

**NEVADA WILDLAND SEED COOPERATIVE FEASIBILITY
ASSESSMENT**



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Table of Contents

	Page
Executive Summary	vi
I. Introduction	1
Nevada Brand of Native Plants, Forbs and Grasses	2
Nevada Certification/Labeling Programs	4
Seed Certification	5
Industry Overview	7
Current Native Seed Cooperatives and Producer Groups	13
Cooperative Organizational Possibilities	16
II. Wildland Seed Producer Interest	21
Producer Survey Description	21
Producer Survey Results	22
III. Current and Potential Native Plant Markets	28
Market Survey Description	28
Aggregate Market Results	29
Individual Market Results	55
Homeowner Results	72
IV. Cooperative Economic Feasibility	89
Organizational and Start-up Considerations	89
Cooperative Business Plan	94
V. Summary and Recommendations	104
Producer Participation	104
Potential Markets	105
Financial Recommendations	107
VI. References	109
VII. Appendix	112
A. Plant and Seed Purchases by Industry	
B. Native Nevada Plant Varieties	
C. Nevada Agricultural Lawyers	
D. Capital Equipment Needs by Seed	
E. Yield Data	
F. Seed Production Schedule	

- G. Important Phone Numbers
- H. Capital Equipment Description
- I. 6 Month LIBOR Adjustable Rate Mortgage Index History
- J. Profit/Loss Statement
- K. Break Even Analysis Per Pound of Seed
- L. Year 1 Monthly Cash Flow Analysis
- M. Five Year Cash Flow Analysis
- N. Producer Survey
- O. Agency Survey
- P. Floral Survey
- Q. Health and Beauty Survey
- R. Landscaping Survey
- S. Mine/Reclamation Survey
- T. Nursery Survey
- U. Homeowner Survey

List of Tables

Table 2.1	Ranking of Cooperative Benefits
Table 3.1	Category of Supplier Used - Plants
Table 3.2	Factors Influencing Choice of Supplier - Plants
Table 3.3	Category of Supplier Used – Seeds
Table 3.4	Plant and Seed Suppliers Used
Table 3.5	Factors Influencing Choice of Supplier - Seeds
Table 3.6	Customer Base – Landscaping Companies, Nurseries, Federal Agencies, Mining Companies, Food, Wholesale, Internet Commerce and Other
Table 3.7	Plants Used by Industry
Table 3.8	Response to Premium Bids Across Markets
Table 3.9	Response to Premium Bids by Homeowners
Table 4.1	Revenue Based on Seed Varieties Grown in Nevada
Table 4.2	Annual Expense Projections
Table 4.3	Additional Start-up Costs
Table 4.4	Capital Machinery and Equipment
Table 4.5	Capital Office Equipment
Table 4.6	Amortization Schedule
Table 4.7	Profit/Loss Statement
Table 4.8	Sensitivity Analysis on Revenue
Table 4.9	Sensitivity Analysis on Profit

List of Figures

- Figure 1.1 Landscapers' Use of Nevada Seed Suppliers vs. Other Seed Suppliers
- Figure 1.2 Landscapers' Use of Nevada Plant Suppliers vs. Other Plant Suppliers
- Figure 1.3 Nursery Use of Nevada Plant Suppliers vs. Other Plant Suppliers
- Figure 1.4 Nursery Use of Nevada Seed Suppliers vs. Other Seed Suppliers
- Figure 1.5 Mining Use of Nevada Plant Suppliers vs. Other Plant Suppliers
- Figure 1.6 Mining Use of Nevada Seed Suppliers vs. Other Seed Suppliers
- Figure 2.1 Producer's Customer Base, by Industry
- Figure 2.2 Species Commonly Grown by Producers
- Figure 3.1 Plant vs. Seed Use Across Markets
- Figure 3.2 Influence of "Nevada Grown" on Purchasing Decisions Across Markets
- Figure 3.3 Influence of Price vs. Location Grown Across Markets – Plants
- Figure 3.4 Do Market Respondents Check Seed Milling Location?
- Figure 3.5 Importance of Price vs. Milling Location Across Markets
- Figure 3.6 Customer Base – Private Businesses/Homeowners
- Figure 3.7 Factors Motivating Uncertain Responses Across Markets
- Figure 3.8 Plant vs. Seed Use – Nurseries
- Figure 3.9 Plant vs. Seed Use – Landscaping
- Figure 3.10 Plant vs. Seed Use – Agency
- Figure 3.11 Plant vs. Seed Use Across Markets
- Figure 3.12 The Influence of Delivery Method on the Choice of Plant Suppliers Across Markets
- Figure 3.13 The Influence of Delivery Method on the Choice of Seed Suppliers Across Markets
- Figure 3.14 The Influence of Ownership/Relationship on the Choice of Plant Suppliers Across Markets
- Figure 3.15 The Influence of Ownership/Relationship on the Choice of Seed Suppliers Across Markets
- Figure 3.16 The Influence of Quality on the Choice of Plant Suppliers Across Markets
- Figure 3.17 The Influence of Quality on the Choice of Seed Suppliers Across Markets
- Figure 3.18 The Influence of Service on the Choice of Plant Suppliers Across Markets
- Figure 3.19 The Influence of Service on the Choice of Seed Suppliers Across Markets
- Figure 3.20 The Influence of Contracts on the Choice of Plant Suppliers Across Markets
- Figure 3.21 The Influence of Contracts on the Choice of Seed Suppliers Across Markets
- Figure 3.22 The Influence of Convenience on the Choice of Plant Suppliers Across Markets
- Figure 3.23 The Influence of Convenience on the Choice of Seed Suppliers Across Markets
- Figure 3.24 The Influence of Price on the Choice of Plant Suppliers Across Markets
- Figure 3.25 The Influence of Price on the Choice of Seed Suppliers Across Markets
- Figure 3.26 The Influence of "Other" Factors on the Choice of Plant Suppliers Across Markets
- Figure 3.27 The Influence of "Other" Factors on the Choice of Seed Suppliers Across Markets
- Figure 3.28 Preferred Packaging Methods Across Markets
- Figure 3.29 Preferred Labeling Methods Across Markets
- Figure 3.30 Preferred Delivery Methods Across Markets
- Figure 3.31 Homeowners' Landscaping/Gardening Materials Purchasing Locations

- Figure 3.32 Price vs. Community Support – Homeowners
- Figure 3.33 Price vs. Origin – Homeowners
- Figure 3.34 Do Homeowners Check Plant Labels for Origin Information?
- Figure 3.35 Do Homeowners Check Seed Labels for Milling Location?
- Figure 3.36 Plant vs. Seed Use – Homeowners
- Figure 3.37 The Influence of Price on Homeowner’s Choice of Plant and Seed Suppliers
- Figure 3.38 The Influence of Location on Homeowner’s Choice of Plant and Seed Suppliers
- Figure 3.39 The Influence of Selection on Homeowner’s Choice of Plant and Seed Suppliers
- Figure 3.40 The Influence of Service on Homeowner’s Choice of Plant and Seed Suppliers
- Figure 3.41 The Influence of Quality on Homeowner’s Choice of Plant and Seed Suppliers
- Figure 3.42 The Influence of Support on Homeowner’s Choice of Plant and Seed Suppliers
- Figure 3.43 The Influence of Other Factors on Homeowner’s Choice of Plant and Seed Suppliers
- Figure 3.44 Other Factors Affecting Homeowner’s Choice of Plant and Seed Suppliers
- Figure 3.45 Importance of Drought Resistance
- Figure 3.46 Importance of Natural Appearance
- Figure 3.47 Importance of Resistance to Invasive Species
- Figure 3.48 Importance of Erosion Control
- Figure 3.49 Importance of Other Characteristics of Native Plants
- Figure 3.50 Other Important Characteristics of Native Plants

Nevada Wildland Seed Cooperative Feasibility Assessment

Executive Summary

The growers of the Nevada Wildland Seed Producers Association (NWSPA) requested a feasibility study be conducted to assess the business feasibility of a cooperative of Nevada wildland seed producers organized to grow, process, package, and market Nevada native plants, grasses, and forbs. As native seed production and collecting is still in its infancy in Nevada, few efforts have been made to establish markets for native seed. In the past, growers have provided plants and seed primarily to federal and state agencies, such as the Bureau of Land Management (BLM). The agency demand for these products is determined primarily by the fire restoration efforts in any given year. Thus, demand is subject to great variability from year to year. The native seed growers in Nevada, as well as their primary customers, requested this study in order to evaluate the potential markets for their products, as well as gain an idea of the interest in forming a cooperative among Nevada native seed producers.

The creation of a Nevada native wildland seed brand may offer producers the ability to charge higher prices and maintain higher quality over non-branded, non-certified products. Native plants, forbs, and grasses produced by a local cooperative have been grown in their own native, natural conditions, rather than in a controlled environment. Hence, potential benefits may include drought resistance as native plants require less water and can sustain long periods of direct sunlight. Additionally, native products provide a more natural looking landscape and since these breeds are native to Nevada, they can endure the range of temperatures common to this region. Native plants have also been shown to prevent invasive plant/weed infestation and prevent soil erosion and dust caused by low water levels and high winds common to Nevada. Hence, the objective of this study is to examine market demand and pricing for Nevada native plants, forbs, and grasses, as well as the production capabilities required to meet market demand. Projected revenues will be computed along with projected costs to determine the business feasibility of the cooperative.

A survey of native plant growers, seed collectors, and potential growers was completed to assess the organizational feasibility and production capabilities of a Nevada Wildland Seed Cooperative. A list of fifty-eight growers was provided by the NWSPA. Two separate mailings were sent out to growers, generating six completed surveys, or an 11% response rate. The six growers encompassed 6300 acres of production area. Of the six growers who responded, three stated that they would be willing to join a cooperative, listing set buying contracts and low interest loans as the primary benefits of joining a cooperative. Increased profits and discounts on inputs were secondary benefits.

The low response rate of 11% is concerning, as it is not clear if this is due to lack of interest in participating in a cooperative, or due to other factors such as the timing of the survey or lack of incentive to respond to the survey. If lack of interest is the issue, the cooperative may have difficulty building the membership necessary to finance the cooperative start-up. In the business feasibility analysis, we have used a 51% participation rate of the 6300 acres, but have included a total of 30 grower members. On a positive note, many of the grower respondents did engage in contracts with buyers and are aware of many of the benefits of such contractual relationships. These growers may need to educate other growers on the benefits of cooperatives and contractual relationships, including reduced market and price risk.

Current and potential markets for native plants, forbs, and grasses were assessed to determine the viability of such markets, including types and quantities needed, as well as pricing, delivery, packaging, and seasonal availability. Additionally, support for locally (Nevada) grown products and the willingness to pay premiums for local products was also assessed. A total of 935 surveys were sent to florists, nurseries, landscapers, mining companies, federal agencies, and natural health and beauty suppliers. Other than the natural health and beauty suppliers, which were located across the U.S., all others were located in Nevada. A total of 41 valid responses were returned, for a response rate of 3%. Additionally 1000 homeowners in Reno, NV were surveyed, with 173 valid responses returned, for a response rate of 17.3%.

The majority of the markets surveyed purchase their plant and seed products from wholesalers and nursery's outside of Nevada. The market respondents identified quality, followed by price and service as the most influential factors in their choice of plant/seed supplier. The influence of a locally grown product was equal between no influence (44%) and some influence (41%). However, 41% market respondents were willing to pay 10% extra for locally (Nevada) grown products (12% unwilling). At a premium of 20%, 30.8% of the market respondents were still willing to pay (18% unwilling). This general trend continued as the premium was increased. Many market respondents were uncertain (40-50%) if they would be willing to pay a premium for Nevada grown products, naming quality, price, and present supplier as their main concerns. According to study results, only a small portion of the native plants (6-14%) and seed (1-18%) consumed or sold by nurseries, landscapers, and mining operations in Nevada are produced in Nevada. There is obviously room for Nevada producers to increase their market share in local Nevada markets. The cooperative will need to set up purchasing contracts with government agencies and larger residential and commercial landscapers. These markets have different requirements, but quality, availability, and delivery play a large role in the decision process.

The homeowners surveyed in Reno, NV were willing to pay a premium for Nevada grown products over the non-Nevada alternative (53% would pay \$.25 more, 35% would pay \$1.00 more, and 21% would pay \$2.00 more). Additionally, 44% would choose products to support local business and 33% check for origin labeling. Interestingly, this Reno homeowner market prefers primarily plant products (84%, 16% use seeds). Based on the information gathered in the marketing section of this study, there is definitely a niche market for locally produced Nevada native plant products for residential use. This niche market consists of consumers who are willing to pay premiums for locally grown products and shop for these products at small local nurseries and specialty stores.

In the business feasibility analysis, we estimate a need for 30 producer members, all of which invest \$5,000.00 to finance the cooperative start-up of \$150,000.00. Obviously fewer members making a larger investment would also be feasible. On the production side, for the business feasibility analysis, we used a 51% participation rate on 6300 acres to estimate total seed production for the cooperative. These estimates are based on yield per acre for nine native plant species. All revenue estimates in the profit and loss statement and cash flow analysis are tied to this level of production. Should production fall below these estimates the cooperative may no longer be a feasible business in the long-run.

The New Generation Cooperative (NGC) provides the optimal legal situation for the cooperative, as its investment options, distribution on owner's equity, and marketing options seem to best fit the current needs of native plant and seed producers in Nevada.

Nevada Wildland Seed Cooperative Feasibility Assessment

I. INTRODUCTION

The growers of the Nevada Wildland Seed Producers Association (NWSPA) requested a feasibility study be conducted to assess the business feasibility of a cooperative of Nevada wildland seed producers organized to grow, process, package, and market Nevada native plants, grasses, and forbs. As native seed production and collecting is still in its infancy in Nevada, few efforts have been made to establish markets for native seed. In the past, growers have provided plants and seed primarily to federal and state agencies, such as the Bureau of Land Management (BLM). The agency demand for these products is determined primarily by the fire restoration efforts in any given year. Thus, demand is subject to great variability from year to year. The native seed growers in Nevada, as well as their primary customers, requested this study in order to evaluate the potential markets for their products, as well as gain an idea of the interest in forming a cooperative among Nevada native seed producers. Hence, this study will examine market demand and pricing, as well as the production capabilities required to meet market demand. Projected revenues will be computed along with projected costs to determine the feasibility of the cooperative.

This report details the processes and findings of the study. The first section of the report discusses the value-added marketing perspective of a local (Nevada) cooperative, provides an overview of the native seed industry in the West, including current native seed cooperatives and producers groups, and finally evaluates standard cooperative business entities.

The second section of the report discusses the current grower interest in the formation of a Nevada wildland seed cooperative. This section also discusses the current production efforts of growers in Nevada. The third section provides an assessment of a cross section of possible

market opportunities for native plants and seeds in Nevada. This is followed by section four, which details the financial aspects of the cooperative. Section five provides an overview of observations and conclusions which may be drawn from this study.

Nevada Brand of Native Plants, Forbs and Grasses

The creation of a Nevada native wildland seed brand offers producers the ability to charge higher prices and maintain higher quality over non-branded, non-certified products. Branding is a way to differentiate a product and provide higher value through guarantees and simplicity in purchasing. A study by Giddens and Hofmann (2001) finds that consumers believe that branded products offer the certain features, images or quality levels that consumers seek at appropriate prices. It also finds that the price of branded products can reach as high as 40% above that of the non-branded alternatives. This increase is referred to as a brand tax.

One method of branding includes origin labeling. Origin labels may be as broad as the country or state of origin, or as specific as the county or city of origin. According to a study by Bonnet and Simioni (2001) destination of origin labeling guarantees that the quality of the labeled product is due exclusively to the attributes of producing the product in a particular geographic region. Another study by Loureiro and McCluskey (2000) was motivated by the trend that "consumer's attitudes toward quality and desire for cultural identification have generated a growing demand for agricultural products that carry a strong identification with a particular geographic region (p. 309)." Origin labeling, however, is considered a "*credence attribute*," a product characteristic that is neither observed nor experienced by the consumer, and hence, must be communicated by a trusted source through proper product labeling. Certification and corresponding labeling is one way of validating origin labeling. Certification provides an alternative that allows individual producers to qualify for inclusion under an established umbrella

program (third-party) and label that identifies a product from others on the market. The certification process depends on establishing a set of standards, which define how the product is different. Producers who meet those standards qualify for certification. Producer brands (first-party), in contrast, are usually privately owned and managed – the owners of a brand determine the set of standard and types of products that qualify to carry the specific brand label.

Precisely how third-party certification adds value to products can be understood by the functions certification provides. These functions include the following: 1) standard setting, 2) testing, 3) certification of producers and processors, and 4) enforcement. *Standards* set by reputable third parties establish a specific level of quality that the product must possess to carry a third-party certified label. Additionally, these third-party standards facilitate market transactions by creating a recognizable and well-defined terminology that consumers can easily understand. For example, with the new USDA organic standards, consumers purchasing lettuce that is labeled as “certified organic” know the specific set of practices followed. *Testing* services offered by third-parties provide an objective measure of a food product’s quality. These testing services may reduce both the producer’s and consumer’s costs of validating claims that certain quality standards have been reached, and will increase the value of the information provided by the label. For example, corn can now be tested to determine if it is non-genetically modified. *Certification* of producers and processors provided by accredited third-parties ensures consumers that the labeling information provided by producers and processors is valid. Additionally the certification establishes the credibility of a firm’s claims. The final beneficial service provided by third-parties is the *enforcement* of truthful quality standards. In order to provide credible and certified standards, third-parties must provide supervisory services to guard against fraudulent quality claims. Third-parties provide a means to oversee producers and processors insuring all

are following guidelines. This is particularly true for credence characteristics, such as source verification, where labels are the only means to provide information. The third party must be willing to penalize a firm with either legal action or de-certification to discourage fraud.

The value-added nature of the products from a Nevada certified brand of native plants, forbs, grasses, and seed requires the physical segregation of the products, which enhances the value of such products. The form of segregation in this industry is due the products' status as Nevada grown, processed, milled, and packaged. According to the USDA, a when a product is segregated, the customer base for the product is expanded and a greater portion of revenue derived from the marketing, processing, or physical segregation is made available to the producer of the product. Consumers in Nevada may seek out Nevada grown products for various reasons. Native plants, forbs, and grasses produced by a local cooperative have been grown in their own native, natural conditions, rather than in a controlled environment. Hence, potential benefits may include drought resistance, meaning products require less water and can sustain long periods of direct sunlight. In addition to this, native products provide a more natural looking landscape and since they are native to Nevada, they can endure the range of temperatures common to this region. Native plants have also been shown to prevent invasive plant/weed infestation and prevent soil erosion and dust caused by low water levels and high winds common to Nevada.

Nevada Certification/Labeling Programs

Nevada Grown

To date, the "Nevada Grown" program demonstrates one of the only large-scale uses of Nevada-produced labeling techniques. The Nevada Grown program is a government-sponsored third-party certification program. For a producer of agriculture or food products to be considered for Nevada Grown certification, he or she must either reside or own property in the state of

Nevada. For a raw agricultural product, such as a plant, to be certified as Nevada Grown, it must be grown in the state of Nevada. Processed agricultural products, such as feed, must have at least 60% of their composition grown in Nevada. The use of the Nevada Grown logo is restricted to members in good standing. Certification is a cost-free process and membership is reconsidered on an annual basis.

Made in Nevada

The Nevada Commission on Economic Development has established the “Made in Nevada” program, designed to increase support for products grown or produced within the State of Nevada. Its goal is to increase the volume of member business through education programs for consumers both within Nevada and outside the state. The Commission also provides business expansion expertise and assistance by partnering with the Management Assistance Program and the Small Business Development Center. Made in Nevada tags are provided at no cost to members and additional marketing opportunities exist through the Made in Nevada program. There is a strict selection process to ensure high quality products and to maintain the reputation of Made in Nevada. The membership fee is \$30 per year.

Seed Certification

The Association of Official Seed Certifying Agencies (AOSCA) provides certification standards that allow for a unified approach to genetic purity. These standards apply to both wildland collection or field produced seeds and allows for a third-party verification of source, genetic identity and genetic purity. The AOSCA plant germplasm types are based upon the species and source along with the extent of distinctive trait identification, selection and stabilization documented for each plant or population. According to these certification standards, a race or ecotype of a native or naturalized species may be categorized into one of four classes:

- Source Identified (yellow tag): Comparisons with other germplasm collections, accessions or ecotypes of the same species not known.
- Selected (green tag): Shows promise of superior and/or identifiable traits as contrasted with other germplasm accessions, ecotypes or variety/cultivars of the species. Selection criteria and supporting comparative data is required.
- Tested (blue tag): Requires progeny testing to prove that traits of interest are heritable in succeeding generations. Testing procedures (number of sites, generation required, etc.) are outlined for each species by certification agencies.
- Variety (foundation {white tag}, registered {purple tag}, and certified {blue tag} generations): Applicable tested germplasm which, in the estimation of the developer, has sufficient marketplace potential to warrant release as a variety in compliance with Federal and State seed laws (Kitchen and Young, 2001).
- Foundation Seed: Foundation seed shall be the progeny of breeder or foundation seed so handled as to maintain specific genetic purity and identity. Production is supervised by the Foundation Seed Stocks Project and inspected by the Nevada Seed Growers Association.
- Registered Seed: Registered seed shall be the progeny of breeder or foundation seed that is so handled as to maintain satisfactory genetic identity and purity and which has been approved and certified by the Association.
- Certified Seed: Certified seed shall be the progeny of breeder, foundation or registered seed and is not eligible for planting for recertification. This is to maintain satisfactory genetic identity and purity that has been approved and certified by the Association (Montana Seed Growers Association, 2004).

Once seed has been certified, it qualifies for the official "blue" certified seed tag and meets state, federal and international seed law requirements. Certification is a limited generation system based on four seed classes.

The Plant Variety Protection Act (PVPA) provides legal protection for intellectual property such as new varieties of plants, which are sexually reproduced. There are two options for plant variety protection available to a developer. First, the PVPA allows developers and certificate holder to sell either certified or uncertified seed of the variety, but must resort to civil action if their rights are infringed upon within the period of protection. For certified seeds, a second option exists. The Federal Seed Act allows for trademark violators to be prosecuted by the federal or state government. The total cost of protection is \$4,084. This price includes \$3,652 for the application and examination; and the certificate fee of \$432, upon issuance of the certificate. These fees are subject to change (USDA-AMS, 2005).

Industry Overview

There is currently a high demand for native plant and seed products, however there are few producers to provide for the demand. Most native seed used in restoration projects in Nevada are purchased through producers in Montana, Utah, and Idaho.

The arid landscapes in the State of Nevada are prone to severe drought, wildfires and highly erodible soils. Recent wildfires and excessive mining have brought about an increase in invasive plant species, increasing the need for the restoration of public and private lands. Native grasses and forbs provide perennial protection for soils and are highly drought resistant, growing well in Nevada's climate. Many federal and state organizations, including the US Forest Service, the Department of Transportation, Nevada Fish and Wildlife, the Bureau of Land

Management, the Nevada Division of Forestry, as well as mining operations currently use native seed and plants for restoration.

The agricultural communities in Nevada can also benefit from the use of native grasses and forbs in the treatment of invasive weeds. Noxious weeds have become a growing concern in the State of Nevada. Propagation through dense native plants is more difficult. Hence, planting native grasses, plants, and forbs after weed treatments has proven to be successful.

The landscaping industry benefits from the use of Nevada native grasses and forbs, through the offering of drought resistant, attractive landscaping material for private, public and recreational foliage. Native plants provide an appealing alternative and fit well with the natural environment surrounding landscaped areas. Landscaping companies and nurseries are a natural distribution channel for this product (Appendix A). According to our survey, a total of thirty-five thousand pounds of seed and two thousand twenty plants are purchased on an annual basis by landscaping companies in Nevada. However, only six thousand one hundred forty-four pounds of seed (18% of total purchases) and one hundred thirty plants (6%) came from Nevada sources. Figures 1.1 and 1.2 describe these results in percentage form.

Figure 1.1: Landscapers' Use of Nevada Seed Suppliers vs. Other Seed Suppliers

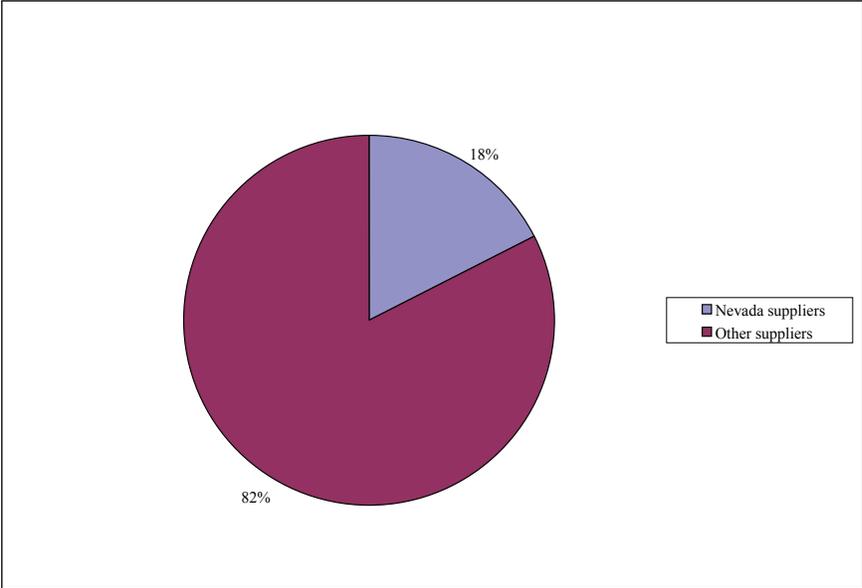
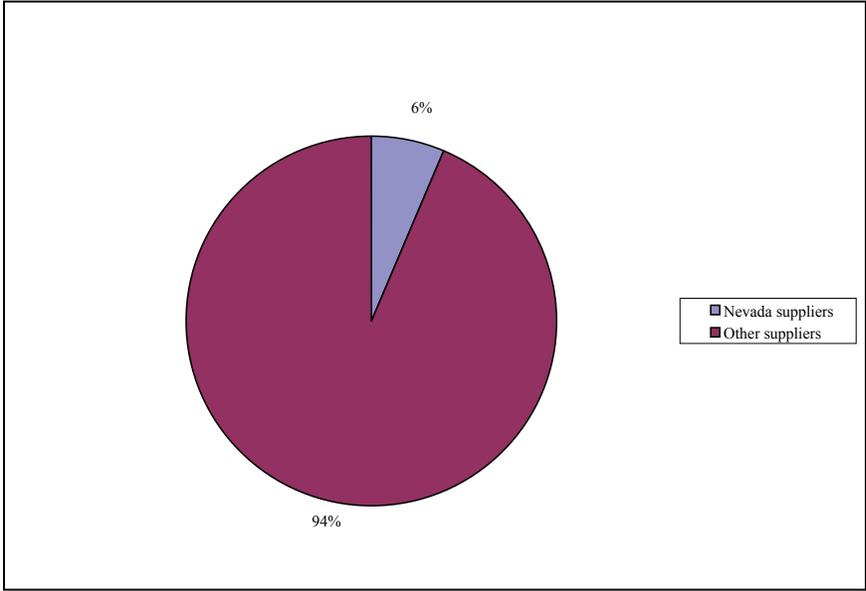


Figure 1.2: Landscapers' Use of Nevada Plant Suppliers vs. Other Plant Suppliers



Grasses and forbs are often used in floral and plant arrangements by florists in Nevada. Locally grown plants are more cost effective and aesthetically pleasing to customers over non-native alternatives. Our survey data of nurseries show that nine hundred thirty pounds of native seed and one thousand one hundred seventy-five plants were purchased by nurseries in

California, Arizona and Nevada. Most plants and seeds were purchased from non-Nevada wholesalers. Only four hundred twenty-one plants (9% of total purchases) and two hundred thirty pounds of seed (4%) were purchased in-state (Appendix A). Figures 1.3 and 1.4 summarize this information.

Figure 1.3: Nursery Use of Nevada Plant Suppliers vs. Other Plant Suppliers

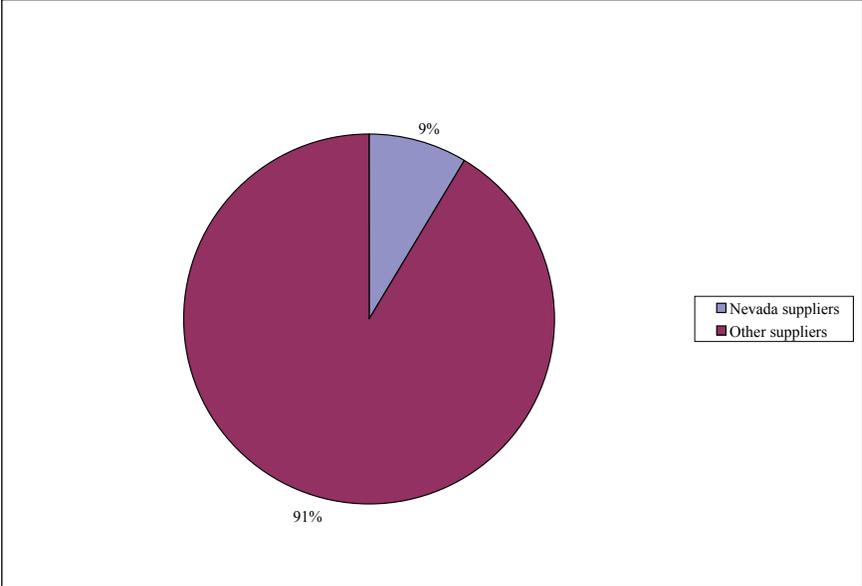
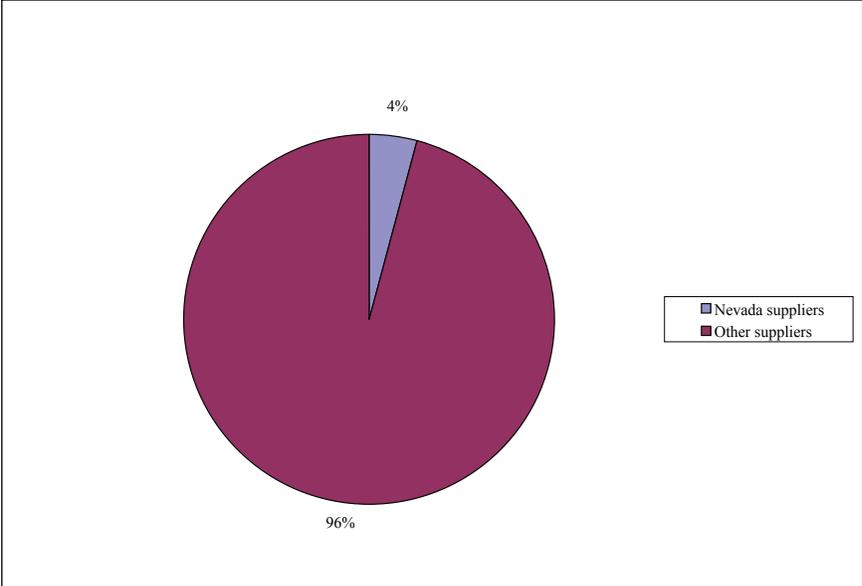


Figure 1.4: Nursery Use of Nevada Seed Suppliers vs. Other Seed Suppliers



The mining industry reclaims thousands of acres each year in the Great Basin. According to our survey, over one hundred thousand pounds of seed and sixty-six thousand plants are purchased each year by the three respondents, but only nine thousand four hundred twenty-nine plants (14% of total purchases) are purchased in Nevada and only four hundred seventy-six pounds of seed (less than 1%) are purchased in Nevada (Appendix A). These results are summarized in Figures 1.5 and 1.6.

Figure 1.5: Mining Use of Nevada Plant Suppliers vs. Other Plant Suppliers

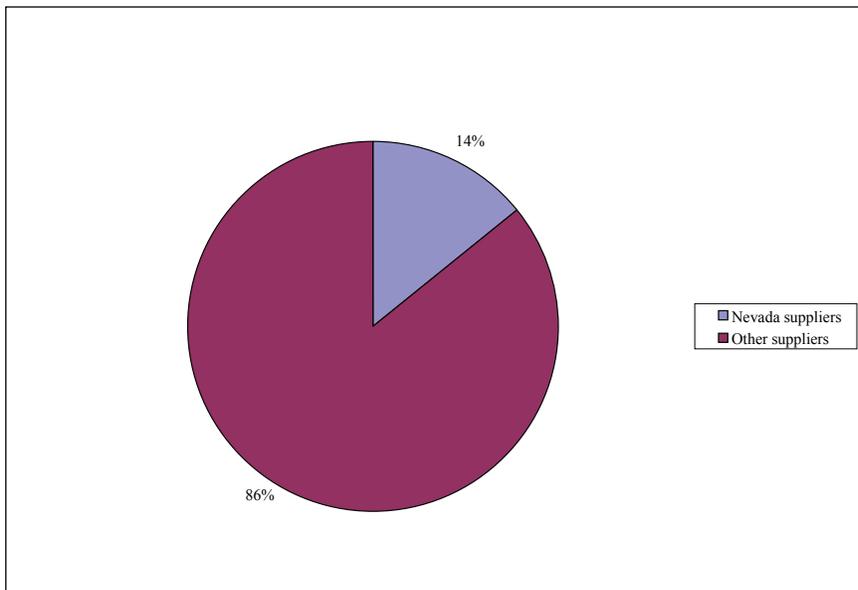
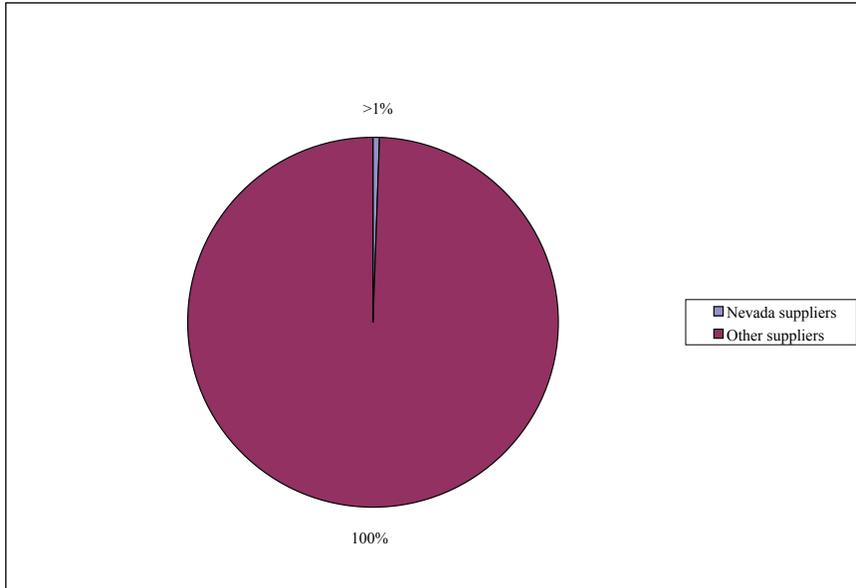


Figure 1.6: Mining Use of Nevada Seed Suppliers vs. Other Seed Suppliers



Lastly, native grasses and forbs are currently used in health food and beauty products around the world. Gluten free flour and baking additives are currently made from Indian Rice Grass, which contains a high level of fiber and protein. Gluten has been linked to celiac disease, a digestive disorder that affects one in one hundred thirty-three people and can cause malnutrition (Gluten Intolerance Group, 2004). Wheatgrass is high in vitamin A, B, C and E and its juice is sold in many health food stores around the country. Health food advocates claim that wheatgrass juice aids in neutralizing toxins and carcinogens in the body, improving blood sugar disorders, helping prevent tooth decay, increasing hemoglobin production, keeping hair from graying, improving digestion, reducing high blood pressure, aiding in the prevention and curing of cancer. Triterpenoids extracted from Stansbury cliffrose have been shown to have inhibitory effects on HIV and Epstein-Barr virus (Utah State University Extension, 2004). Globemallow is used to treat early stages of bronchial distress and urinary tract infections (TCBMed, 2001).

Current Native Seed Cooperatives and Producer Groups

There are a number of private seed producers throughout the States of Montana, Utah, Arizona and New Mexico. While not all native Nevada varieties are offered by all producers, most varieties can be found at one or more of these agencies. Below is a list of the top producers, their business philosophy and the seeds that they produce.

Bitterroot Restoration, Inc.: Located in Bozeman, Montana, the Bitterroot Restoration Inc. (BRI) is a privately funded, indoor seed producing operation. They specialize in large land lot restoration and service mining operations, golf courses, gas pipeline companies, transportation and utility companies and other public restoration agencies. They claim to have the largest selection of native plants in the west. In addition to native plants and seeds, BRI is a fully integrated consulting firm that employs experts in soil conservation and erosion control, phytoremediation research and wetlands restoration.

Competitive species carried include: Great Basin Wild Rye (*Elymus Cinereus*), Bluebunch Wheatgrass (*Pseudoroegneria Spicata*), Bottlebrush Squirrel Tail (*Elymus Elymoides ssp*), Four-wing Saltbrush (*Atriplex Canescens*), Shadscale (*Atriplex Confertifolia*), Wyoming Big Sagebrush (*Artemisia Tridentata (wyomingensis)*), Mountain Big Sagebrush (*Artemisia Tridentata (vaseyana)*), Big Basin Sagebrush (*Artemisia Tridentata (tridentata)*), Low Sagebrush (*Artemisia Arbuscula*), Black Sagebrush (*Artemisia Nova*), Antelope Bitterbrush (*Purshia Tridentate*), Scarlet Globemallow (*Sphaeralcea Coccinea*), and Western Yarrow (*Achillea Millifolium*). (www.revegetation.com)

Montana Seed Growers Association: Formed in 1912, the Montana Seed Growers Association works closely with Montana State University as the certifying agency for the State of Montana.

The association is not a marketing entity and only refers potential customers to their database of seed producers around the state.

Intermountain Native Plant Growers Association: This non-profit organization's goal is to educate public and private enterprises on the benefits of utilizing native species in landscaping and restoration projects. Through the Utah Choice program, marketing material available includes illustrated plant tags, signs, brochures, posters, and CDs with descriptive and cultural information for 40 key plants. Membership is open to all interested individuals and businesses. Their producers provide 40 seed species, including: Showy Sandwort (*Arenaria Macradenia*), Mountain Big Sagebrush (*Artemisia Tridentata (vaseyana)*), Cliffrose (*Purshia Mexicana*), Desert Sage (*Salvia Dorrii*), Gooseberryleaf Globemallow (*Sphaeralcea Grossulariifolia*), and Indian Ricegrass (*Stipa Hymenoides*). (<http://ag.montana.edu/msga/>)

Native Seed Network (NSN): Located in Corvallis, Oregon, NSN focuses on improving genetic purity through the supply of local Oregonian seeds. In a partnership with the Bureau of Land Management, NSN is trying to increase supply to keep up with the large demand from public and private agencies in Oregon. The only competing seed variety that they provide is Western Yarrow (*Achillea Millefolium*) and Indian Ricegrass (*Achnatherum Hymenoides*). (<https://www.nativeseednetwork.org>)

Comstock Seed: Located in Gardnerville, NV, Comstock Seed specializes in custom seed blends for reclamation areas, drought tolerant landscaping, and pastures, and also carries pre blended turf, pasture and wildflower mixes. Sixty-five percent of their business is mine reclamation with ongoing deliveries to both the Bureau of Land Management and the US Forest Service. Seed is collected through public land permits. Seasonal on-staff employees pick 30,000 pounds of native seeds, usually between the months of October through December. Less than 50% of the

seeds collected are certifiable. In a 1997 article, Comstock claimed a 1000% markup on seed prices, with a yearly revenue of \$300,000 (Goodman, 1997). Seed species carried include: Indian Ricegrass (*Achnatherum Hymenoides*), Great Basin Wildrye (*Leymus Cinereus*), Bluebunch Wheatgrass (*Agropyron Spicatum*), Thickspike Wheatgrass (*Agropyron Dasystachyum*), Bottlebrush Squirreltail (*Elymus Elymoides*), Sandberg Bluegrass (*Poa Secunda*), Thurber's Needlegrass (*Achnatherum Thurberianum*), Needle and Thread Grass (*Hesperostipa Comata*), Desert Needlegrass (*Achnatherum Speciosum*), Fourwing Saltbush (*Atriplex Canescens*), Wyoming Big Sagebrush (*Artemisia Tridentata (wyomingensis)*), Mountain Big Sagebrush (*Artemisia Tridentata (vasseyana)*), Basin Big Sagebrush (*Artemisia Tridentata (tridenata)*), Black Sagebrush (*Artemisia Nova*), Winterfat (*Ceratoides Lanata*), Antelope Bitterbrush (*Purshia Tridentata*), Cliffrose (*Cowania Mexicana*), Yarrow (*Achilea Millefolium*), Blue Flax (*Linum Lewisii*). (www.comstockseed.com)

Nevada Division of Forestry Nurseries (NDF): With two nurseries in the State of Nevada, one in Washoe Valley and one in Clark County, the NDF provides native seeds to encourage conservation by offering shrubs and trees grown to sizes suitable for conservation plantings on private and public lands. Plant materials must be used for conservation purposes such as: windbreaks, shelterbelts, woodlots, erosion control, wildlife habitat, Christmas tree farms, stream bank stabilization, green stripping, and mine reclamation. They do not offer materials for landscaping purposes. (http://agri.nevada.gov/nursery_index.htm)

Moana Nursery: Located in Reno, NV, Moana Nursery offers over 160 varieties of shrubs and 200 varieties of trees for the Northern Nevada climate. Plants are grown at their facility in Oregon and transplanted to Nevada. They offer consulting services for homeowners and landscaping businesses. They currently do not carry the native seed varieties discussed in this

document, but plan to begin native seed sales in the upcoming year.

(<http://www.moananursery.com>)

Granite Seed: Located in North Lehi, Utah, Granite Seed boasts a 30,000 square foot seed processing facility. Seeds are acquired both through seed collection on federally owned land, and seed growers throughout the western United States. Granite Seed also offers recommendations, seeding methods and seeding rates, along with consultation on erosion control, roadside reclamation, fire rehabilitation, forage and pasture improvement, landscaping and beautification, range improvement, mine land and pipeline reclamation, enhancing wildlife habitat, restoring wetlands, golf courses and other turf sites. Seed and plant varieties include: Indian Ricegrass (*Achnatherum Hymenoides*), Great Basin Wildrye (*Leymus Cinereus*), Bluebunch Wheatgrass (*Agropyron Spicatum*), Thickspike Wheatgrass (*Agropyron Dasystachyum*), Sandberg Bluegrass (*Poa Secunda*), Needle and Thread Grass (*Hesperostipa Comata*), Desert Needlegrass (*Achnatherum Speciosum*), Fourwing Saltbush (*Atriplex Canescens*), Wyoming Big Sagebrush (*Artemisia Tridentata (wyomingensis)*), Mountain Big Sagebrush (*Artemisia Tridentata (vasseyana)*), Basin Big Sagebrush (*Artemisia Tridentata (tridentata)*), Black Sagebrush (*Artemisia Nova*), Desert Bitterbrush (*Purshia Glandulosa*), Shadscale (*Atriplex Confertifolia*) Winterfat (*Ceratoides Lanata*), Antelope Bitterbrush (*Purshia Tridentata*), Blue Flax (*Linum Lewisii*), and Scarlet Globemallow (*Sphaeralcea Coccinea*). (<http://www.graniteseed.com>)

Cooperative Organizational Possibilities

Traditional Cooperatives

A cooperative is a business entity that is controlled and owned by those who utilize its services. These owners finance and operate the business, striving for a mutual benefit by

working together. By combining resources, the overall production costs are decreased and the production capabilities and marketing successes are increased.

Cooperatives are run similar to other business entities and usually incorporate under state laws. They require bylaws and a board of directors, who set policy and hires managers to run the day-to-day operations. Three characteristics make a cooperative different from other business organizations: (Rapp and Ely, 1996)

- User owned
- User controlled
- User benefited

Members finance the start-up and operation costs through a variety of methods. First, members may make a direct financial contribution through a membership fee or through the sale of common or preferred stock. Secondly, cooperatives may withhold a portion of net earning from cooperative members to reinvest back into the cooperative. Thirdly, assessment fees can be charged based on the number of units procured from each member, or based on the number of units sold after processing. The advantage of soliciting a direct contribution or utilizing the sale of stock is the upfront cash requirements to purchase capital equipment and building services. Assessment fees and/or net earning withholdings are more beneficial once the cooperative has begun operations and require working capital or future replacement cash.

The user-controlled characteristic refers to the election of a board of directors and the ability for common stock holders or members to vote on major organizational issues. User benefited characteristics include the distribution of resources based on the member's use of the organization. Cooperatives provide a direct cost savings through the purchase of bulk supplies,

increases in market access, a distribution of overhead and fixed costs as well as the allocation of profits based on usage to the members.

It is vital to the success of a cooperative that owners stay informed in business practices. A cooperative is a democratically control organization, that operates through a majority vote. Members have a monetary interest in the financial well-being of the organization and rely heavily on the education and success of neighboring producers. While the pooling of resources helps reduce risk in the market place, judgments and decisions made on one farm can affect the profitability of other farm members.

New Generation Cooperatives

The “New Generation Cooperative” (NGC) is similar to traditional cooperative, except that it focuses on marketing niche strategies rather than the traditional cooperative roles such as production and storage. One of the main focuses is on delivery rights, which is directly tied to the initial investment required by each member. The NGC establishes a production volume, and then sells shares based on a delivery commitment from farmers that generates enough seed to fulfill its capacity requirement. One disadvantage to this system is the inability for the cooperative to encompass new producers, as the production capacity is maximized at its inception. Delivery rights may be sold or traded to other members of the cooperative and future expansion can generate the sale of additional delivery rights.

The key advantage to a NGC is the amount of start-up capital that can be generated. NCG’s can typically generate 30%-50% of their start up capital, lowering long term private debt commitments and freeing up future profits for larger dividend payments to farmers (Harris, Stefanson, and Fulton, 1996). Additionally, delivery rights insure a reliable volume of product for the cooperative, while guaranteeing a home for the producer’s product. It also allows the cooperative to better react to market conditions.

New cooperatives may choose a combination of options, but usually organizations stay within a stock or non-stock form of capital acquisition. Potential members may feel more comfortable with stock options, as it is a more commonly understood system of capitalization.

Investor Owned Corporations

NGCs normally maintain a marketing agreement with the member producers, whereas traditional cooperatives do not. Because NGCs are limited to purchasing grain from their members only, they require a much narrower level of quality standards than traditional cooperatives. The process of identity preserved is used to ensure that an acceptable quality product is grown by members, or it can trade lower quality member grain for the higher quality grain needed for processing.

Capitalizing refers to the amount of money needed to begin operations and the mechanism for acquiring the cash. Important decisions include whether the cooperative will issue stock or nonstock options (i.e. membership dues), borrow from traditional financial institutions, and determine minimal rates of return for its members. The goal is to provide enough working capital to begin and maintain operations while sustaining manageable debt levels for the organization and making the investment affordable to prospective members.

Ownership certificates come in a variety of forms. Below is a brief description of ownership types and rights that accompany each.

Common Stock: Common stocks are shares of an organization that represent membership or ownership in the cooperative and are accompanied by voting rights. Common stock can be divided into classes, each carrying different voting privileges and assessed different values. Those with more privileges are more expensive to purchase. Cooperatives usually do not pay interest on common stock issued.

Preferred Stock: Preferred stocks are nonvoting stock and can be issued to both members and nonmembers of the cooperative. The proceeds are usually used for capital investment and preferred stock owners receive interest for their investment. Again, preferred stock can be divided into classes, each with a different value receiving different scales of interest payments. Preferred stockholders are usually paid first, before the distribution of profits to common stock holders. Should an organization cease to exist, preferred stock holders are compensated first.

Membership Certificates: If a cooperative decides that they do not wish to offer stock, membership is derived through membership certificates. Voting rights accompany membership certificates, which are issued once membership dues are paid. Usually memberships and capital certificates are insured, but are non-interest bearing.

Capital Certificates: Capital certificates are similar to preferred stock, but are not issued as stock. They are sold in a variety of denominations and do not have accompanying voting rights. Interest may or may not be paid to holders, but they may be sold to nonmembers of the cooperative.

NGCs require a marketing contract, making all members producers. In an NGC, preferred stock and/or capital certificates are generally not offered. After the cooperative has begun operation, members continue their investment by providing additional risk capital. This can be accomplished in a variety of ways. The cooperative may retain a portion of earnings as an additional investment into the organization. This can be done in two ways: through the payment or retention of a per-unit fee for each member, or through the retention on the overall cooperatives net earnings. Either way, the equity investment is credited to the members' equity accounts and held as a liability on the cooperatives balance sheet.

II. WILDLAND SEED PRODUCER INTEREST

Producer Survey Description

A survey of seed producers was conducted during the summer months of 2004. The first mailing was sent to nearly sixty producers in northern Nevada. The database of producers was compiled by the Nevada Wildland Seed Producers' Association. The first mailing resulted in slightly less than a 7% response rate, as only four of the fifty-eight surveys mailed were returned. A second mailing was executed with a revised database of fifty-four seed producers. Several producers were eliminated due to undeliverable returns from the first mailing. Two of the fifty-four surveys from the second mailing were returned, increasing the overall response rate to 11.1%. All six returned surveys were considered complete and usable.

The first section of the survey sought to determine the farm's organizational structure and to ascertain the size and scope of production. This section requested information such as the title of the respondent within the organization, where the farm is located, as well as various questions relating to the employment structure within the organization, net earnings and profit margin amounts.

The third section was concerned with the organization's attitude towards contracting and cooperatives, whether the organization was involved in either or would be willing to become involved with either. This section also listed several perceived benefits of a producer cooperative and asked the respondent to rank the benefits in relation to one another. Finally, this section inquired about the labeling techniques of the organization and the perceived effectiveness of such labeling. The last section of survey questions simply asked respondents to summarize their clientele in percentage form, ranked by industry.

Also included in the survey was a blank table in which respondents were asked to fill out information relating to the specific seed produced on each farm, yearly production quantities, the

average purity or germination percentage, the type of packaging, delivery methods, pricing, etc. A copy of the survey can be found in Appendix N.

Producer Survey Results

Demographics

The completed surveys represented a total of 6200 active acres in Humboldt and Douglas counties in northern Nevada. Four of the responding organizations described themselves as sole proprietorships (66.7%) while the remaining two organizations were described as S Corps (33.3%). The survey asked for the number of full time and part time employees both during the summer and throughout the year, but due to the low response rate and the fact that none of the respondents indicated a difference between summer and year-round employment, this was condensed into a single employment variable. One response each was given to one employee (16.7%), two employees (16.7%), eight employees (16.7%), fourteen employees (16.7%), and two for four employees (33.3%). This gives an average of five and a half full time employees per organization, or approximately one full time employee per three hundred eighteen active acres. Only one respondent listed an average employee wage, which was stated to be \$12 per hour.

Earnings and Profit Margins

Respondents were asked to give information relating to the organization's average annual net earnings and average profit margins on production of plants and seeds. Of the six responses received, only two respondents listed net earnings giving an average of \$220,000 or \$171.88 per active acre. Only two respondents gave information relating to their organization's profit margin on the production of plants and seeds, both of which came to an average of 20%, with a high of 25% and a low of 15%. With only two responses it is impossible to conclude whether the

reported figures are representative of the entire population of native seed producers in northern Nevada.

Contracting and Cooperative Impressions

Respondents were asked several questions relating to their organization's current and future contracting policy and cooperative status, as well as some questions relating to the perceived benefits of cooperatives. Of the six respondents, four (66.7%) said that they presently engage in contracts with customers (purchasers of their products) while the remaining two (33.3%) respondents said they did not. Of the two who did not already enter into contracts, one (50%) said that his/her organization would consider entering into contracts under the right circumstances while the other would not. One respondent (16.7%) said his/her organization was presently a member of a producers' cooperative while the remaining five (83.3%) respondents were not. Of these five respondents, three (60.0%) said that they would be willing to consider joining a producers' cooperative while only one (20.0%) said his organization would not consider joining a cooperative under any circumstances and the other respondent failed to respond to the question. When asked where the respondent would like to have a cooperative-operated milling facility maintained, one respondent believed Orovada, Nevada would be the best location while another simply responded that something near his farm would be best. The other respondents failed to answer the question.

The next section listed six perceived benefits to joining a producers' cooperative and asked the respondents to rank the benefits against one another in terms of importance. Table 2.1 summarizes the responses to this question. The percent of total responses is listed over the actual number of responses, which is given in parentheses. Categories that received no responses are indicated by three dashes.

The first benefit was the cooperative's ability to set buying contracts. Three (50.0%) respondents ranked this as the primary benefit to joining a cooperative, while one (16.7%) respondent ranked contracts as the third benefit and the remaining two (33.3%) respondents did not rank the choice at all.

Table 2.1: Ranking of Cooperative Benefits

Rank of benefit	Set buying contracts	Reduced input prices	Lower interest -rate capital	Return on value-added products	Pest control education	Risk management education	Other
1	50.0 (3)	---	16.7 (1)	---	---	---	---
2	---	16.7 (1)	33.3 (2)	---	16.7 (1)	---	16.7 (1)
3	16.7 (1)	---	16.7 (1)	16.7 (1)	---	---	16.7 (1)
4	---	16.7 (1)	---	16.7 (1)	---	16.7 (1)	---
5	---	16.7 (1)	---	---	33.3 (2)	---	---
6	---	---	---	---	---	33.3 (2)	---
7	---	---	---	---	---	---	---
8	---	---	---	16.7 (1)	---	---	---
9	---	---	---	---	---	---	---
10	---	---	---	---	---	---	---
Did not respond	33.3 (2)	50.0 (3)	---	50.0 (3)	50.0 (3)	---	---

The second benefit listed was the reduced input prices to which cooperative members are often entitled. One (16.7%) respondent ranked this as the second benefit to joining a cooperative, one (16.7%) ranked it as the fourth benefit, one (16.7%) ranked it as the fifth benefit and three (50.0%) did not rank the choice at all.

The third benefit listed was lower interest-rate capital. One (16.7%) respondent ranked this as the primary benefit of joining a cooperative, two (33.3%) respondents ranked this as the secondary benefit, one (16.7%) ranked this as the third benefit and the remaining two (3.33%) respondents did not rank the choice.

The fourth benefit listed was profit return on value-added products. One (16.7%) respondent ranked this as the third benefit to joining a cooperative, one (16.7%) ranked this as the fourth benefit, one (16.7%) ranked this as the eighth benefit (respondents were given six choices and two options to "write-in" what they perceived as benefits not given in the survey), and the remaining three (50.0%) respondents did not rank the benefit.

The fifth benefit listed was pest management education. One (16.7%) respondent ranked this as the second benefit to joining a cooperative, two (33.3%) ranked pest management as the fifth benefit to joining a cooperative, and the remaining three (50.0%) did not rank the benefit of pest management education.

The final benefit given was risk management education. One (16.7%) respondent ranked risk management education as the fourth benefit to joining a cooperative, two (33.3%) ranked this as the sixth benefit, and the remaining three (50.0%) did not rank the benefit.

Two respondents wrote in benefits that they believed to come from joining a producers' cooperative. One such response was the cooperative's ability to bring together buyers and sellers. This benefit was given a rank value of 3. The other written response was a cooperative's ability to provide a means of mitigation for overproduction. This benefit was given a rank value of 2.

Labeling

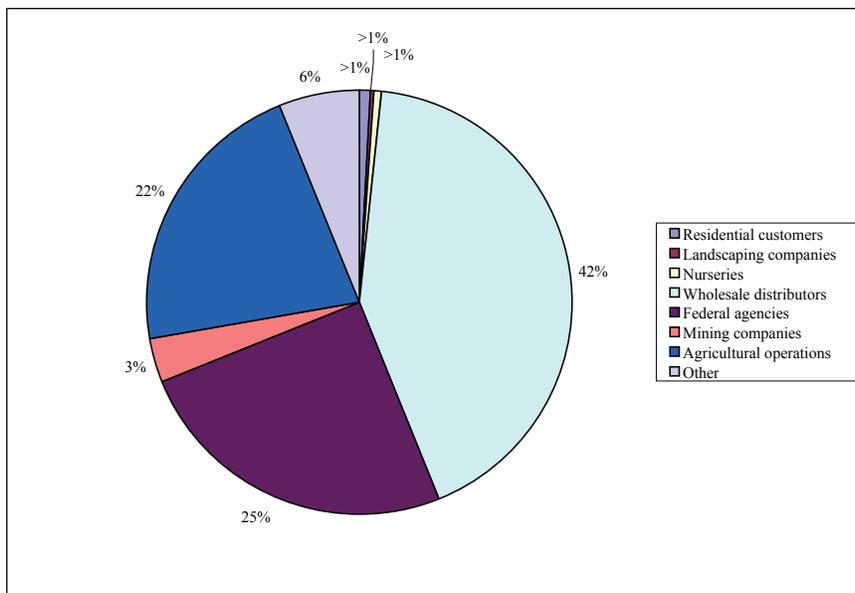
The next section of the survey asked respondents whether or not they routinely use a label on their finished products. If so, they were then asked if the label specified the product's Nevada origin and if so, whether or not customers seemed to respond positively to the additional information. Only one (16.7%) respondent said that his/her organization uses a label on its products and that "some" of those labels bear information relating to the product's Nevada roots, and that "some" customers respond positively to the information. Four (66.7%) respondents said

their organization does not routinely label its finished products and the remaining (16.7%) respondent did not answer the question.

Buyers

The last section of the survey listed several potential buyers of native seed and asked respondents what percent of their total business went to each of the categories. Respondents were given seven choices and the option to write in a response. The results of this question are summarized in Figure 2.1. Each entry represents the average percent of total business that producers receive from each industry.

Figure 2.1: Producer's Customer Base, by Industry

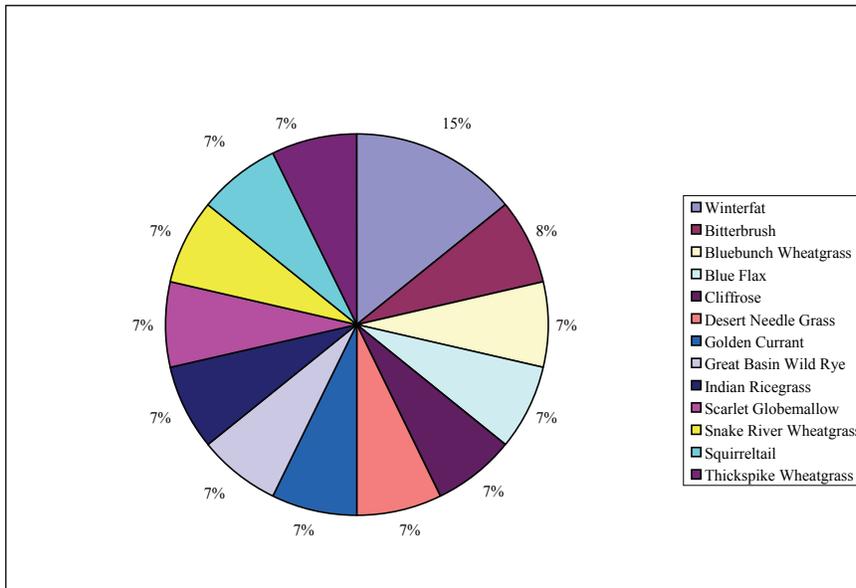


On average, 0.68% of the total business comes from residential customers, 0.48% comes from landscaping companies, 0.40% from nurseries, 40.34% from wholesale distributors, 24.0% from federal agencies (such as the Bureau of Land Management), 3.1% from mining companies, 20.8% from other agricultural operations, and the remaining 5.88% of respondents' business comes from miscellaneous other industries.

Seed Produced

In addition to the questions comprising the body of the survey, respondents were also asked to fill out a table relating to which seeds their organization produces, what quantities and quality they are able to produce, and how the finished product is packaged, labeled and delivered and at what time of year. Of all listed products, Winterfat seed was most common with 33.3% of respondents producing it. Each of the following species were produced by at least one producer: Bitterbrush, Bluebunch Wheatgrass, Blue Flax, Cliffrose, Desert Needle Grass, Golden Currant, Great Basin Wild Rye, Indian Ricegrass, Scarlet Globemallow, Snake River Wheatgrass, Squirreltail, and Thickspike Wheatgrass. Figure 2.2 summarizes the products grown. All respondents failed to fill the chart out completely, so no conclusions can be derived as to trends in packaging, labeling, delivery and production.

Figure 2.2: Species Commonly Grown by Producers



III. CURRENT AND POTENTIAL NATIVE PLANT MARKETS

Market Survey Description

To gain an understanding of the market demand for native Nevada plants and seeds, a survey was mailed to a random sampling of businesses/agencies that might sell or use such native plants and seeds. The surveys were mailed to florists, mining companies, reclamation companies, federal agencies, nurseries, landscaping companies and producers of natural health and beauty supplies. With the exception of the health and beauty suppliers, all of the companies surveyed were either based or had a location in Nevada. The health and beauty suppliers were located across the United States, but the majority were located in California. Two mailings of the survey were performed: a first mailing consisting of nine hundred fifty-five surveys and a second mailing of four hundred twenty-seven surveys. A total of forty-one valid responses were returned for a response rate of 3%.

The surveys were structured differently for each market, but followed a similar thread of questioning. The first part of each survey asked general questions about how the respondents' organization made purchasing decisions regarding plants and seeds, though the florist survey inquired about decorative grass purchases and plant purchases rather than plant and seed purchases as the other market surveys. The next section asked more specific questions about the type of company respondents regularly make purchases from and respondents were asked to rank several factors that might influence purchasing decisions. The third section of the survey gave respondents a series of ten hypothetical premiums over a base price and asked if they would be willing to pay such a premium. The final section inquired about the respondent organizations' employee structure, financial standing, and customer base. The markets will be analyzed as a whole and individually, in cases where individual results may be of interest. Pie charts explaining the data in percent form can be found in the individual section. In addition, a separate

survey was sent to private homeowners to examine the purchasing patterns and trends occurring in that market. This survey was sent to a random sampling of one thousand homeowners in Reno, Nevada. A total of one hundred seventy-three valid surveys were returned for a response rate of 17.3%. This survey was conducted the same general pattern of questioning as the market surveys and all of the results will be presented in the individual market results section.

Of the forty-one valid market surveys, responses came from fifteen landscapers (34.1%), fourteen nurseries (34.1%), six mining companies (14.6%), two federal agencies (4.88%), two florists (4.88%), and two health/beauty suppliers (4.88%). All surveys can be found in Appendix N through U.

Aggregate Market Results

Purchasing Decisions-Plants

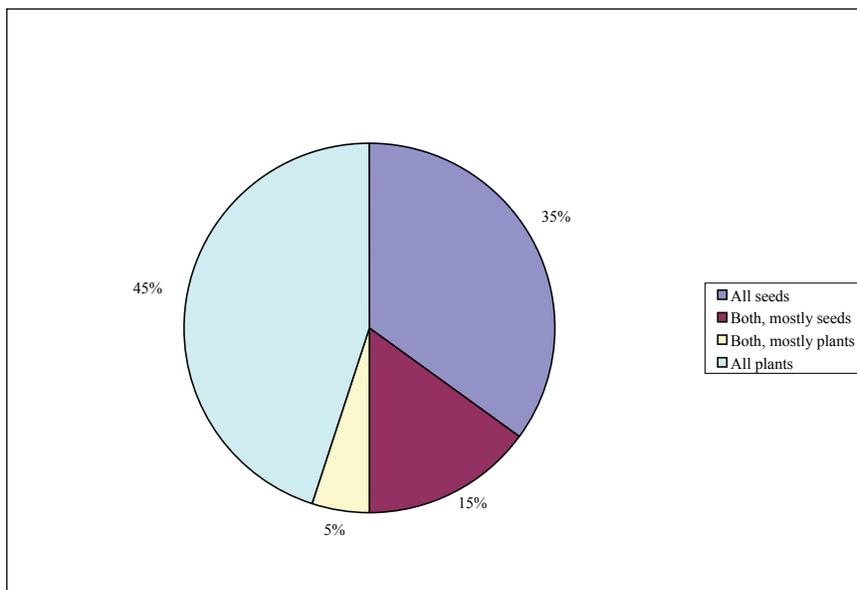
Respondents were asked whether or not they had free will when deciding from which company to purchase plants and seeds. Thirty-five respondents (85.4%) said they did have free will, five (12.2%) said that they did not have free will with such decisions, and one (2.44%) did not respond. Of the five respondents without free will with purchasing decisions, one (2.44%) said that the decision was made by a committee, one said that the decision was usually determined through a bid process, one said that their company propagates all of their own plants and uses no outside sources and one respondent worked for a landscaping company whose customers provide their own materials.

Plant Use vs. Seed Use

The following section began by asking respondents to rank whether they purchased mostly plants or mostly seeds on a scale of one to ten, with one as purchasing all seeds and ten as purchasing all plants. This question was posed only to landscapers, mines, and agencies, so the calculated percentages are out of twenty-one rather than forty-one. Seven of the respondents

(33.3%) chose either one or two, meaning they purchase only seeds. Three respondents (14.3%) chose either three or four, or purchase slightly more seeds than plants, while one respondent (4.76%) chose five or six, meaning that his organization purchases equal amounts of plants and seeds. Nine respondents (42.9%) chose either nine or ten, meaning they purchase only plants. One respondent did not answer the question (4.76%). Figure 3.1 summarized these results over all markets.

Figure 3.1: Plant vs. Seed Use Across Markets



Type of Supplier-Plants

The section went on to ask respondents to describe the type of supplier they most commonly use for plants by asking for a percentage breakdown of purchases by category. The results from this section of the survey are summarized in Table 3.1. Each entry represents the percent of total respondents and the number of actual responses given to each category of supplier for the percent of total purchases listed in the leftmost column. Again, categories for which there was no response are represented by three dashes.

Table 3.1: Category of Supplier Used-Plants

Percent of total purchases	Own NV nursery	Own non-NV nursery	NV nursery	Non-NV nursery	NV wholesaler	Non-NV wholesaler	Other
1%	---	---	2.44 (1)	---	---	---	---
5%	2.44 (1)	2.44 (1)	2.44 (1)	2.44 (1)	---	2.44 (1)	2.44 (1)
10%	4.88 (2)	---	2.44 (1)	---	7.31 (3)	---	---
15%	---	---	2.44 (1)	---	2.44 (1)	2.44 (1)	---
20%	2.44 (1)	---	2.44 (1)	---	---	---	---
40%	---	---	---	---	---	2.44 (1)	---
50%	---	---	---	---	---	2.44 (1)	2.44 (1)
60%	---	---	2.44 (1)	---	---	---	---
70%	---	---	---	---	---	2.44 (1)	---
80%	---	---	---	---	---	4.88 (2)	---
85%	---	---	2.44 (1)	---	---	4.88 (2)	---
90%	---	---	2.44 (1)	4.88 (2)	---	4.88 (2)	---
95%	2.44 (1)	---	---	---	---	2.44 (1)	---
99%	---	---	---	2.44 (1)	---	---	---
100%	9.76 (4)	2.44 (1)	4.88 (2)	14.6 (6)	---	14.6 (6)	2.44 (1)

One respondent (2.44%) said they obtain 5% of their plants from their own nursery located in Nevada. Two respondents (4.88%) said they obtain 10% from their own nursery in Nevada, one respondent (2.44%) said 20%, one respondent (2.44%) reported 95%, and four respondents (9.76%) said that they obtain all of their plants from their own nursery in Nevada. One respondent (2.44%) said they obtain 5% of their plants from their own nursery outside of Nevada and one respondent (2.44%) said they obtain 100% of their plants from their own nursery outside of Nevada.

One respondent said they purchase 1% of their plants from a Nevada nursery (2.44%), and an additional one response each was given to 5, 10, 15, 20, 60, 85, and 90% of total plants being purchased from a nursery in Nevada (2.44% each). Two respondents said they purchase 100% of their plants from a nursery in Nevada (4.88%).

One respondent (2.44%) said they purchase 5% of their total plants from a nursery outside of Nevada, two respondents (4.88%) said they purchase 90% of their plants from a non-Nevada nursery, and an additional one respondent (2.44%) said they purchase 99% of their plants from a nursery outside of Nevada. Six respondents (14.6%) said that they purchase 100% of their plants from a nursery outside of Nevada.

Three respondents (7.31%) said they purchase 10% of their plants from a wholesaler in Nevada, while one respondent (2.44%) said they purchase 15% of their plants from a Nevada wholesaler. More respondents made plant purchases from a wholesaler located outside of Nevada: one response each (2.44% each) was given to 5, 15, 40, 50, 70 and 95% of total purchases. Two responses each (4.88% each) were given to 80, 85, and 90% of total purchases and six responses (14.6%) were given to 100% of total plants as purchased from a non-Nevada wholesale supplier. One response each (2.44% each) was given to the "other" selection under the categories of 5, 50 and 100%. These respondents were asked to describe what other suppliers they used. One respondent (2.44%) said he purchases 50% of his plants from the Henderson campus and one respondent (2.44%) said that the large landscaping company they work for supplies 100% of the plants they use. The respondent who marked 5% as "other" did not elaborate.

Influential Factors-Plants

The following section asked respondents to rank the influence of certain factors on their purchasing decisions on a scale of one to ten, with one as the greatest influence and ten as the

least influence on the purchasing decision. The results of this question are summarized in Table 3.2. Each entry represents the percent of total responses and the actual number of responses given to each category for the respective rank listed in the leftmost column. Categories for which there was no response are represented by three dashes. Figures summarizing this information for each category can be found in the Individual Market section.

Table 3.2: Factors Influencing Choice of Supplier-Plants

Rank	Price	Convenience	Contract	Service	Quality	Ownership	Delivery method	Other
Most influential	39.0 (16)	19.5 (8)	---	26.8 (11)	73.2 (30)	19.5 (8)	12.2 (5)	9.76 (4)
Very influential	43.9 (18)	19.5 (8)	2.44 (1)	26.8 (11)	4.88 (2)	4.88 (2)	17.1 (7)	2.44 (1)
Somewhat influential	---	19.5 (8)	19.5 (8)	19.5 (8)	2.44 (1)	19.5 (8)	24.4 (10)	---
Slightly influential	---	7.32 (3)	31.7 (13)	---	---	9.76 (4)	9.76 (4)	---
Not influential	---	2.44 (1)	2.44 (1)	---	---	2.44 (1)	2.44 (1)	---

Sixteen respondents (39.0%) ranked price as one/two, meaning price is the all-important influential factor in their decision-making process, while eighteen respondents (43.9%) ranked price as three/four, meaning price is of great consideration. Price did not receive a rank lower than four. Eight respondents (19.5%) ranked convenience as one/two, meaning convenience is all-important, while eight responses (19.5%) were also given to three/four, meaning convenience has great influence on their plant purchasing decisions. Another eight respondents (19.5%) ranked convenience as five/six, meaning convenience is of some importance, while three respondents (7.31%) ranked convenience as seven/eight, meaning convenience is of little importance. One respondent (2.44%) gave convenience a rank of nine/ten, meaning it is not influential on their plant purchasing decisions. One respondent (2.44%) ranked the influence of contracts on purchasing decisions as three/four, meaning contracts have great influence, while

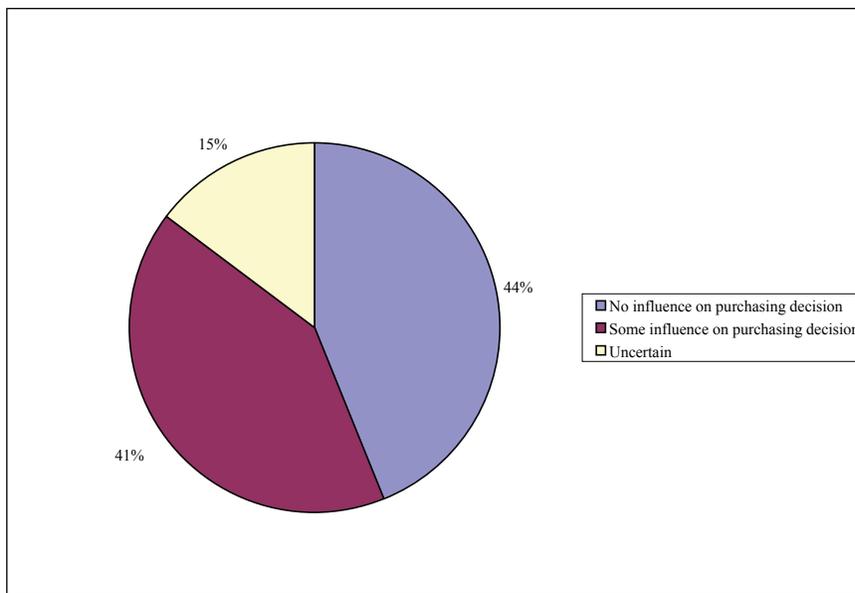
eight respondents (19.5) ranked contracts as five/six, meaning contracts are of some importance in purchasing decisions. Thirteen respondents ranked (31.7%) contracts as seven/eight, meaning they have little influence on purchasing decisions. One respondent (2.44%) ranked contracts nine/ten, meaning they have no influence on purchasing decisions at all. Later in the survey was a question asking respondents whether or not they engage in contracts with suppliers, and twenty-six (63.4%) respondents said that they did not, which may explain the distribution of this category. Eleven respondents (26.8%) ranked service as a one/two, meaning they consider service as an all-important influence on plant purchasing decisions, while another eleven respondents (26.8%) ranked service as three/four, meaning service has great influence on plant purchasing decisions. Eight respondents (19.5%) ranked service as five/six, meaning it has some influence on purchasing decisions. Thirty respondents (73.2%) ranked the quality of plants as one/two, meaning quality has the most influence on their plant purchasing decisions, while 2 respondents (4.88%) ranked the quality of the plants as three/four, and one respondent (2.44%) ranked quality as a five/six. Eight respondents (19.5%) ranked the ownership of the supply company as one/two, meaning they find ownership to be an all-important influence on plant purchasing decisions, while two respondents (4.88%) ranked ownership as three/four. Another eight respondents (19.5%) ranked ownership as five/six, 4 (9.76%) ranked it as seven/eight, and one respondent (2.44%) ranked ownership as nine/ten. Five respondents (12.2%) ranked delivery method as one/two, seven (17.1%) ranked delivery method as a three/four, ten respondents (24.4%) ranked delivery method as five/six, four respondents (9.76%) ranked it as a seven/eight, and one respondent (2.44%) ranked delivery method a nine/ten. Four respondents (12.2%) ranked "other" as one/two and listed this other as availability or type of plant in stock. One respondent (2.44%) ranked other as a three/four and described the "other" as whether or not

the company is Nevada-owned. Another one respondent (2.44%) ranked other as three/four and said the influence was whether or not the supplier had a toll-free telephone number.

Location vs. Price-Plants

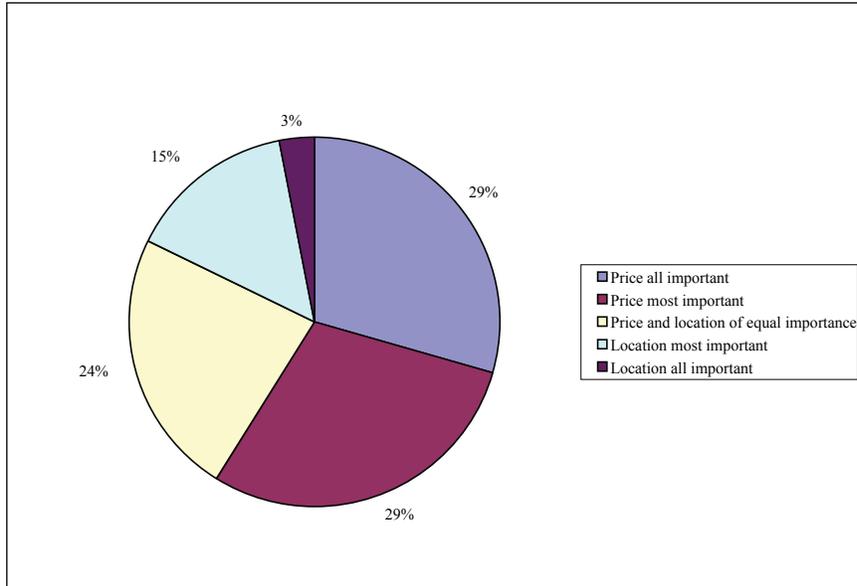
The final two questions specifically related to plants asked respondents if they considered the location where the plants were grown (in the state of Nevada or outside of Nevada) to be influential in their purchasing decisions, and also asked respondents to rank the importance of location versus the importance of the price of the plant. The results of this question are summarized in Figure 3.2 and Figure 3.3.

Figure 3.2: Influence of "Nevada Grown" on Purchasing Decisions Across Markets



Seventeen respondents (41.5%) said that whether or not the plants were grown in Nevada did have some sort of influence on their purchasing decision, while eighteen respondents (43.9%) said that location did not influence their plant purchasing decisions. Six respondents (14.6%) did not answer the question.

Figure 3.3: Influence of Price vs. Location Grown Across Markets-Plants



When asked to rank the influence of the price of the plant versus the influence of the location where the plant was grown, ten respondents (24.4%) chose either one or two, meaning price has all of the influence on their purchasing decision and location has none. Ten respondents (24.4%) chose either three or four, meaning price has the most influence and location has only slight influence. Eight respondents (19.5%) chose either five or six, meaning they consider price and location to be equally influential. Five respondents (12.2%) chose either seven or eight, meaning location has most influence, but price is influential as well. One respondent (2.44%) chose either nine or ten, meaning that location has primary influence and price is of no importance.

Purchasing Decisions-Seeds and Grasses

The next section of the survey asked the same questions as the previous section, only in reference to seed purchases rather than plant purchases, although the survey sent to florists asked about decorative grasses instead of plants. The florist results will be discussed separately.

To be sure that the floral companies surveyed had businesses applicable to this research, the respondents were asked if they sold individual plants (as opposed to only floral arrangements). Both respondents (100%) said that they did sell individual potted plants. Further, florists were asked if they sold native Nevada species. One respondent (50.0%) said that his company did sell Nevada natives, the other respondent (50.0%) said that his company did not sell Nevada natives.

Type of Supplier-Seeds

The next section asked respondents who purchase seeds to provide a breakdown of the type of seed suppliers they generally use by percent of total seed purchases. The results of this question can be found in Table 3.3. Each entry represents the percent of total responses and the number of actual responses given to each category for the percent of total seed purchases listed in the leftmost column.

Three (7.69%) respondents said that they obtain 100% of their seeds from their own nursery in Nevada. One respondent (2.56%) said they obtain 90% of their seeds from their own nursery outside of Nevada, and two respondents (5.13%) said they obtain 100% of their seeds from their own nursery outside of Nevada. Two respondents (5.13%) said they purchase 10% of their seeds from a nursery in Nevada, one respondent (2.56%) said they obtain 80% of their seeds from a nursery in Nevada, and three respondents (7.69%) said they purchase 100% of their seeds from a nursery in Nevada. One response each (2.56%) said that the respondent purchased 20, 85, and 90% of their seeds from a nursery outside of Nevada. One respondent (2.56%) said they purchase 25% of their seed from a Nevada wholesaler, while an additional one response each (2.56% each) was given to 40, 50, and 80% of total seed purchases from a Nevada wholesaler. Two respondents (5.13%) said they purchase 100% of their seed from a Nevada wholesaler. One respondent each (2.56% each) said that they purchase 50, 60, and 75% of their seed from a wholesaler outside of Nevada. Eleven respondents (28.2%) said they purchase

100% of their seed from a non-Nevada wholesale supplier. One respondent (2.56%) marked "other" and said that 15% of their seed is collected locally. One respondent (2.56%) selected "other" and said that 20% of their seed is purchased directly from the grower.

Table 3.3: Category of Supplier Used-Seeds

Percent of total purchases	Own NV nursery	Own non-NV nursery	NV nursery	Non-NV nursery	NV wholesaler	Non-NV wholesaler	Other
10%	---	---	5.13 (2)	---	---	---	---
15%	---	---	---	---	---	---	2.56 (1)
20%	---	---	---	2.56 (1)	---	---	2.56 (1)
25%	---	---	---	---	2.56 (1)	---	---
40%	---	---	---	---	2.56 (1)	---	---
50%	---	---	---	---	2.56 (1)	2.56 (1)	---
60%	---	---	---	---	---	2.56 (1)	---
75%	---	---	---	---	---	2.56 (1)	---
80%	---	---	2.56 (1)	---	2.56 (1)	---	---
85%	---	---	---	2.56 (1)	---	---	---
90%	---	2.56 (1)	---	2.56 (1)	---	---	---
100%	7.69 (3)	5.13 (2)	7.69 (3)	---	5.13 (2)	28.2 (11)	---

Respondents were asked to supply the names and addresses of plant and seed suppliers that they currently use. This information can be found in Table 3.4.

Table 3.4: Plant and Seed Suppliers Used

Name	Location (if known)
Granite Seed	Lehi, Utah
Rainer Seed	Washington
Comstock Seed	Minden, Nevada
NDF Washoe Nursery	Washoe Valley, NV
Moana Nursery	Reno, NV
Ensign Wholesale	Salt Lake City, UT
Greenleaf Wholesale	Reno, NV
DWF	Salt Lake City, UT
Flowers Centrals	Daytona Beach, FL
Perennial Greenhouses	Centerville, UT
Woodbridge	Lodi, CA
United Evergreen	
First Distributors	
Pearson's Herbs	Vista, CA
Boething Treeland	California
Haight Nursery	
Western Trees	
Stones Aces	
Loen Nursery	
Norman's Nursery	California
Villiage Nursery	California
Waldron's	Arizona
Star Nursery	Nevada
Hurley's nursery	Las Vegas, Nevada
Bitterroot Restoration	Corvallis, MT
Color Spot	
Alta Nursery	San Jacinto, CA
Bingham Nursery	Beaumont, CA
Clearwater	Idaho
Jackson Perkins	Medford, OR
Crestwood Growers	Kaysville, UT
Forage Genetics	Boise, ID
Northrup King	
Jerry Morris	
Olds Seeds	
Talbert Nursery	Pahrump, NV
Inland Nursery	Rancho Cucamonga, CA
Bingham Nursery	Rancho Cucamonga, CA
Western States Nursery	Phoenix, AZ
Burpee Seed	
Plants of Southwest	Sante Fe, NM
Applewood	Orvada, CO
Lawyer Nursery	Plains, MT
Seed Trust	Hailey, ID
Western Native Seeds	Coaldale, CO
Mountain States	Litchfield Park, AZ
Nakase Bros.	Huntington Beach, CA
Desert Tree Farm	Phoenix, AZ
Cactus Unlimited	
Seeds of Southwest	

Type of Supplier-Grasses

Both of the florist respondents (100%) said that they purchase 100% of their decorative grasses from a non-Nevada wholesaler.

Influential Factors-Seeds

Respondents were asked to rank the factors that influence their seed purchasing decisions on a scale of one to ten. The results of this question are summarized in Table 3.5. Each entry displays the percent of total responses and the actual number of responses given to each category for the rank value given in the leftmost column. A summarization of this information by category can be found in the Individual Markets section.

Table 3.5: Factors Influencing Choice of Supplier-Seeds

Rank	Price	Convenience	Contract	Service	Quality	Ownership/ Relationship	Delivery Method	Other
Most influential	53.8 (21)	12.8 (5)	2.56 (1)	15.4 (6)	46.1 (18)	5.13 (2)	7.69 (3)	15.4 (6)
Very influential	10.3 (5)	23.1 (9)	5.13 (2)	33.3 (13)	15.4 (6)	10.3 (4)	7.69 (3)	2.56 (1)
Somewhat influential	5.13 (2)	15.4 (6)	17.9 (7)	12.8 (5)	2.56 (1)	15.4 (6)	20.5 (8)	0.00 (0)
Slightly influential	0.00 (0)	5.13 (2)	25.6 (10)	0.00 (0)	0.00 (0)	20.5 (8)	15.4 (6)	0.00 (0)
Not influential	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)

Twenty-one respondents (53.8%) ranked price as one/two, meaning price has an all-important influence on their seed purchasing decisions. Five respondents (10.3%) ranked price three/four, meaning price has a great influence on their seed purchasing decisions. Two respondents (5.13%) ranked price as five/six, meaning price has some influence on their seed purchasing decisions. Five respondents (12.8%) ranked convenience one/two, meaning the convenience of the seed supplier has an all-important influence on their purchasing decisions. Nine respondents (23.1%) ranked convenience as a three/four, meaning convenience has a great

influence on their seed purchasing decisions. Six respondents (15.4%) ranked convenience as five/six, meaning it has some influence on their seed purchasing decisions, and two respondents (5.13%) ranked it as seven/eight, meaning convenience has little influence on their seed purchasing decisions. One respondent (2.56%) ranked contracts as one/two, meaning they believe contracts with seed suppliers have an all-important influence on their seed purchasing decisions. Two respondents (5.13%) ranked contracts three/four, while seven respondents (17.9%) ranked them as five/six, meaning they believe contracts have great influence and some influence on seed purchasing decisions, respectively.

Ten respondents (25.6%) ranked contracts seven/eight, meaning they have little influence on seed purchasing decisions. Six respondents (15.4%) ranked service as a one/two, meaning they believe that the service of the supplier has an extremely influential impact on their seed purchasing decisions. Thirteen respondents (33.3%) ranked service three/four, meaning they believe service has great influence on their seed purchasing decisions, while an additional five respondents (12.8%) ranked service as five/six, meaning service has only some influence on their purchasing choice. Eighteen respondents (46.1%) ranked quality as one/two, meaning they find the quality of the seeds supplied to be an all-important part of their purchasing decision-making process. Six respondents (15.4%) ranked quality as three/four, and one respondent (2.56%) ranked quality as five/six.

Two respondents (5.13%) ranked the ownership of the supply company or a previous relationship with the supplier as one/two, meaning they feel that the ownership of the supplier is an extremely important part of their seed purchasing decision. Four respondents (10.3%) ranked ownership as three/four, six respondents (15.4%) ranked ownership as five/six and eight respondents (20.5%) ranked ownership seven/eight. Three respondents (7.69%) ranked the

delivery method used by the seed supplier as one/two and an additional three respondents (7.69%) ranked delivery method as three/four. Six respondents (15.4%) ranked delivery method as five/six and eight respondents (20.5%) ranked delivery method as seven/eight. Six respondents (15.4%) ranked "other" as one/two, and described "other" as variety (2.56%), availability (2.56%), the ability to purchase from a cooperative (2.56%), the supplier's knowledge of product and local areas (2.56%), and germination rating (2.56%). One respondent (2.56%) ranked "other" as three/four and described "other" as whether or not the supplier has a toll-free telephone number.

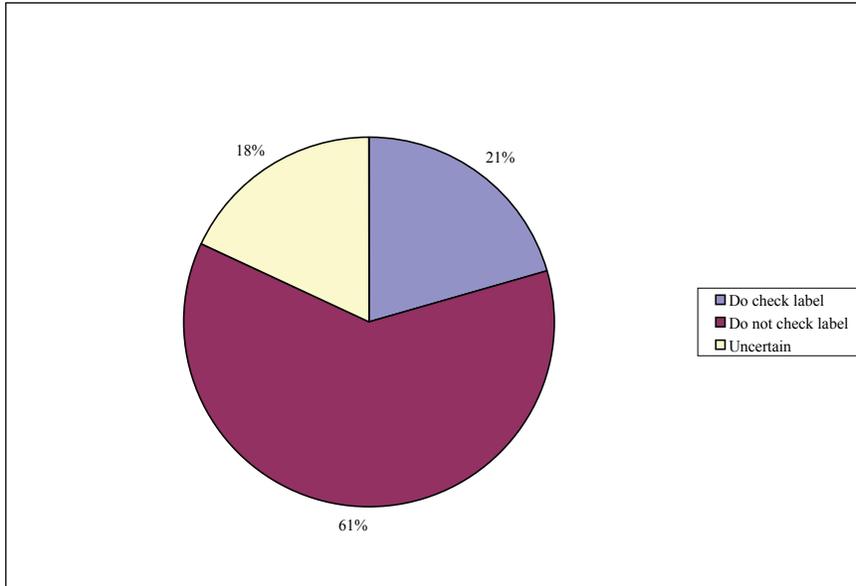
Influential Factors-Grasses

One respondent (50.0%) ranked price as one/two, meaning they consider price to be an all-important factor is the decorative grass purchasing process, while one respondent (50%) ranked price as three/four. Two respondents (100%) ranked convenience as one/two. One respondent each (50% each) ranked service, quality and ownership as one/two. Two respondents (100%) ranked delivery method as one/two. One respondent (50%) ranked "other" as one/two and described "other" as uniqueness of the grasses the supplier offers.

Location vs. Price-Seeds:

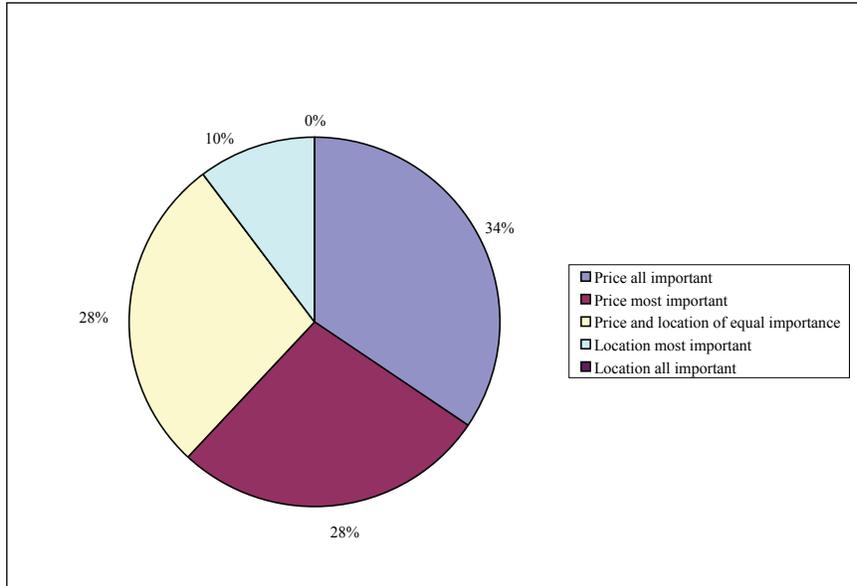
Respondents were asked whether or not respondents checked to see whether the seeds they purchased will milled in Nevada or outside of Nevada (See Figure 3.4). Eight respondents (20.5%) said they do check the label to see where seeds were milled, while 24 respondents (61.5%) said they do not. Seven respondents (17.9%) did not answer the question.

Figure 3.4: Do Market Respondents Check Seed Milling Location?



When asked to rank the importance of price versus the importance of milling location on a scale of one to ten (See Figure 3.5), ten respondents (25.6%) ranked the importance as one/two, meaning they believe location is all-important. Eight respondents (20.5%) answered three/four, meaning they consider price to be most important, but the location where the seeds were milled is also important. Another eight respondents (20.5%) answered five/six, meaning they find price and location to be of equal importance. Three respondents (7.69%) answered seven/eight, meaning they find location grown to be slightly more influential than price.

Figure 3.5: Importance of Price vs. Milling Location Across Markets



Contracts

When asked if they currently engage in contracts with plant/seed suppliers, ten respondents (24.4%) said that they do, twenty-six respondents (63.4%) said they do not, and the remaining five respondents (12.2%) did not answer the question. When asked if they would be willing to contract with a cooperative of native Nevada seed growers, twenty-one respondents (51.2%) said that they would be willing to contract, sixteen respondents (39.0%) said that they would not, and the remaining four respondents (9.76%) did not answer the question. Those respondents who said that they would not be willing to contract with a seed cooperative were asked to explain why they would not be willing to contract. One respondent (2.44%) said his company had no need to contract with a seed cooperative while another one respondent (2.44%) said his company uses all of their own plants and so does not need an outside supplier. One respondent (2.44%) said it would depend on the specifics of the contract, and one respondent (2.44%) from a California-based beauty supply company said that his company would probably

rather contract with a known California-based supplier. The other twelve respondents (29.3%) did not specify why they would not be willing to contract with a native Nevada seed cooperative.

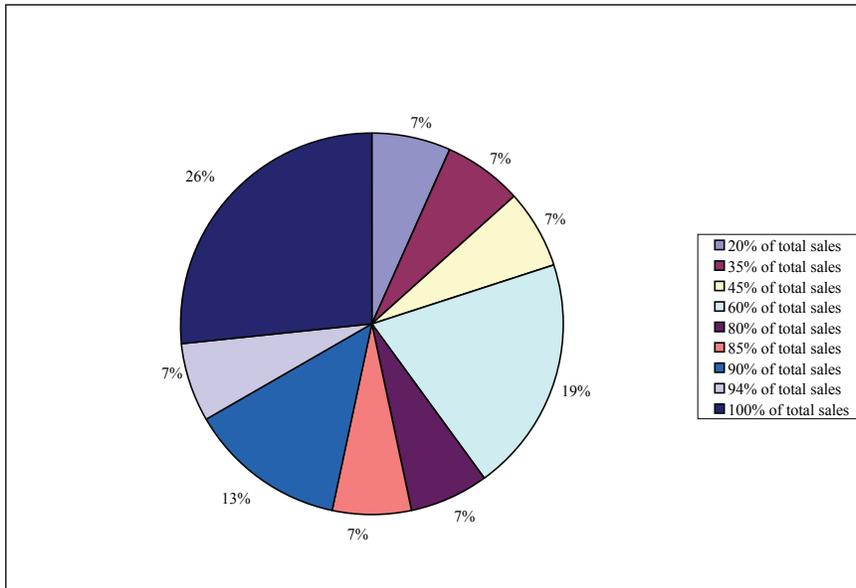
Customer Base

The final section asked respondents to break down their customer base in terms of percentages based on several different categories. The results of this question can be found in Figure 3.6 and Table 3.6. Figure 3.6 describes the percent of total responses for the given percents of total sales made to private businesses and homeowners. Table 3.6 describes the percent of total responses and the actual number of responses given for the percent of total sales made to the categories listed in the leftmost column. Again, categories that did not receive any responses are represented by three dashes.

Private Business/Homeowners

Four respondents (9.76%) reported that 100% of their business comes from either private businesses or homeowners. Three respondents (7.32%) said that 60% of their business comes from private businesses or homeowners, while another two respondents reported 90% of their business as coming from the same. One respondent (2.44%) said his company sells 20% of its product to either private businesses or homeowners, while another one respondent each (2.44% each) said that 35, 45, 80, 85, and 94% of their business comes from private businesses or homeowners.

Figure 3.6: Customer Base-Private Businesses/Homeowners



Landscaping Companies

One respondent each (2.44% each) said that 1, 10, 15, 30, and 40% of their business comes from landscaping companies.

Nurseries

Two respondents (4.88%) said that 10% of their business comes from nurseries. One respondent (2.44%) said that 1% of his business comes from nurseries.

Federal Agencies

One respondent (2.44%) said that 1% of his/her business goes to federal agencies, and an additional one respondent (2.44%) said that 100% of his/her business goes to federal agencies, such as the Bureau of Land Management.

Mining Companies

One respondent (2.44%) said that 2% of his business goes to mining or reclamation companies.

Food

One respondent (2.44%) said that 2% of his products are sold as food, while one respondent (2.44%) said that 20% of his products are sold as food.

Wholesale

One respondent (2.44%) said that 30% of his business goes to a wholesale distributor.

Internet Commerce

One respondent (2.44%) said that 3% of his products are sold to online distributors, while another one respondent (2.44%) said that 15% of his products are sold to online distributors.

Other

One respondent (2.44%) said that 20% of his business goes to "other" companies, described as farmers. One respondent (2.44%) said that 40% of his business goes to the city, farmers, ranchers, apartment complexes and others. One respondent (2.44%) said that 50% of his business goes to farmers, and one other respondent (2.44%) said that 80% of his business is commercial.

Plants, Grasses and Seeds Used by Market

Respondents were asked to fill in a chart describing the plants, grasses, and seeds that they purchase on a regular basis. Additionally, respondents were asked to supply information related to the quantity that they purchase on an annual basis, the packaging and delivery methods that they prefer and other attributes. Few respondents gave all the information that was requested. Hence, Table 3.7 is simply a list, by industry, of species that the respondents said they do purchase on a regular basis. None of the floral industry respondents responded to this section of the survey, so that industry is not present in the table.

Table 3.6: Customer Base-Landscaping Companies, Nurseries, Federal Agencies, Mining Companies, Food, Wholesale, Internet Commerce, and Other

Percent of total business	1%	2%	3%	10%	15%	20%	30%	40%	50%	80%	100%
Customer											
Landscaping	2.44 (1)			2.44 (1)	2.44 (1)		2.44 (1)	2.44 (1)			
Nurseries	2.44 (1)	---	---	4.88 (2)	---	---	---	---	---	---	---
Federal Agencies	2.44 (1)	---	---	---	---	---	---	---	---	---	2.44 (1)
Mining companies	---	2.44 (1)	---	---	---	---	---	---	---	---	---
Food	---	2.44 (1)	---	---	---	2.44 (1)	---	---	---	---	---
Wholesale	---	---	---	---	---	---	2.44 (1)	---	---	---	---
Internet Commerce	---	---	2.44 (1)	---	2.44 (1)	---	---	---	---	---	---
Other	---	---	---	---	---	2.44 (1)	---	2.44 (1)	2.44 (1)	2.44 (1)	---

Table 3.7: Plants Used By Industry

Landscaping	Nurseries	Agencies	Mining Companies	Health/Beauty
Fourwing Saltbrush	Blue Flax	Hycrest Crested Wheatgrass	Great Basin Wildrye	Rosemary
Wyoming Big Sagebrush	Fourwing Saltbrush	Nordan Crested Wheatgrass	Bluebunch Wheatgrass	Lavender
Basin Big Sagebrush	Indian Ricegrass	Ephraim Crested Wheatgrass	Mountain Big Sagebrush	True Lavender
Antelope Bitterbrush	Shadscale	Intermediate wheatgrass	Winterfat	Melissa
Indian Ricegrass	Mountain Big Sagebrush	Oahe	Antelope Bitterbrush	Peppermint
Bluebunch Wheatgrass	Antelope Bitterbrush	Critana	Blue Flax	Spearmint
Bottlebrush Squirreltail	Great Basin Wildrye	Bannock	Scarlet Globemallow	Catnip
Sandberg Bluegras	Desert Bitterbrush	Arriba	Indian Ricegrass	Scented Geraniums
Blue Flax	Thickspike Wheatgrass	Secar	Penstemon	Aloe Vera
Scarlet Globemallow	Cercocarpis Ledifolia	Magnar	Fourwing Saltbrush	Jojoba
Western Yarrow	Apache Plume	Bozoisky	Shadscale	
Buffalo Juniper	Ephedra Nevadense	Manchar	Thickspike Wheatgrass	
Blue Juniper	Opuntia Prickly Pear Cactus	Idaho Fescue	Palmer Penstemon	
Seal Green Juniper	Penstemon Palmerii	Sandberg Blue Grass	Wyoming Big Sagebrush	
Yellow Eronymous Golden Tip	Pinus Monofylla	Nezpar	Snake River Wheatgrass	
Blue-Chip Juniper	Pinus Jeffreyii	Rimrock	Desert Bitterbrush	
Spearmint Juniper	Archtophaphylis Patula	Needle-and-Thread Grass	Basin Big Sagebrush	
Blue Point Juniper	Prunus Andresonii	Ladak Alfalfa	Black Sagebrush	
Golden Arborvitae	Ribes Nevadense	Appar Blue Flax	Western Yarrow	
Hollywood Twister Juniper		Delar Small Burnet	Western Wheatgrass	
Modell Pine		Western Yarrow	Cicer Milkvetch	
		Fourwing Saltbush	Alkali Sacaton	
		Shadscale	Slender Wheatgrass	
		Bitterbrush	Small Burnet	
		Forage Kochia	Lewis Blue Flax	
		Basin Big Sagebrush	Idaho Fescue	
		Mountain Big Sagebrush	Quickguard	
		Winterfat	Yellow Sweetclover	
			Crested Wheatgrass	
			Quailbush	
			Sandberg Bluegrass	

Market Bidding

Each survey contained a section in which the respondent was offered a hypothetical native Nevada plant at a standard base price. The respondent was then offered a series of ten bids represented as a percent increase over the base price of the hypothetical plant, and was asked to rank his interest in the plant at the premium price on a scale of one to five. A rank of one meant the respondent would definitely not purchase the plant, two meant they would probably not purchase the product, three indicated uncertainty, four meant they would probably purchase the product, and a rank of five indicated the respondent would definitely purchase the product. Five versions of each survey were distributed and each version presented the same ten bids in a slightly different order. The bidding results are summarized in Table 3.8, with the percent of total responses and the actual number of responses listed for each premium bid in the leftmost column.

Table 3.8: Response to Premium Bids Across Markets

Bid	No	Yes	Uncertain
10%	12.9 (5)	41.0 (16)	46.2 (18)
20%	18.0 (7)	30.8 (12)	51.3 (20)
30%	28.2 (11)	17.9 (7)	53.9 (21)
40%	35.9 (14)	7.69 (3)	56.4 (22)
50%	35.9 (14)	7.69 (3)	56.4 (22)
60%	46.2 (18)	5.13 (2)	48.8 (19)
70%	46.2 (18)	5.13 (2)	48.8 (19)
80%	48.8 (19)	5.13 (2)	46.2 (18)
90%	48.8 (19)	5.13 (2)	46.2 (18)
100%	51.3 (20)	5.13 (2)	43.6 (17)

When offered a premium of 10% over the standard price, three respondents (7.69%) said they would definitely not be willing to pay the premium, two respondents (5.13%) said they would probably not pay the premium, two respondents (5.13%) were unsure, eight respondents (20.5%) said they would probably pay the premium and an additional eight respondents (20.5%) said they would definitely pay the premium. Sixteen respondents (41.0%) did not answer the question.

When offered a premium of 20% over the standard price, four respondents (10.3%) said they would definitely not pay the premium, three respondents (7.69%) said they would probably not pay the premium, four respondents (10.3%) were unsure, eight respondents (20.5%) said they would probably pay the premium, and four respondents (10.3%) said they would definitely pay the premium. Sixteen respondents (41.0%) did not answer the question.

When offered a premium of 30% over the base price, five respondents (12.8%) said they would definitely not pay the premium, six respondents (15.4%) said they would probably not pay the premium, four respondents were unsure (10.3%), and seven respondents (17.9%) said they would probably pay the premium. No respondents (0.00%) said they would definitely pay the premium, and seventeen respondents (43.6%) failed to answer the question.

When offered a premium of 40% over the standard price, nine respondents (23.1%) said they would definitely not pay the premium, five respondents (12.8%) said they would probably not pay the premium, five respondents (12.8%) were unsure, and three respondents (7.69%) said they would probably pay the premium. No respondents (0.00%) said they would definitely pay the premium, and seventeen respondents (43.6%) did not answer the question.

When offered a premium of 50% over the base price, eight respondents (20.5%) said they would definitely not pay the premium, six respondents (15.4%) said they would probably not pay

the premium, five respondents (12.8%) were unsure, and three respondents (7.69%) said they would probably pay the premium. No respondents (0.00%) said they would definitely pay the premium, and seventeen respondents (43.6%) did not answer the question.

When offered a premium of 60% over the base price, thirteen respondents (33.3%) said they would definitely not pay the premium, five respondents (12.8%) said they would probably not pay the premium, two respondents (5.13%) were unsure, and two respondents (5.13%) said they would probably pay the premium. No respondents (0.00%) said they would definitely pay the premium, and seventeen respondents (43.6%) did not answer the question.

When offered a premium of 70% over the base price, thirteen respondents (33.3%) said they would definitely not pay the premium, five respondents (12.8%) said they would probably not pay the premium, one respondent (2.56%) was unsure, and two respondents (5.13%) said they would probably pay the premium. No respondents (0.00%) said they would definitely pay the premium, and eighteen respondents (46.2%) did not answer the question.

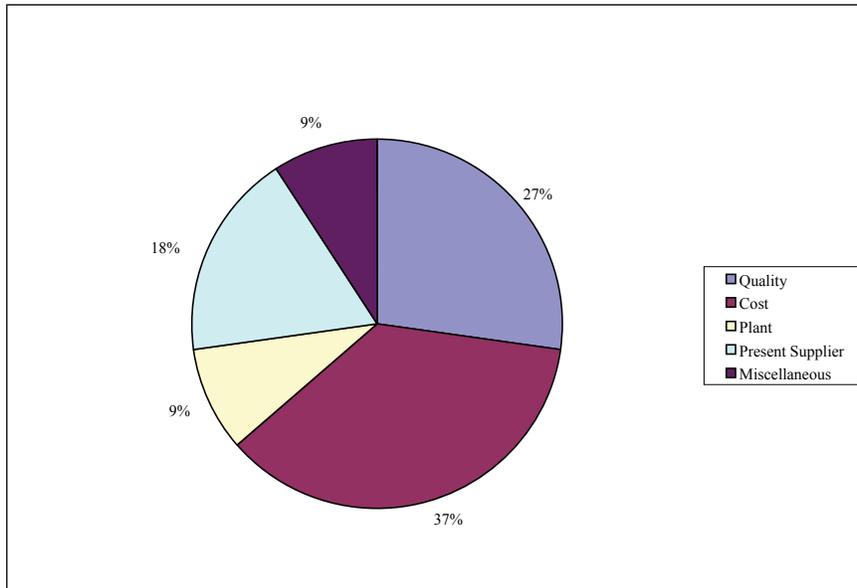
When offered a premium of 80% over the standard price, eighteen respondents (46.2%) said they would definitely not pay the premium, one respondent (2.56%) would probably not pay the premium, one respondent was unsure, and two respondents (5.13%) said they would probably pay the premium. No respondents (0.00%) said they would definitely pay the premium, and seventeen respondents (43.6%) did not respond.

When offered a premium of 90% over the base price, eighteen respondents (46.2%) said they would definitely not pay the premium, one respondent (2.56%) said he would probably not pay the premium, one respondent (2.56%) was unsure, and two respondents (5.13%) said they would probably pay the premium. No respondents (0.00%) said they would definitely pay the premium, and seventeen respondents (43.6%) did not answer the question.

When offered a premium of 100% over the standard price, nineteen respondents (48.7%) said they would definitely not pay the premium, one respondent (2.56%) said they would probably not pay the premium, one respondent (2.56%) was unsure, and two respondents (5.13%) said they would probably pay the premium. No respondents (0.00%) said they would definitely pay the premium, and sixteen respondents (41.0%) did not answer the question.

The respondents were then asked to give a brief description of why they were unable to give a definitive answer if they had responded with either two, three, or four to any of the bids. Respondents were given a choice of five different reactions to the bids: "Definitely No," "Probably No," "Not Sure," "Probably Yes," and "Definitely Yes." If respondents were unable to select one of the definite responses, they were asked to give a brief explanation as to why their decision was unsure. Although respondents were asked to give an explanation for each uncertain response, all but one respondent gave a single general explanation for the reasoning behind all of their reactions. Responses were grouped into five categories: Quality, Cost, Plant, Supplier, and Miscellaneous. The results of this question are summarized in Figure 3.7. Each entry represents the percent of total responses and the actual number of responses given to each category.

Figure 3.7: Factors Motivating Uncertain Responses Across Markets



Quality

Responses were put into this category if the decision-making process appeared to have been based around some quality aspect of the product. Three responses (27.3%) were included in this category. Examples of these responses are: "[My decision] depends on germination and purity testing" and "It depends on the quality of the product in relation to the presentation."

Cost

Responses were placed in the Cost category if the respondent's decision-making process was centered on the cost of the product. Four responses (36.4%) were included in this category. Examples of these responses are: "[My] profit margin is too low at this time" and "[My decision] depends on the quantity we order and the total cost difference- are we considering a \$100 difference or a \$2000 difference?"

Plant

Responses were placed in the Plant category if the respondent's decision-making process was based on the actual type of plant product in question. One response (9.10%) was included in this

category. This respondent explained the uncertain response by saying, "I'm not sure we would even buy these types of plants."

Present Supplier

Responses were placed in the Supplier category if the response appeared to be based on the respondent's current supplier or supply method. Two responses (18.2%) were included in this category. Examples of these responses are: "Usually we seek California- or Oregon-grown organic plants" and "[We are] satisfied with the current supplier and results."

Miscellaneous

The Miscellaneous category was created to describe all responses that did not seem to fit in the previous categories. One response (9.10%) was included in this category. This respondent explained his or her uncertainty by saying, "[My decision] depends upon availability."

Individual Market Results

The following section summarizes survey results by individual market and in some cases by aggregate market as well. The final section is devoted to the homeowner survey results.

When asked to discuss whether the ratio in which they purchase plants and seeds for resale, 45% of nursery owners said they purchase all seeds. Twenty-two percent said they purchase both, but more seeds than plants, while 22% of nursery owners said they purchase both, but more plants than seeds. Eleven percent of nursery owners said they purchase only plants.

Figure 3.8: Plant vs. Seed Use-Nurseries

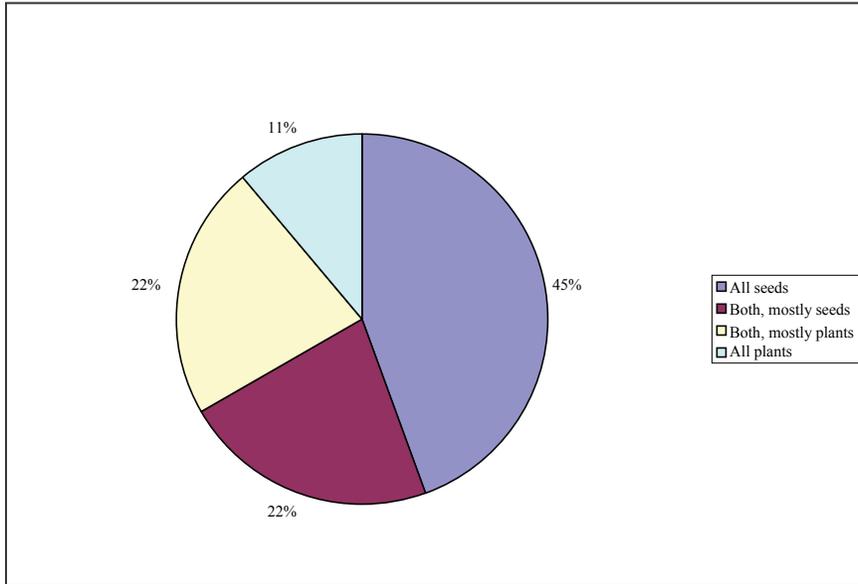
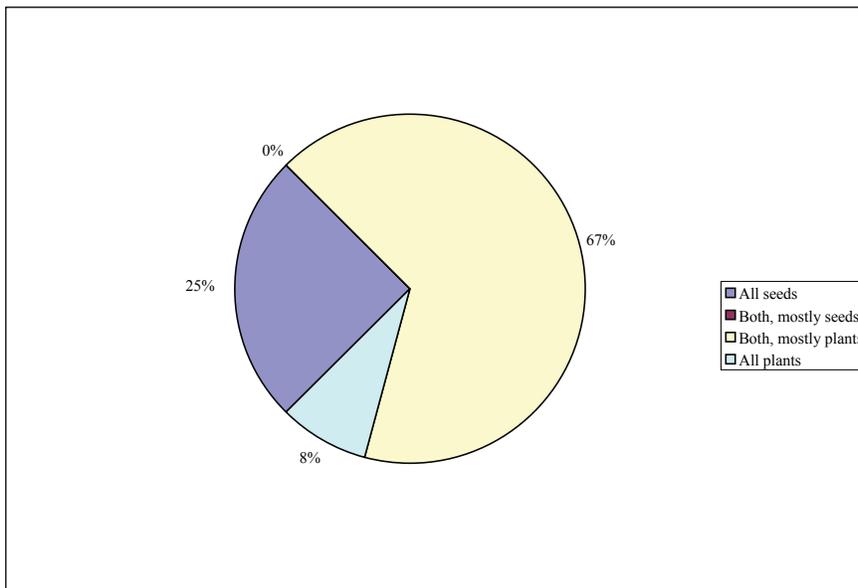
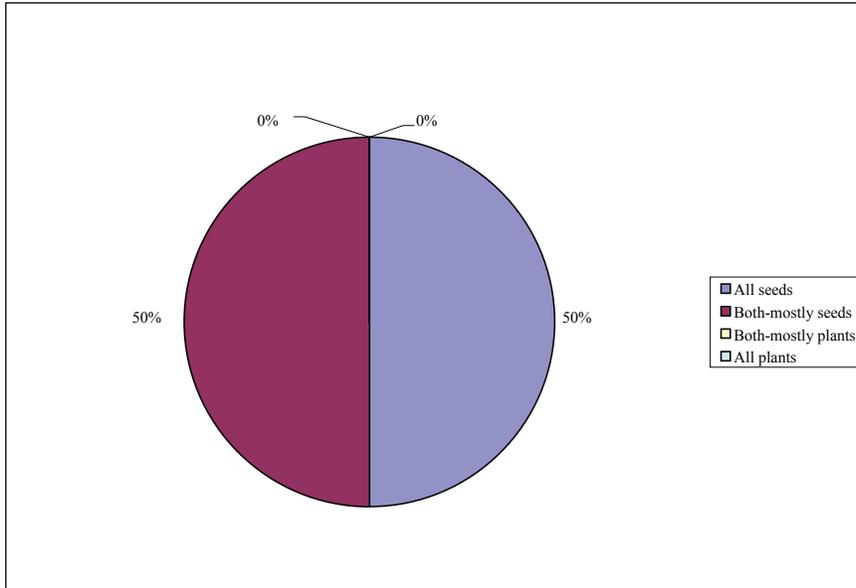


Figure 3.9: Plant vs. Seed Use-Landscaping



Landscapers were asked to explain whether they purchase more plants or seeds for their use. Sixty-seven percent of respondents said they purchase both plants and seeds, with an emphasis on plants. Twenty-five percent said they purchase all seeds, and 8% said they purchase all plants. No respondents said they purchase more seeds than plants.

Figure 3.10: Plant vs. Seed Use-Agency



Agencies were asked to describe their purchasing patterns for plants and seeds by ranking purchases of each against one another. Fifty percent of respondents said they purchase all seeds, and 50% of respondents said they purchase both with an emphasis on seeds. No respondents said they purchase more plants or all plants.

Figure 3.11: Plant vs. Seed Use Across Markets

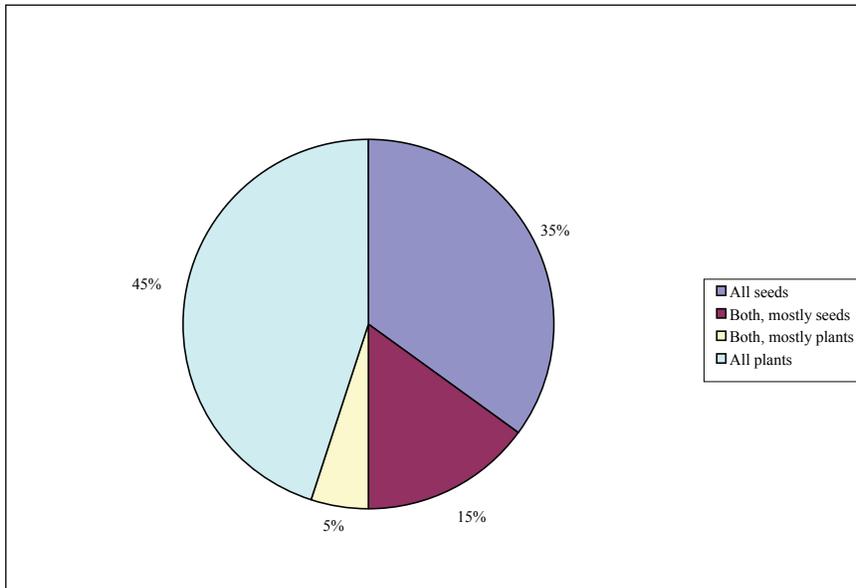
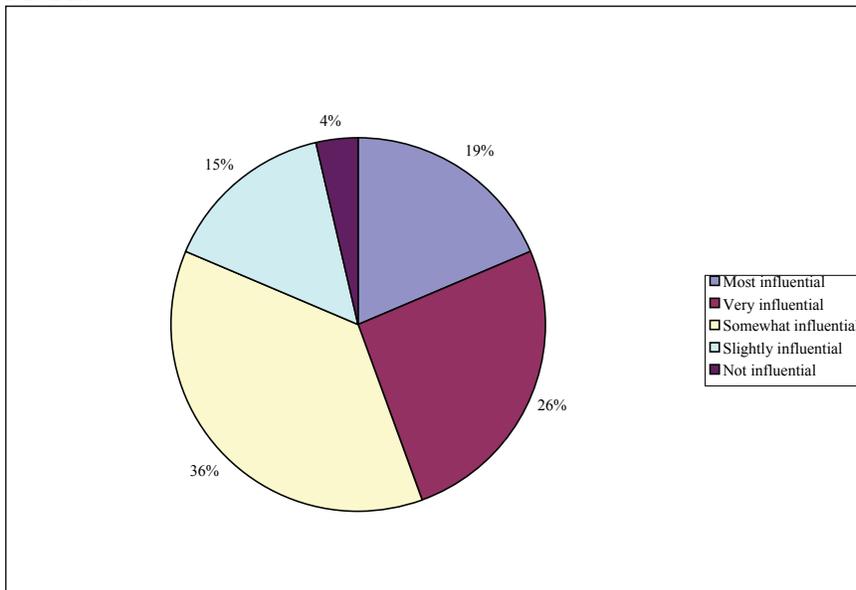


Figure 3.11 shows plant and seed use across all markets. Forty-five percent of respondents said they purchase all plants, 35% of respondents said they purchase all seeds, 15% said they purchase both with an emphasis on seeds, and 5% of respondents said they purchase both with an emphasis on plants.

Figure 3.12: The Influence of Delivery Method on the Choice of Plant Suppliers Across Markets



Respondents were asked to rank the influence of a supplier's delivery method on their choice of plant suppliers. Thirty-six percent of respondents considered delivery method to be somewhat influential, 26% of respondents said delivery method was very influential, 19% of respondents said that delivery method was the most influential factor in their purchasing decision, 15% of respondents said that delivery method is slightly influential, and 4% of respondents did not consider delivery method to be at all influential.

Figure 3.13: The Influence of Delivery Method on the Choice of Seed Suppliers Across Markets

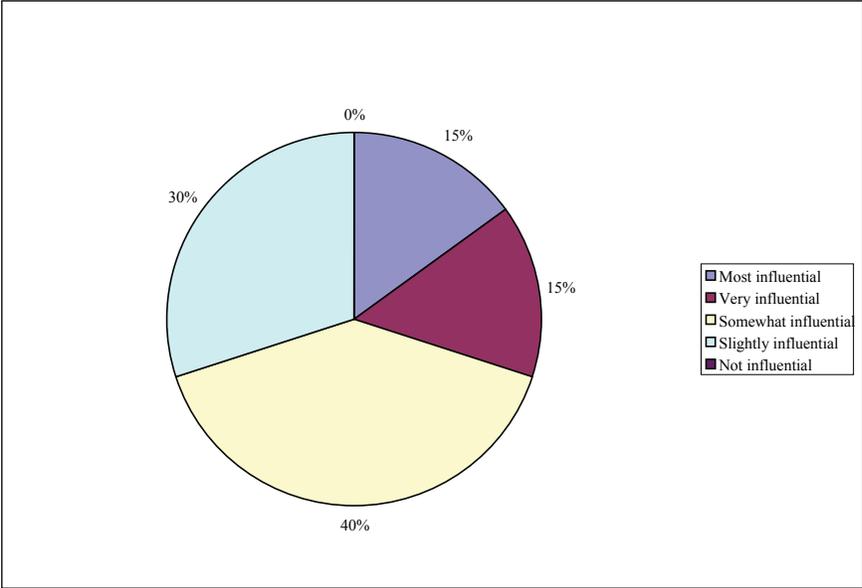
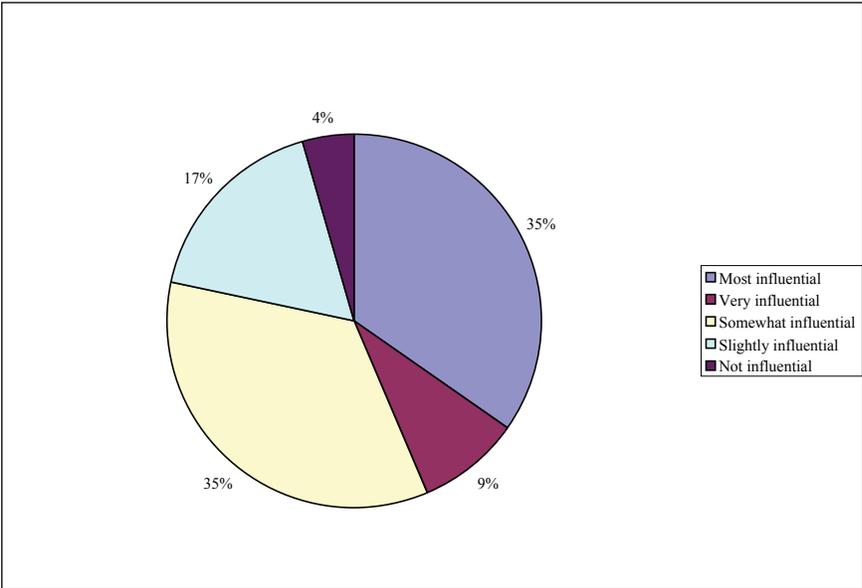


Figure 3.14: The Influence of Ownership/Relationship on the Choice of Plant Suppliers Across Markets

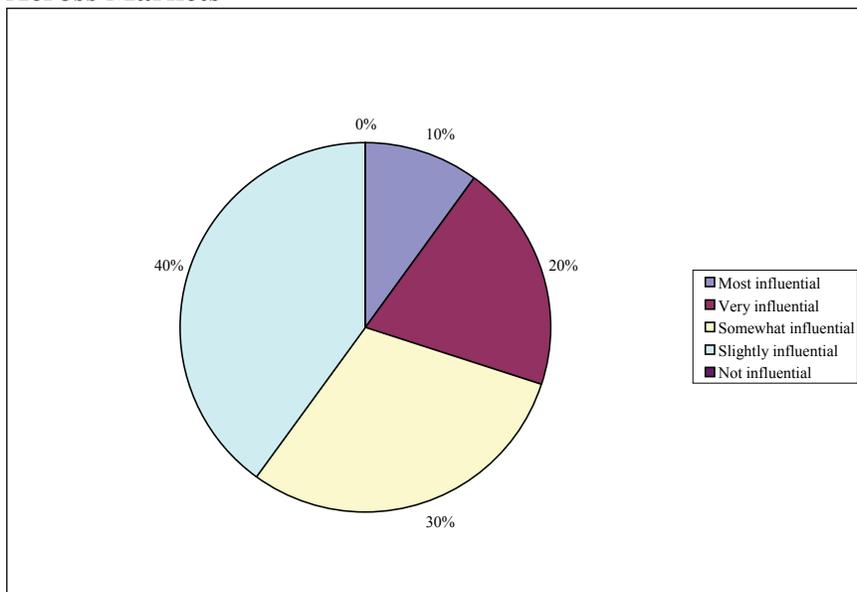


Respondents were asked to rank the influence of delivery method on their choice of seed suppliers. Forty percent of respondents said that delivery method was somewhat influential, 30% said that delivery method is slightly influential, 15% said that delivery method was very

influential, and 15% said that delivery method is the most influential factor in choosing a seed supplier. No respondents said delivery method was not influential.

Respondents were asked to rank the influence of the ownership of the plant vendor or a previous relationship with the vendor on their choice of plant suppliers. Thirty-five percent of respondents considered ownership to be the most influential factor, while another 35% of respondents considered it to be somewhat influential. Seventeen percent of respondents felt that ownership was slightly influential, 9% found it to be very influential, and 4% of respondents considered ownership to be no influence on their choice of plant suppliers.

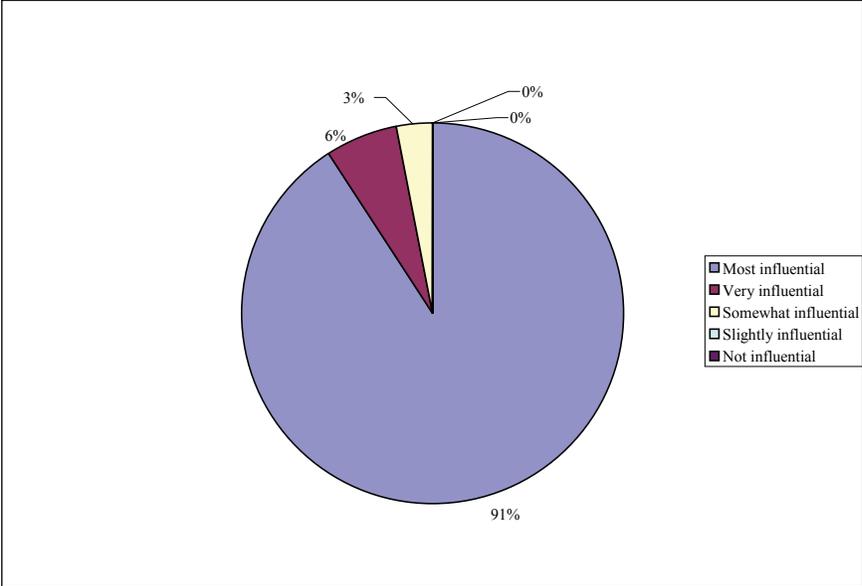
Figure 3.15: The Influence of Ownership/Relationship on the Choice of Seed Suppliers Across Markets



Respondents were asked to rank the influence of vendor ownership or a previous relationship with a vendor on their choice of seed supplier. Forty percent of respondents said that ownership is slightly influential, 30% said that ownership is somewhat influential, 20% said that ownership is very influential, and 10% of respondents said that ownership is the most

influential factor in choosing a seed supplier. No respondents said that ownership is not an influential factor.

Figure 3.16: The Influence of Quality on the Choice of Plant Suppliers Across Markets



Respondents were asked to rank the influence of the quality of plants on their choice of plant suppliers. Ninety-one percent of respondents said that quality is the most influential factor in their choice of plant suppliers, 6% said that quality was very influential, and 3% of respondents felt that quality was somewhat influential. No respondents said that quality was either slightly or not at all influential.

Figure 3.17: The Influence of Quality on the Choice of Seed Suppliers Across Markets

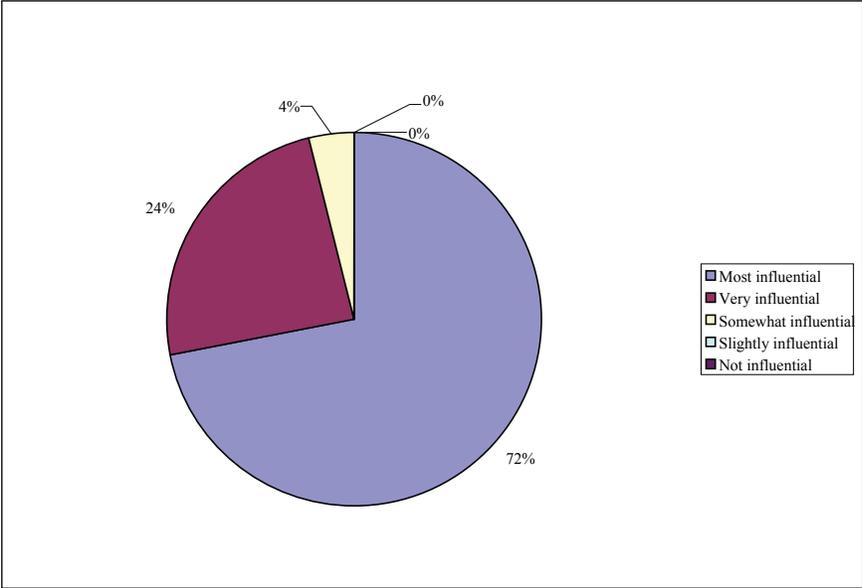
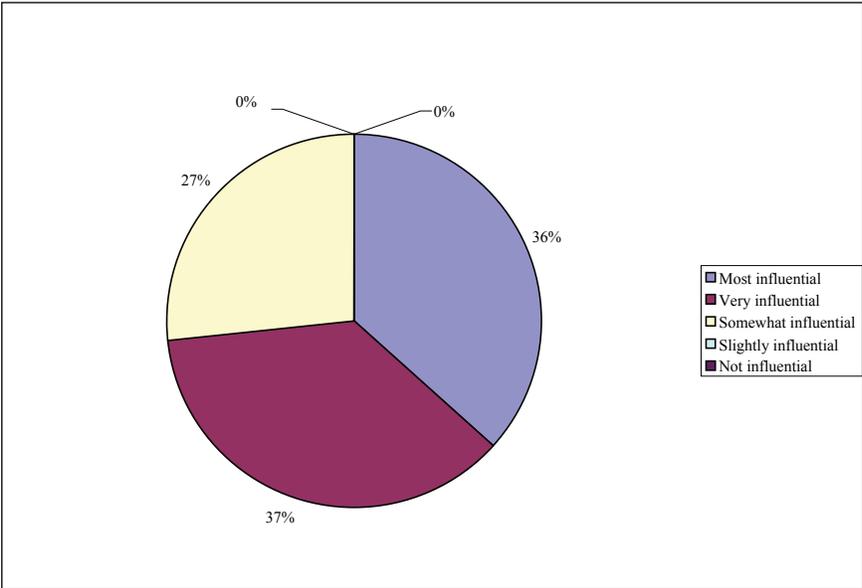


Figure 3.18: The Influence of Service on the Choice of Plant Suppliers Across Markets

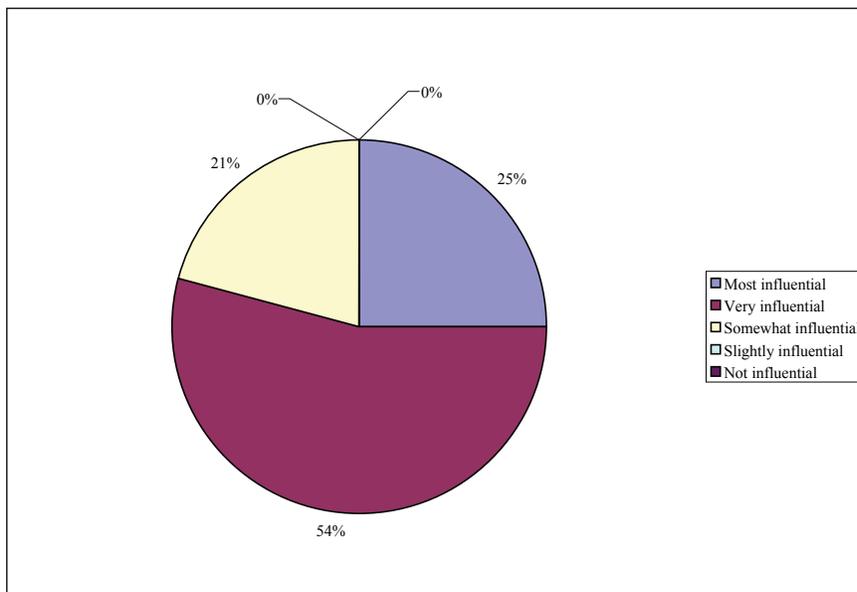


Respondents were asked to rank the influence of the quality of products offered on their choice of seed suppliers. Seventy-two percent of respondents said that quality is the most influential factor in choosing a seed supplier, 24% said that quality is very influential, and 4%

said that quality is somewhat influential. No respondents said that said quality is either slightly or not at all influential.

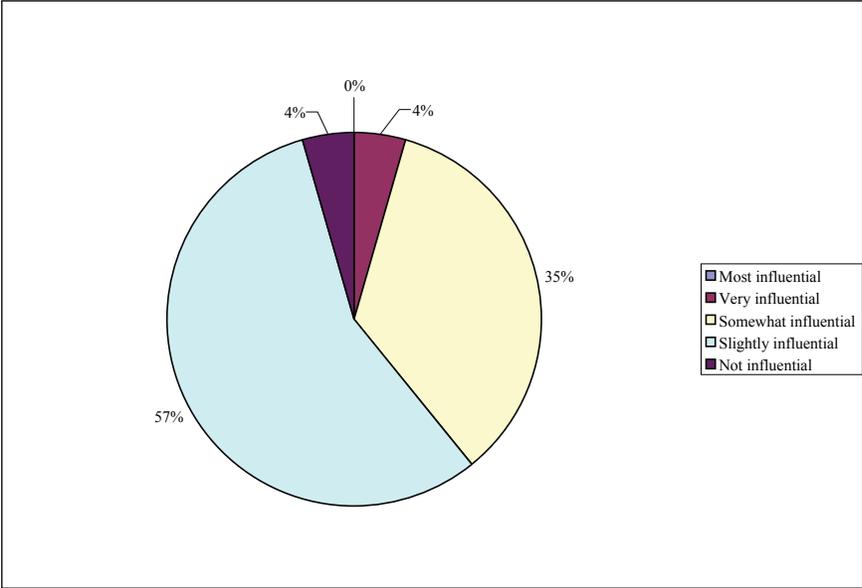
Respondents were asked to rank the influence of vendor service on their choice of plant suppliers. Thirty-seven percent of respondents felt that service is very influential, while 36% felt that service is the most influential factor in their choice of plant supplier. Twenty-seven percent of respondents said that service is somewhat influential on their choice of plant suppliers, and no respondents said that service was either slightly or not at all influential on their choice of plant suppliers.

Figure 3.19: The Influence of Service on the Choice of Seed Suppliers Across Markets



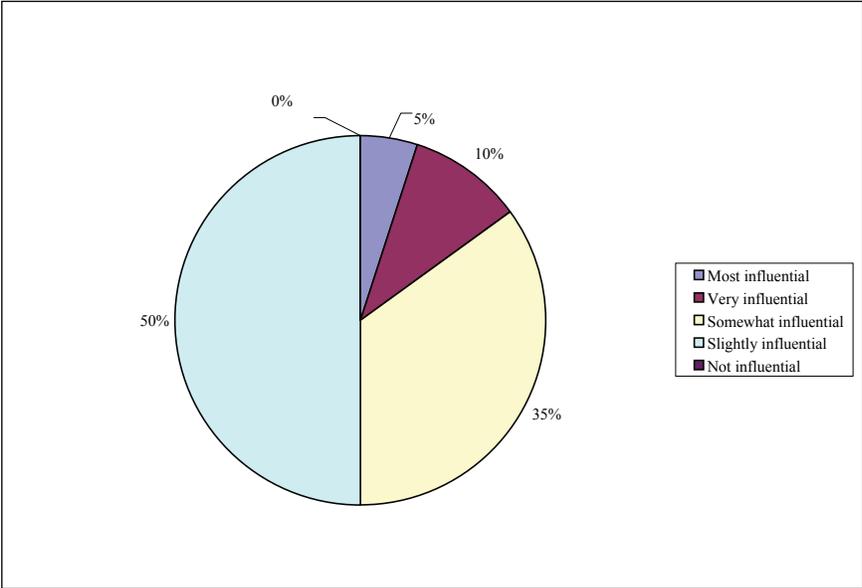
Respondents were asked to rank the influence of vendor service on their choice of seed supplier. Fifty-four percent of respondents said that service is very influential, 25% said that service is the most influential factor, and 21% said that service is somewhat influential on their choice of seed supplier. No respondents ranked service as either slightly or not at all influential.

Figure 3.20: The Influence of Contracts on the Choice of Plant Suppliers Across Markets



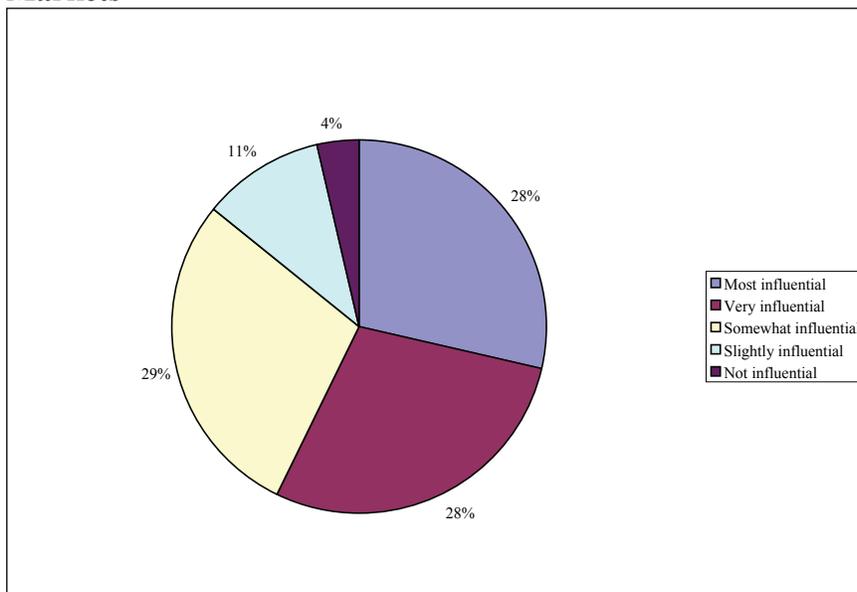
Respondents were asked to rank the influence of contracts or agreements on their choice of plant suppliers. Fifty-seven percent of respondents said that contracts were slightly influential on their choice of plant supplier, 35% said that contracts were somewhat influential, 4% said that contracts are very influential and 4% said contracts were not at all influential.

Figure 3.21: The Influence of Contracts on the Choice of Seed Suppliers Across Markets



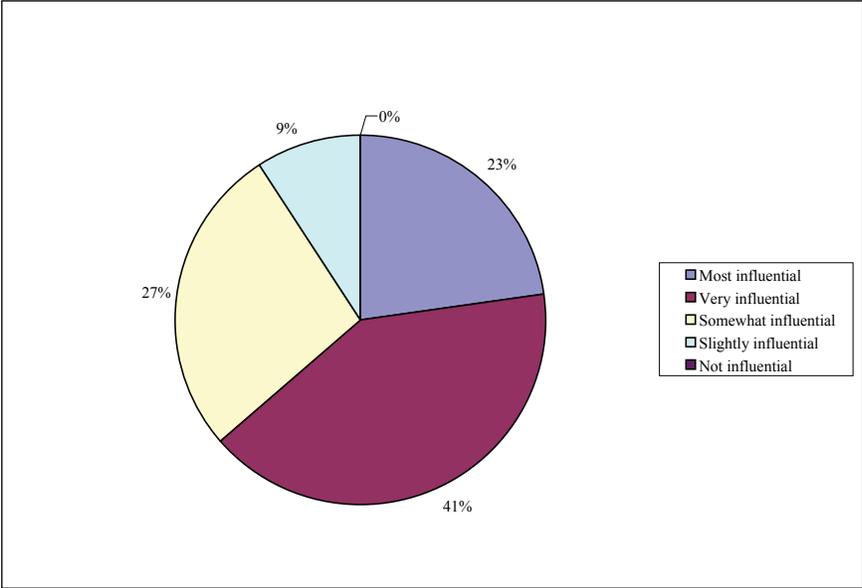
Respondents were asked to rank the influence of contracts or agreements on their choice of seed suppliers. Fifty percent of respondents said that contracts are slightly influential, 35% said that contracts are somewhat influential, 10% said that contracts are very influential, and 5% of respondents said that contracts are the most influential factor in choosing a seed supplier. No respondents said that contracts were not influential.

Figure 3.22: The Influence of Convenience on the Choice of Plant Suppliers Across Markets



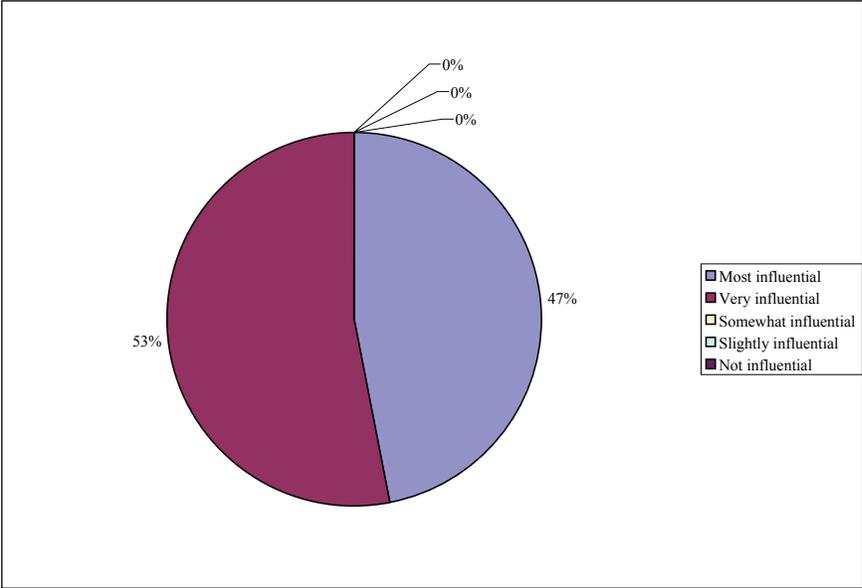
Respondents were asked to rank the influence of vendor convenience of their choice of plant suppliers. Twenty-nine percent of respondents said convenience is somewhat influential, 28% said convenience is very influential, and 28% said that convenience is the most influential factor in their choice of plant suppliers. Eleven percent of respondents said that convenience is slightly influential, and 4% of respondents said convenience has no influence on their choice of plant supplier.

Figure 3.23: The Influence of Convenience on the Choice of Seed Suppliers Across Markets



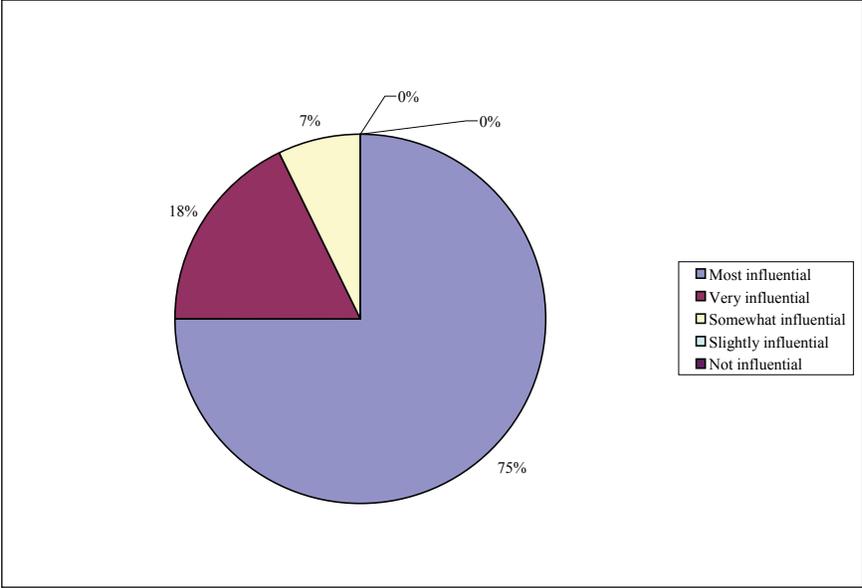
Respondents were asked to rank the influence of vendor convenience on their choice of seed supplier. Forty-one percent of respondents said that convenience is very influential, 27% said that convenience is somewhat influential, 23% said that convenience is the most influential factor in choosing a seed supplier, and 9% of respondents said that convenience is slightly influential. No respondents said that convenience is not influential.

Figure 3.24: The Influence of Price on the Choice of Plant Suppliers Across Markets



Respondents were asked to rank the influence of price on their choice of plant suppliers. Fifty-three percent of respondents said that price is very influential and 47% of respondents said that price is the most influential factor in their choice of plant suppliers. Less than 1% of respondents said that price was either somewhat, slightly, or not influential.

Figure 3.25: The Influence of Price on the Choice of Seed Suppliers Across Markets



Respondents were asked to rank the influence of price on their choice of seed suppliers. Seventy-five percent of respondents said that price is the most influential factor in choosing a seed supplier, 18% said that price is very influential, and 7% of respondents said that price is somewhat influential. Less than 1% of respondents said that price was either slightly or not at all influential.

Figure 3.26: The Influence of "Other" Factors on the Choice of Plant Suppliers Across Markets

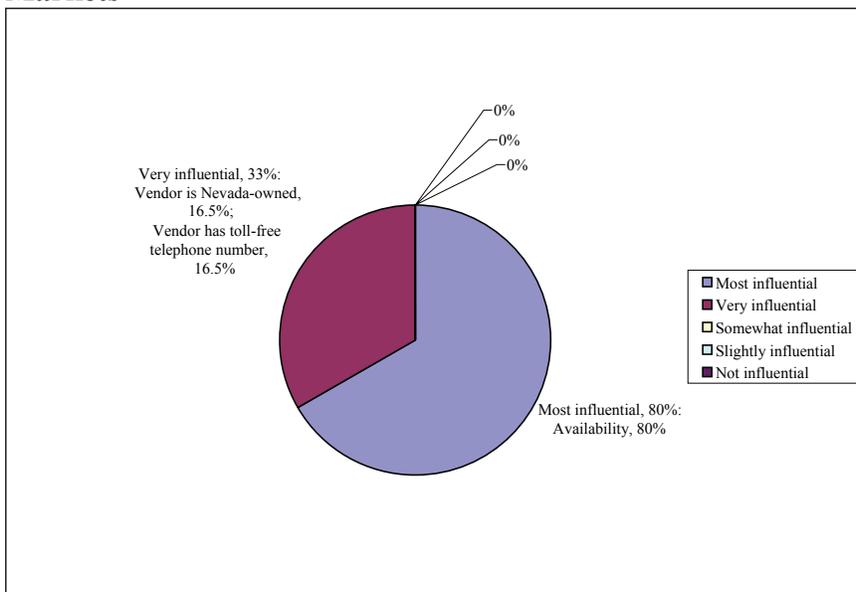
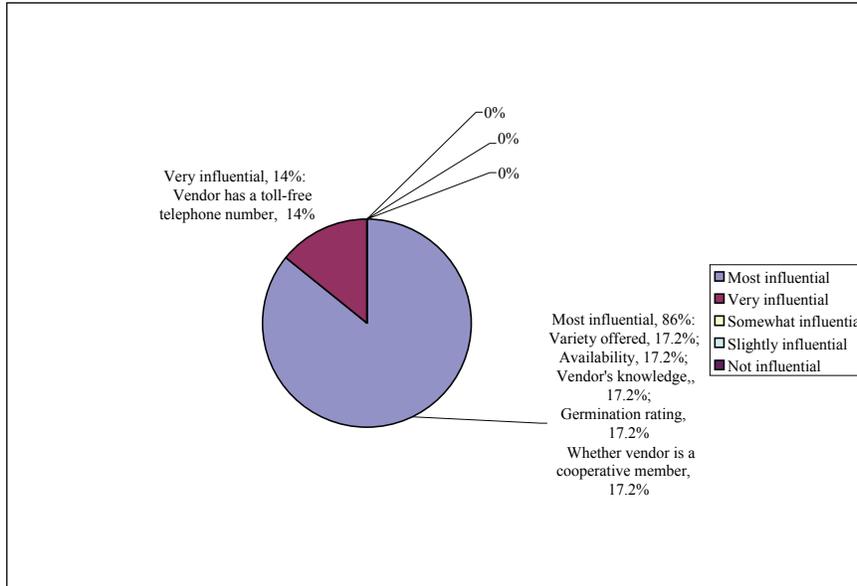


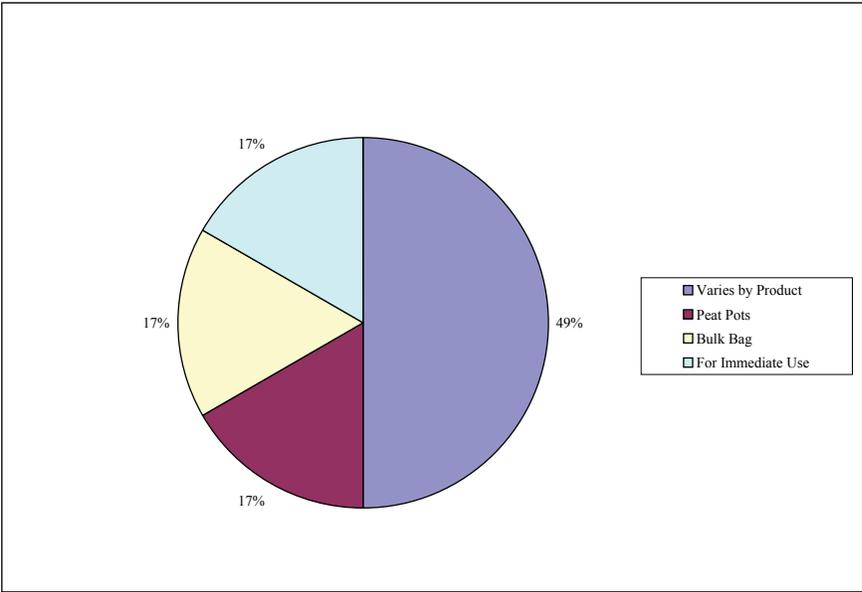
Figure 3.27: The Influence of "Other" Factors on the Choice of Seed Suppliers Across Markets



Respondents were asked to explain what "other" factors influence their choice of plant suppliers. Eighty percent of respondents who selected "other" and considered it to be the most influential factor described it as availability. Thirty-three percent of respondents who chose "other" considered it to be very influential. Sixteen and one-half percent of these respondents said the factor was whether or not the plant vendor was Nevada-owned. An additional sixteen and one-half percent of these respondents listed the other factor as whether or not the vendor has a toll-free telephone number.

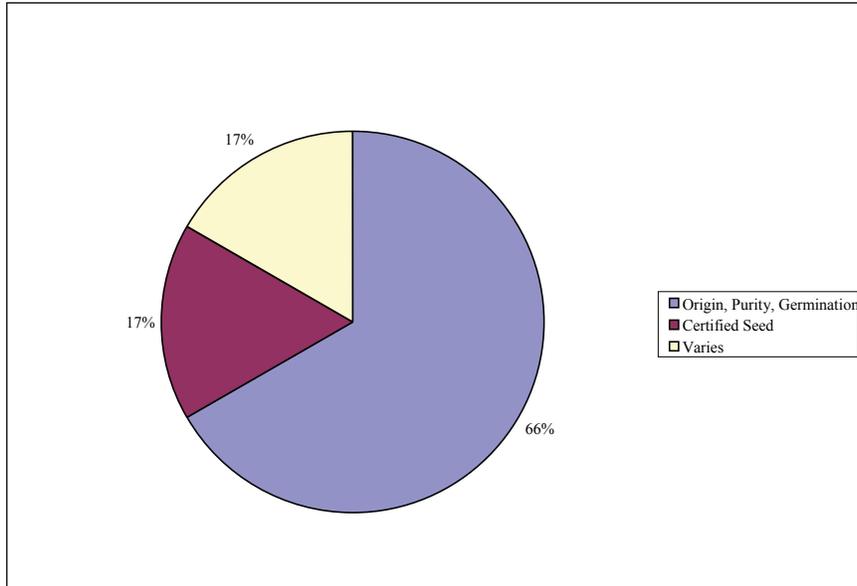
Respondents were asked to explain what "other" factors influence their choice of seed suppliers. Eighty-six percent of respondents ranked an "other" factor as the most influential factor in choosing a seed supplier. These other factors were the variety of seed offered by the vendor, availability, the vendor's knowledge of the product, the germination rating of the product, and whether the vendor is a member of a producers' cooperative. Fourteen percent of respondents ranked an "other" factor as very influential. Often this factor included whether or not the vendor has a toll-free telephone number.

Figure 3.28: Preferred Packaging Methods Across Markets



Respondents were asked to describe the type of packaging methods that they would prefer their products (both plant and seed) arrive in. Forty-nine percent of respondents said that their preferred method varies by product. Methods in this category included burlap sacks for trees, and sacks of varying weight for seeds. Seventeen percent of respondents said they prefer their plant products to come in peat pots, 17% said they prefer their seeds to come in bulk bags, and 17% of respondents said they want their plants and seeds to come packaged for immediate use.

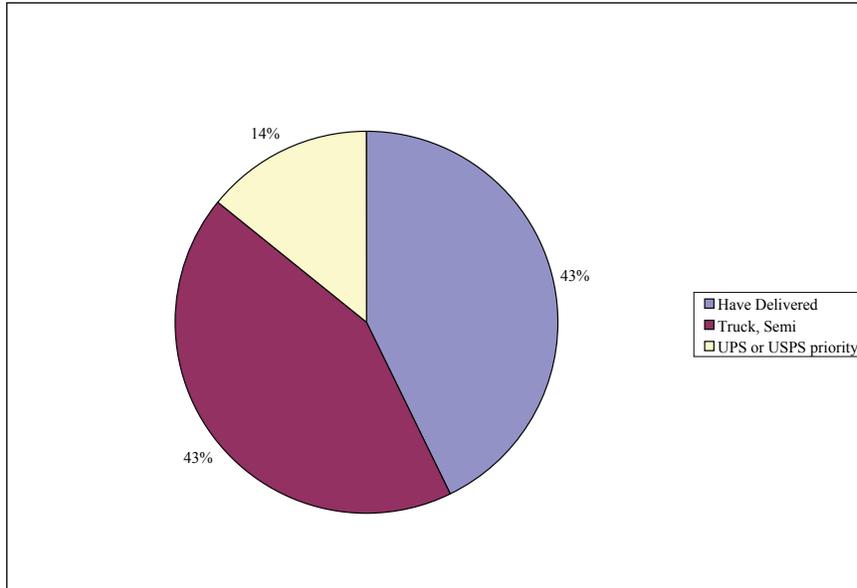
Figure 3.29: Preferred Labeling Methods Across Markets



Respondents were asked to describe the labeling methods they most prefer to have on plants and seeds they purchase. Sixty-six percent of respondents said they would like labeling that includes information on the origin of the product, as well as purity and germination information. Seventeen percent of respondents said they would like their packaged seeds to bear a label stating that the seed is certified. Seventeen percent of respondents said their preferred labeling methods vary from product to product and did not elaborate.

Respondents were asked to describe the delivery methods they prefer for their purchased plants and seeds. Forty-three percent of respondents said they prefer either truck or semi delivery, while another 43% said they didn't have a preferred method as long as their purchases were delivered to them. Fourteen percent of respondents said they preferred either UPS delivery or Postal Service Priority Mail delivery.

Figure 3.30: Preferred Delivery Methods Across Markets



Homeowner Results

The following figures and descriptions relate to the homeowner's survey. Homeowners were asked questions similar to those on the market surveys, including such topics as influences affecting choice of plant and seed suppliers, total expenditure on gardening and landscaping supplies, and the importance of certain characteristics of native plants. Homeowners were also asked to fill out a bidding schedule similar to the one given to the market respondents. All relevant homeowner results are discussed below.

Homeowners were asked to list the locations where they most commonly purchase their landscaping and gardening materials. Thirty-nine percent said they purchase these items at inclusive hardware stores, such as The Home Depot, 26% said they shop at nurseries or specialty stores, 21% listed discount stores, such as K-Mart, 6% said they purchase these items at warehouse stores, such as Costco, 4% said they purchase these items through the mail or over the internet, 3% said they purchase gardening materials from landscaping companies, and 1% of

respondents said they purchase their landscaping and gardening materials elsewhere. Responses in the "other" category included phrases such as "I purchase my products wherever I find the best price," and "I purchase plants and seeds from the Native Plant Society."

Figure 3.31: Homeowners' Landscaping/Gardening Materials Purchasing Locations

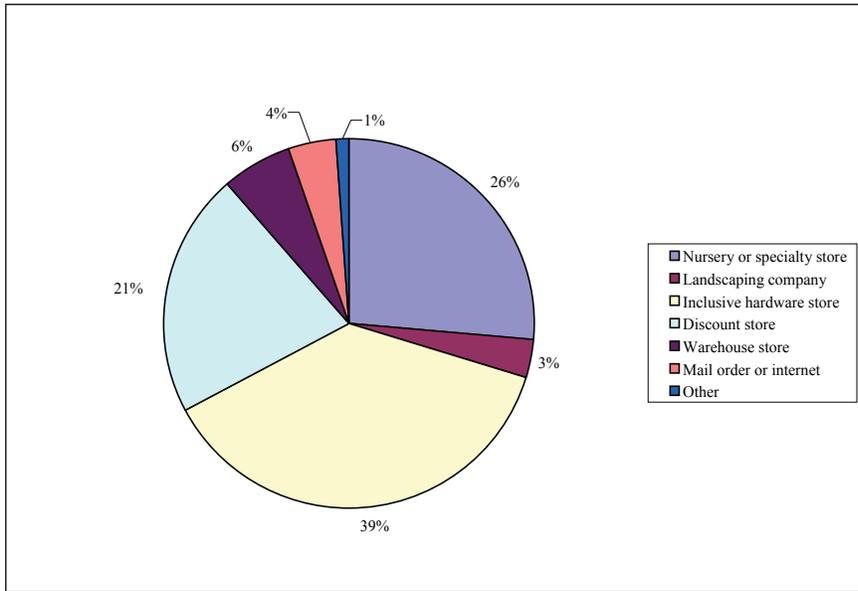
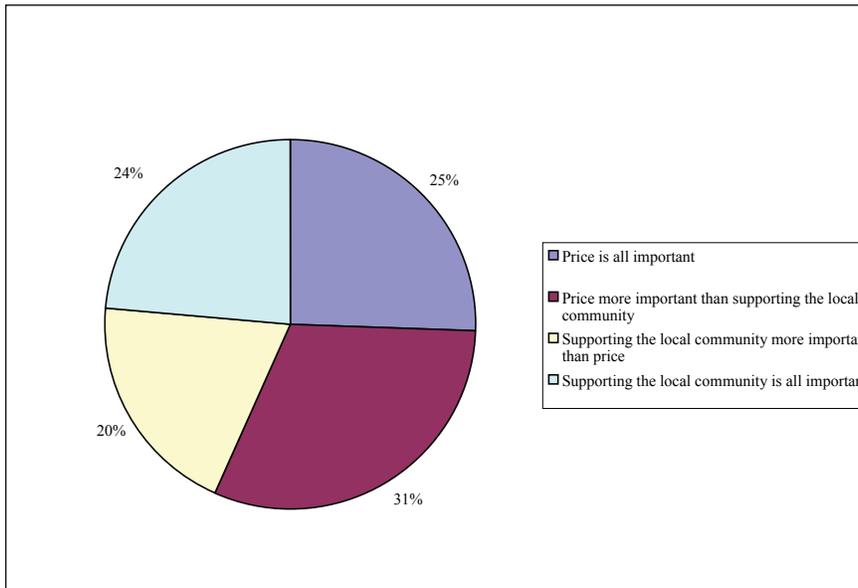


Figure 3.32: Price vs. Community Support-Homeowners



Homeowners were asked to rank the importance of the price of plants and seeds versus the notion of supporting the local community. Thirty-one percent of respondents said that they find price to be more important than supporting the local community, Twenty-five percent said that price is all important (meaning supporting the local community has no impact on their purchasing patterns), 24% said that supporting the local community is all important, and 20% said that supporting the local community is more important than price.

Homeowners were asked to rank the importance of price versus origin when purchasing plants and seeds. Fifty-six percent of respondents said that price is all important, meaning they would give no consideration to where the plant was grown or the seeds were milled. Twenty-three percent said that price is more important than origin, meaning they do give origin some consideration. Twelve percent said that origin is all important, meaning they give price no consideration when making a plant or seed purchase, and 9% of respondents said that origin is more important than price, meaning they do give some consideration to price.

Figure 3.33: Price vs. Origin-Homeowners

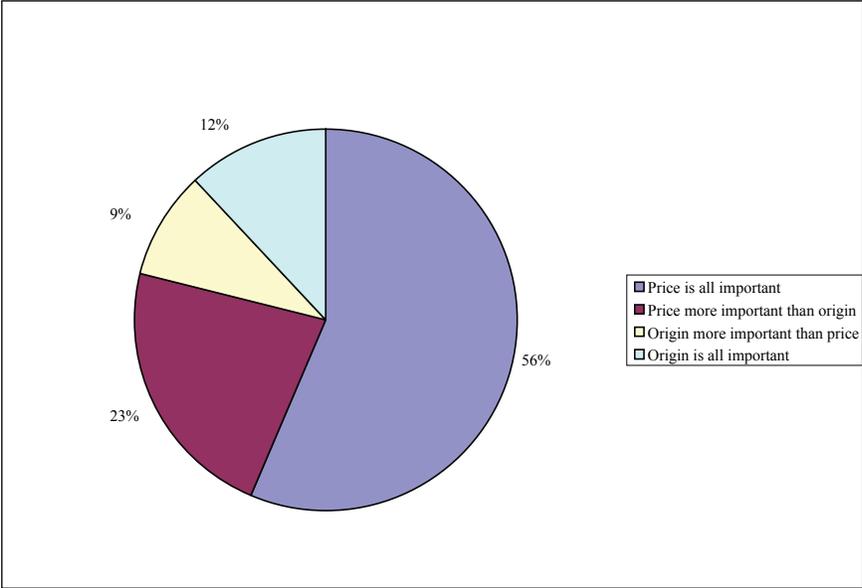
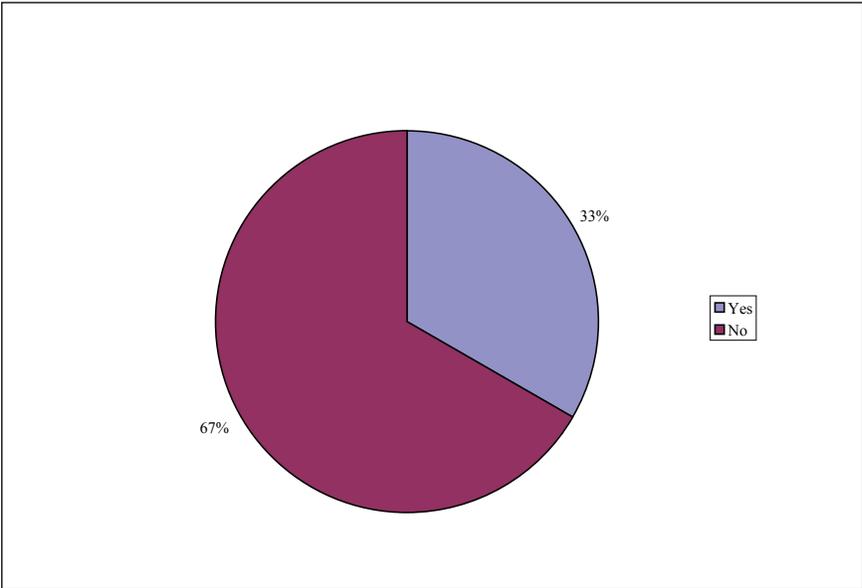
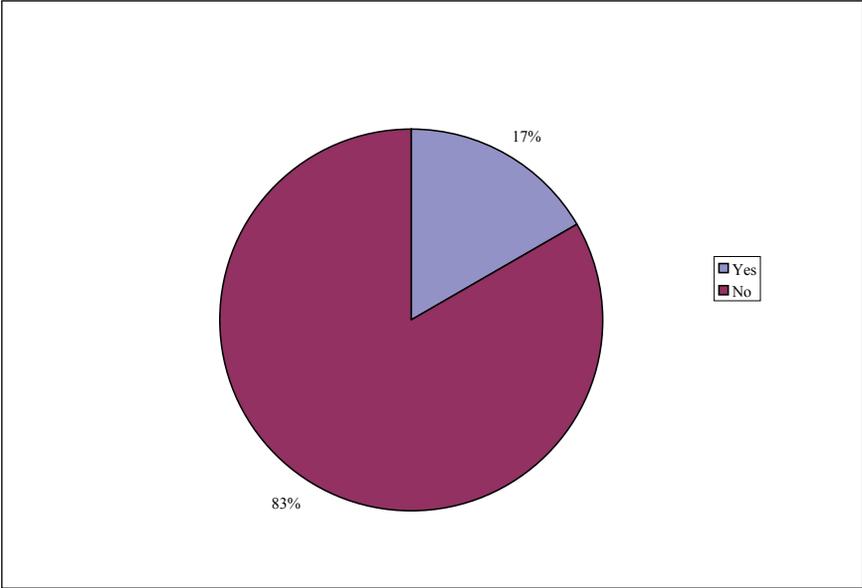


Figure 3.34: Do Homeowners Check Plant Labels for Origin Information?



Homeowners were asked if, when purchasing plants, they looked at the label to see where the item was grown. Sixty-seven percent of respondents said they did not check labels for origin information and 33% of respondents said they do check labels for origin information.

Figure 3.35: Do Homeowners Check Seed Labels for Milling Location?



Homeowners were asked if, when purchasing seeds, they look at the seed label to see where the seeds were milled. Eighty-three percent of respondents said they do not check labels for milling location, and 17% of respondents said they do check labels for milling location.

Homeowners were asked to describe their plant and seed use in terms of which they purchase more of. Fifty-six percent of homeowners said they purchase all plants, while 28% said they purchase both with an emphasis on plants. Ten percent of respondents said they purchase both with an emphasis on seeds, and 6% said they purchase all seeds.

Figure 3.36: Plant vs. Seed Use-Homeowners

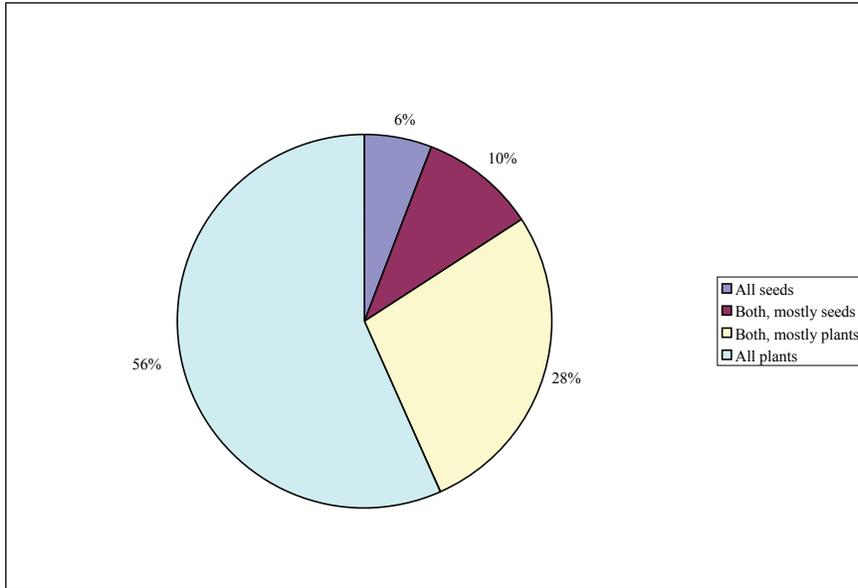
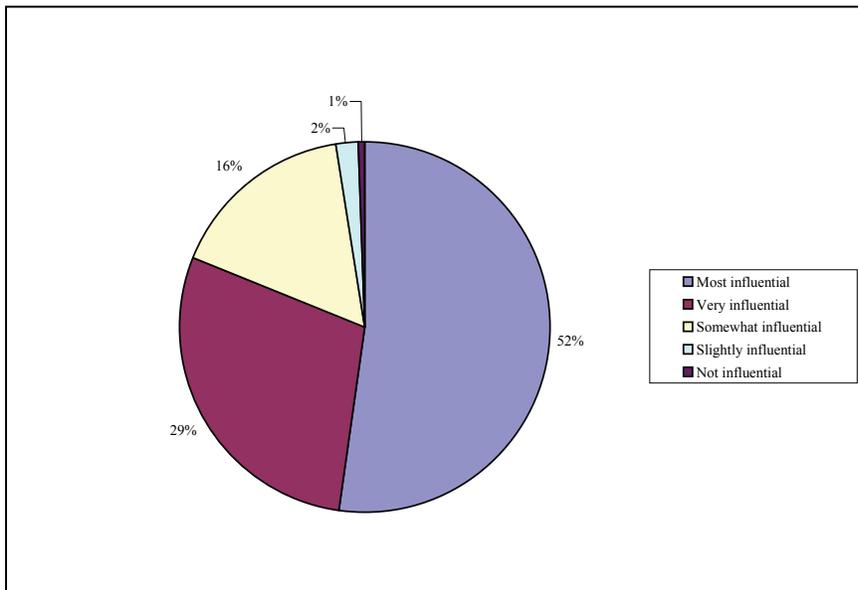


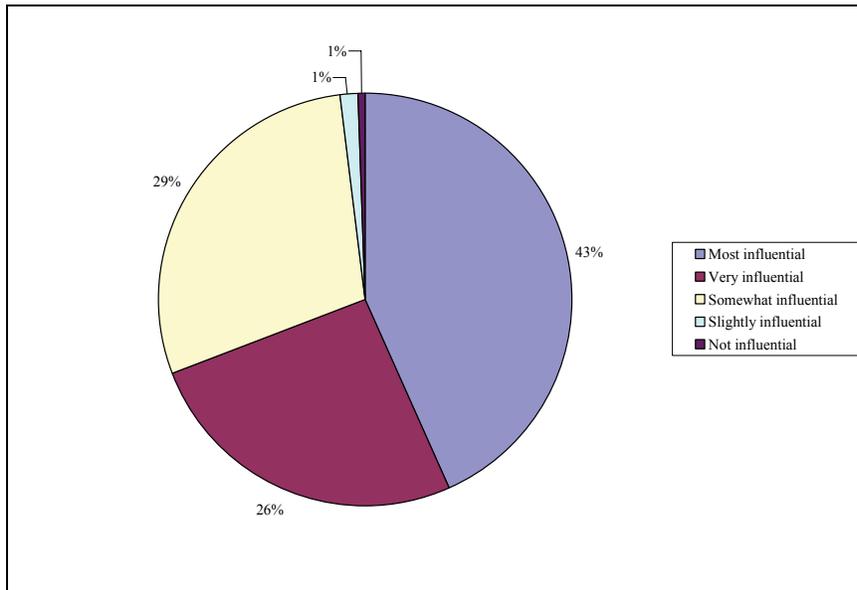
Figure 3.37: The Influence of Price on Homeowner's Choice of Plant and Seed Suppliers



Homeowners were asked to rank the influence of price on their choice of plant and seed suppliers. Fifty-two percent of respondents said that price is the most influential factor, 29% said that price is very influential, 16% said price is somewhat influential, 2% said price is

slightly influential, and 1% of respondents said that price is not at an influence on their choice of plant and seed suppliers.

Figure 3.38: The Influence of Location on Homeowner's Choice of Plant and Seed Suppliers



Homeowners were asked to rank the influence of the location of plant and seed suppliers on their choice of supplier. Forty-three percent of respondents said location is the most influential factor in their decision-making process, 29% of respondents said location is somewhat influential, 26% said location is very influential, and 1% each said that location is slightly influential or not influential.

Homeowners were asked to rank the influence of a vendor's selection on their choice of plant and seed suppliers. Forty-nine percent of respondents said selection is the most influential factor, 37% said selection is very influential, 13% said selection is somewhat influential, 1% of respondents said selection is slightly influential, and less than 1% of respondents said selection is not influential.

Figure 3.39: The Influence of Selection of Homeowner's Choice of Plant and Seed Suppliers

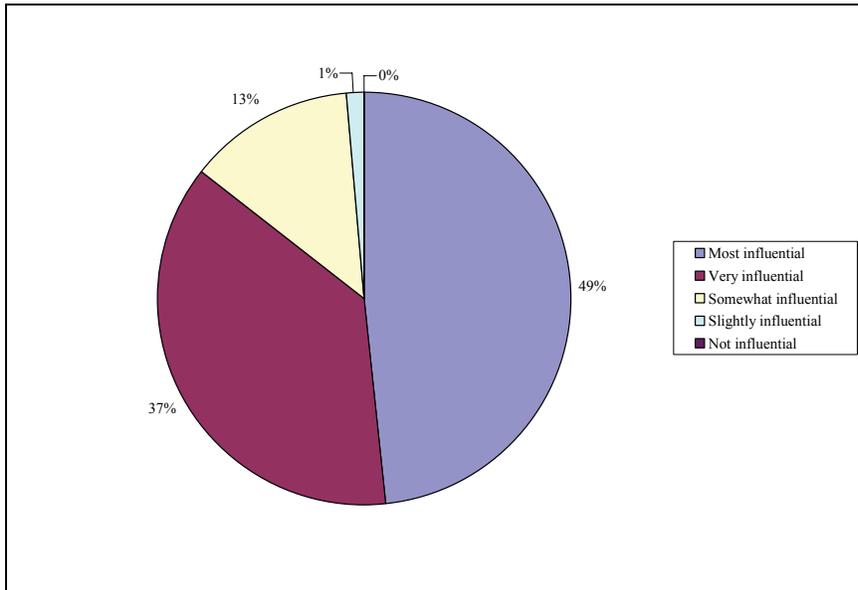
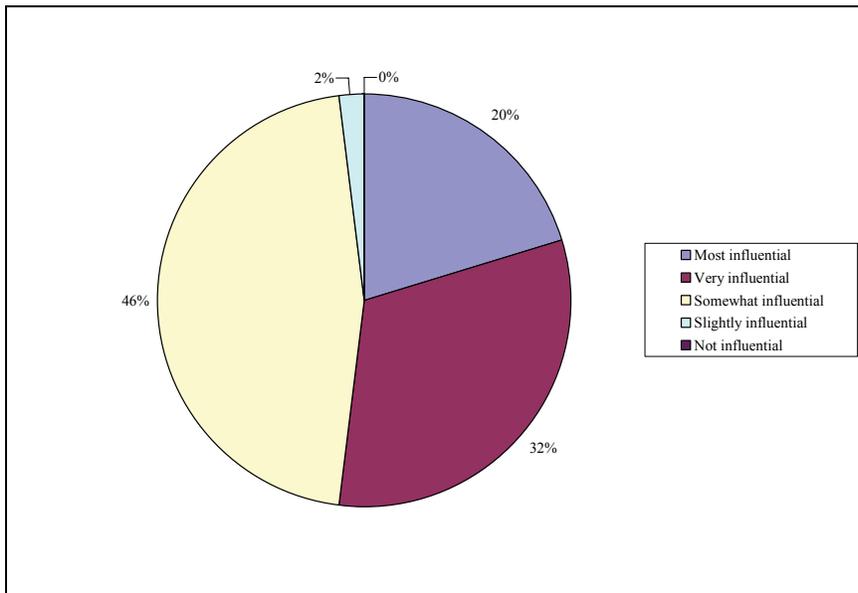
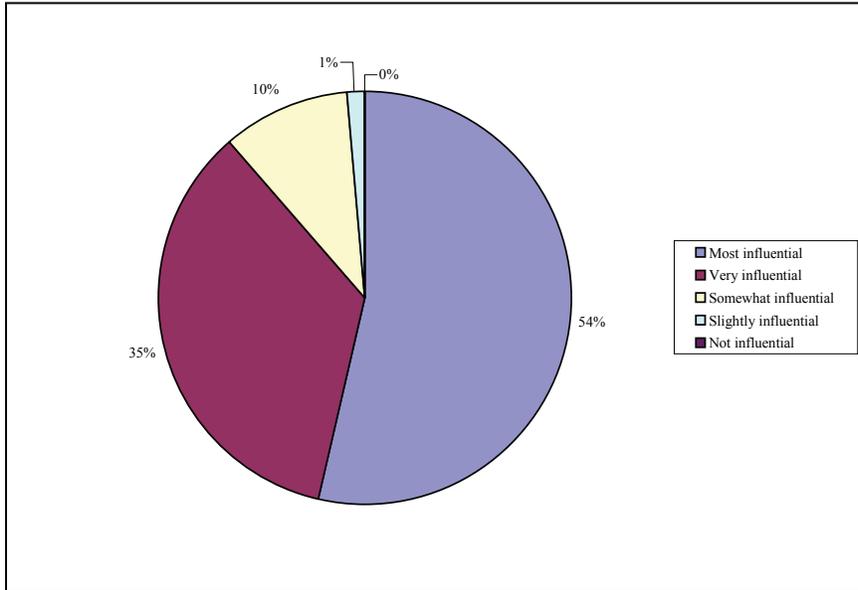


Figure 3.40: The Influence of Service on Homeowner's Choice of Plant and Seed Suppliers



Homeowners were asked to rank the influence of vendor service on their choice of plant and seed suppliers. Forty-six percent of respondents said service is somewhat influential, 32% said service is very influential, 20% said service is the most influential factor, 2% said service is slightly influential, and less than 1% of respondents said service is not influential.

Figure 3.41: The Influence of Quality on Homeowner's Choice of Plant and Seed Suppliers



Homeowners were asked to rank the influence of the quality of a vendor's products on their choice of plant and seed suppliers. Fifty-four percent of respondents said quality is the most influential factor, 35% said quality is very influential, 10% said quality is somewhat influential, 1% said quality is slightly influential, and less than 1% of respondents said quality is not influential.

Homeowners were asked to rank the influence of supporting the local community on their choice of plant and seed suppliers. Fifty-eight percent of respondents said that support is somewhat influential, 23% said that support is very influential, 16% said supporting the local community is the most influential factor, 2% of respondents said support is slightly influential, and 1% of respondents said support is not influential.

Figure 3.42: The Influence of Support on Homeowner's Choice of Plant and Seed Suppliers

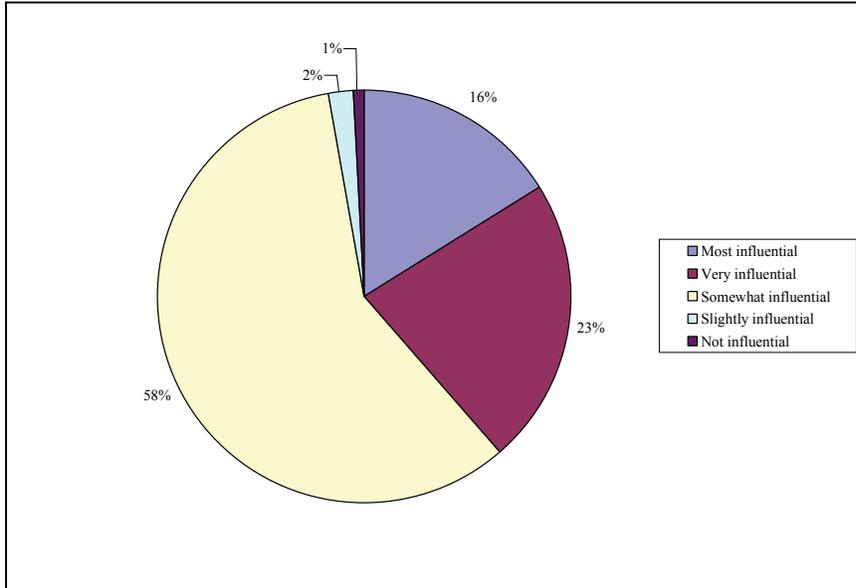
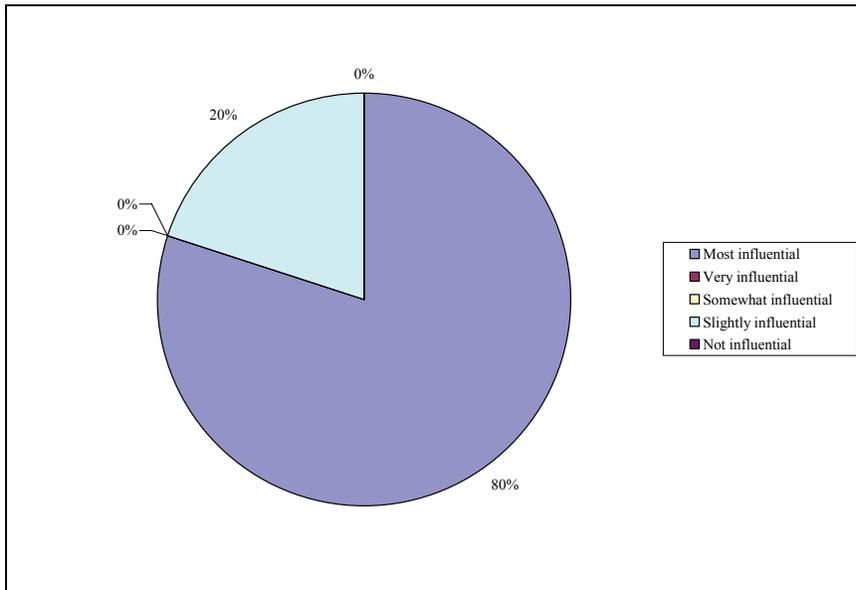
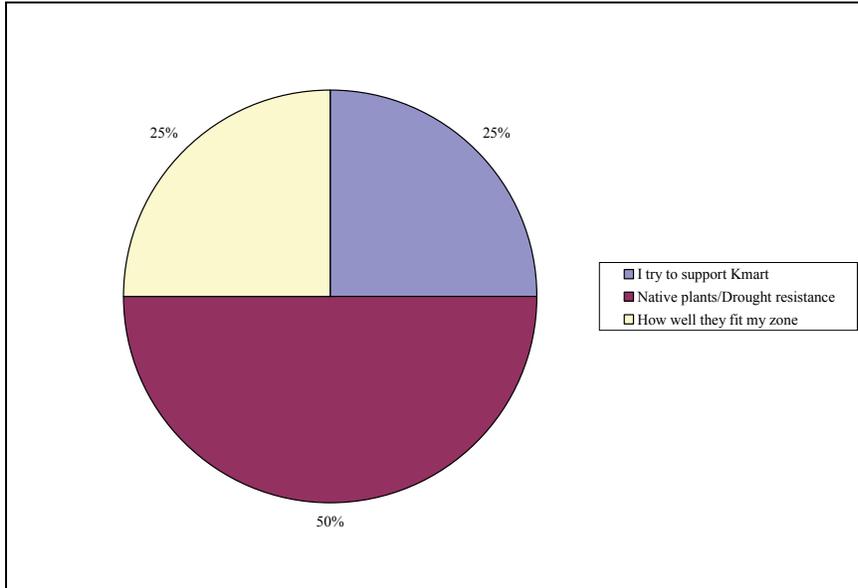


Figure 3.43: The Influence of Other Factors on Homeowner's Choice of Plant and Seed Suppliers



Homeowners were given the option of ranking unlisted factors that they considered to be influential on their choice of plant and seed suppliers. Eighty percent of respondents who wrote in a factor ranked it as the most influential, while the remaining 20% of respondents who chose an "other" factor said it is slightly influential.

Figure 3.44: Other Factors Affecting Homeowner's Choice of Plant and Seed Suppliers



Homeowners who ranked an "other" factor were asked to state the factor. One respondent ranked the "other" factor as being slightly influential, but did not describe the factor. Of the respondents who ranked their "other" factor as being very influential, 50% related this factor to either drought resistance or whether or not the plant is native, 25% said the influential factor is whether or not the plant fits in his/her zone, and the remaining 25% said they try to support K-Mart because "Wal-Mart tries to put it out of business."

Homeowners were asked to rank the importance of several characteristics relating to native plants and seeds. When asked to rank the importance of drought resistance, 79% of respondents said this is the most important characteristic of native plants, 19% said drought resistance is very important, 1% said it is slightly important, 1% said it is not important, and less than 1% of respondents said drought resistance is somewhat influential.

Figure 3.45: Importance of Drought Resistance

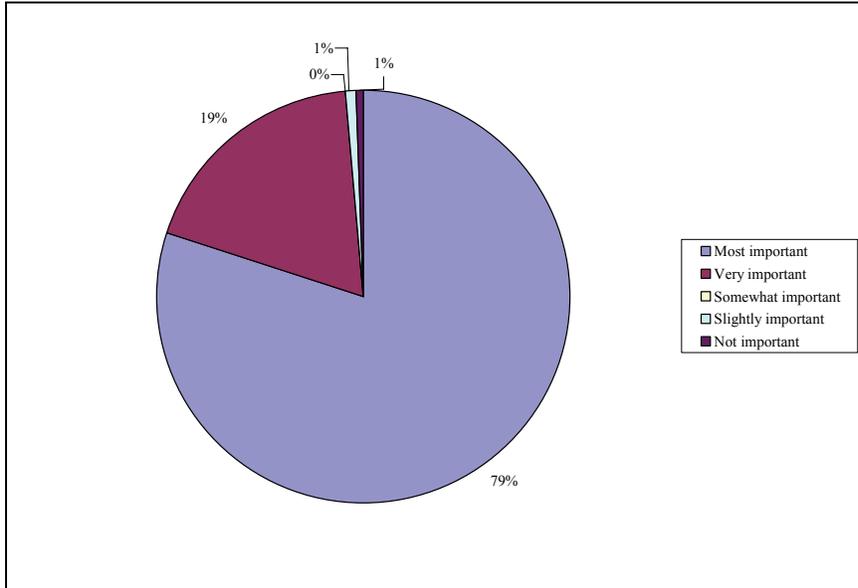
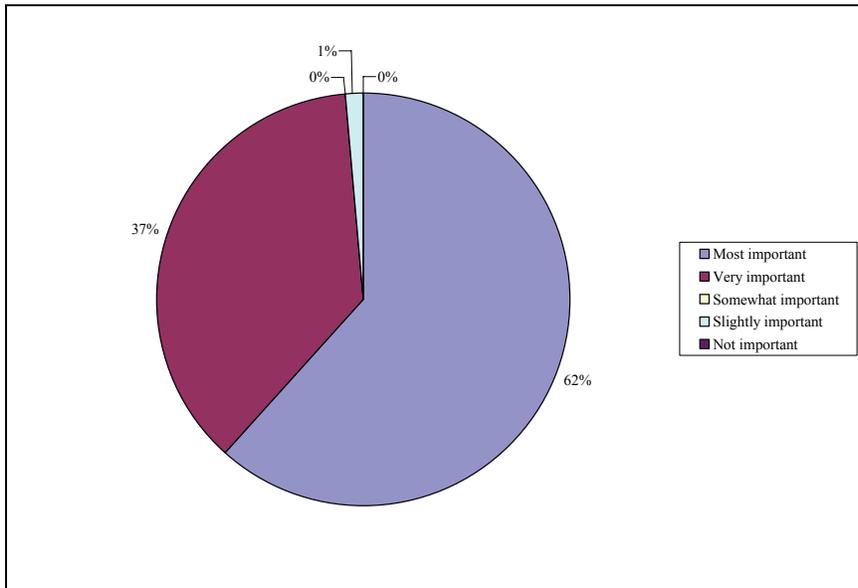


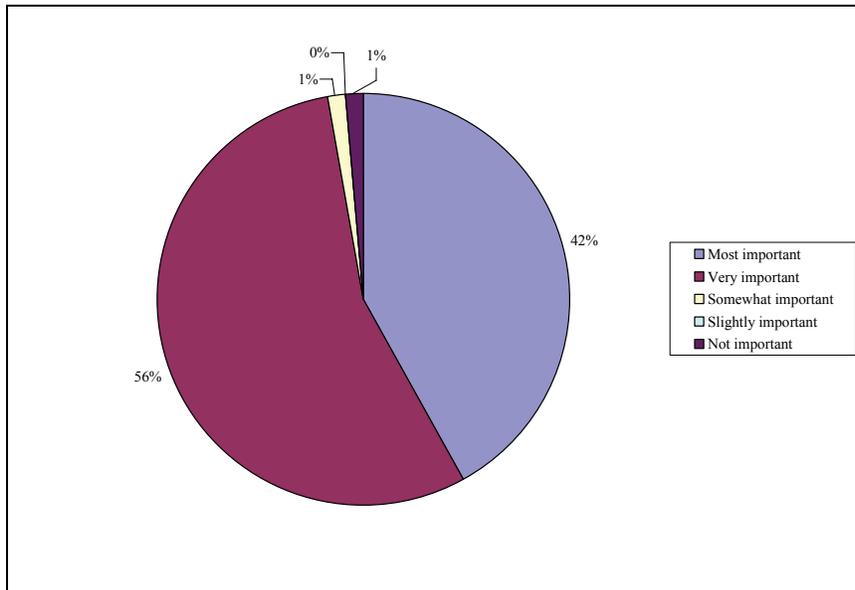
Figure 3.46: Importance of Natural Appearance



Homeowners were asked to rank the importance of a natural appearance as a characteristic of native plants. Sixty-two percent of respondents said that a natural appearance is the most important characteristic of native plants, 37% of respondents said it is very important,

1% said it is slightly important, and less than 1% each said a natural appearance is somewhat important or not important.

Figure 3.47: Importance of Resistance to Invasive Species



Homeowners were asked to rank the importance of native plants' resistance to invasive species, such as weeds. Fifty-six percent of homeowners said resistance is very important while 42% of respondents said resistance to invasive species is the most important characteristic of native plants. One percent of respondents said resistance is somewhat important, 1% said it is not important, and less than 1% of homeowners said resistance is slightly important.

Homeowners were asked to rank the importance of erosion control as a characteristic of native plants. Sixty-nine percent of respondents said erosion control is very important, 26% said erosion control is the most important characteristic of native plants, 3% said erosion control is somewhat important, 1% said it is slightly important, and 1% of respondents said erosion control is not important.

Figure 3.48: Importance of Erosion Control

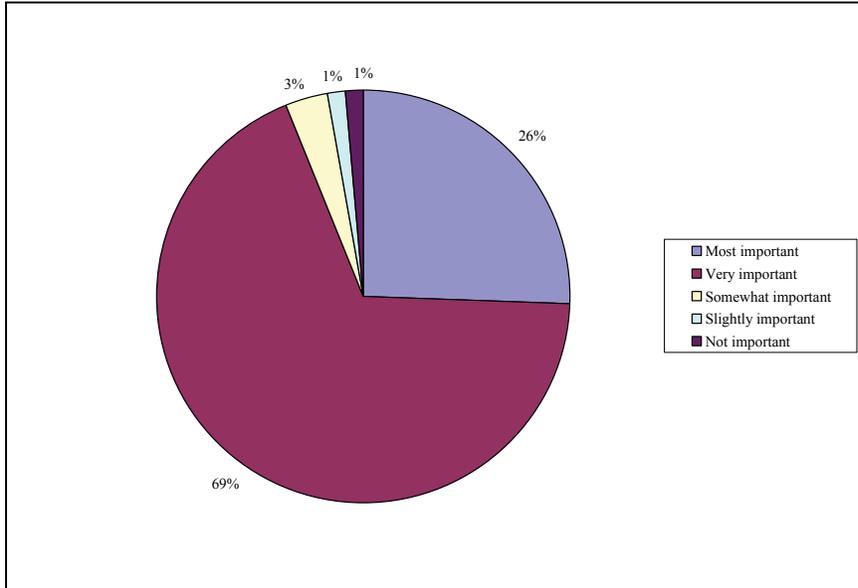
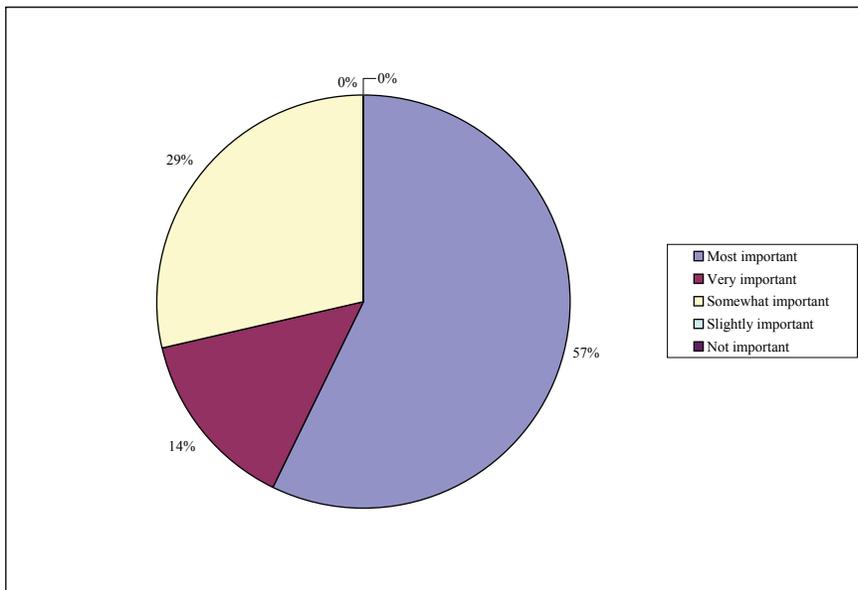


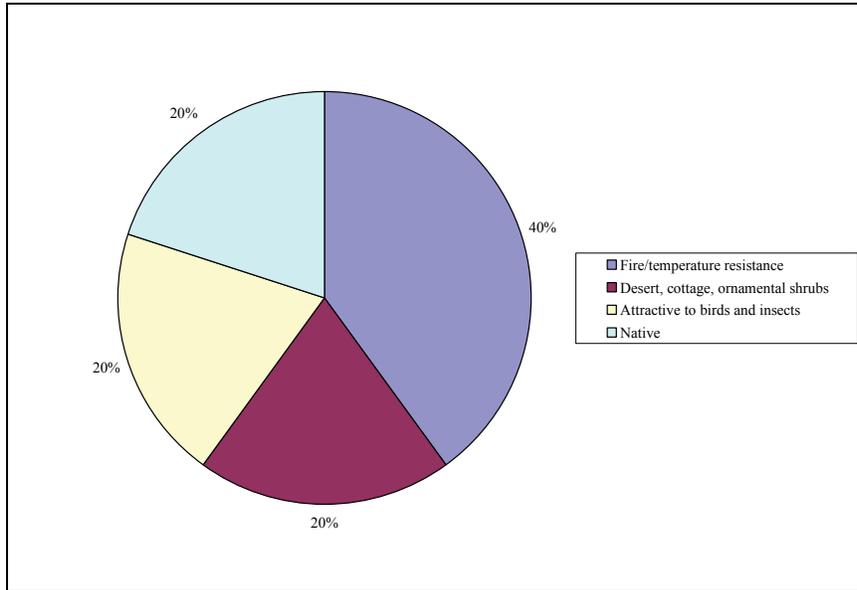
Figure 3.49: Importance of Other Characteristics of Native Plants



Homeowners were given the option of ranking characteristics of native plants that were not given. Fifty-seven percent of respondents ranked an "other" characteristic as being the most important characteristic, 29% ranked "other" as somewhat important, and 14% ranked "other" as

very important. Less than 1% of respondents ranked an "other" characteristic as slightly important or not important.

Figure 3.50: Other Important Characteristics of Native Plants



Respondents who ranked an "other" characteristic were asked to describe what that characteristic is. Forty percent of respondents ranked this other characteristic as resistance to fire and temperature, 20% listed the characteristic as "desert, cottage, and ornamental shrubs," 20% listed it as attractiveness to birds and insects, and the remaining 20% listed their "other" characteristic as simply the fact that the plant is native.

Homeowner Bidding

The homeowner survey asked a similar bidding question, but offered a series of real prices rather than percent increases. Respondents were asked if they would be willing to pay the given dollar amount for a plant with a Nevada Grown label over the same plant, without a label, at the base price of \$5.00. The results of this question are summarized in Table 3.9. Each entry represents the percent of total responses given for that category over the actual number of responses for each bid amount.

Table 3.9: Response to Premium Bids by Homeowners

Bid	No	Yes	Uncertain
\$5.00	9.53 (16)	54.8 (92)	35.7 (60)
\$5.25	9.53 (16)	53.0 (89)	37.5 (63)
\$5.50	10.7 (18)	50.0 (84)	39.3 (66)
\$5.75	13.1 (22)	46.4 (78)	40.5 (68)
\$6.00	16.2 (32)	35.4 (70)	48.5 (96)
\$6.50	22.6 (38)	30.4 (51)	47.0 (79)
\$7.00	29.2 (49)	21.4 (36)	49.4 (83)
\$8.00	42.9 (72)	12.5 (21)	44.6 (75)
\$9.00	50.7 (70)	7.97 (11)	41.3 (57)
\$10.00	49.4 (83)	7.14 (12)	43.5 (73)

When offered the same price of \$5.00, 16 respondents (9.53%) would not purchase the Nevada Grown plant, 92 respondents (54.8%) would purchase the plant, and 60 respondents (35.7%) were uncertain. When offered a bid of \$5.25 for the Nevada Grown plant, 16 respondents (9.53%) would not purchase the plant, 89 respondents (53.0%) would, and the remaining 63 respondents (37.5%) were uncertain. When offered a price of \$5.50 for the Nevada Grown label, 18 respondents (10.7%) would not purchase the plant, 84 would (50.0%), and 66 respondents (39.3%) were uncertain. When offered a bid of \$5.75, 22 respondents (13.1%) would not purchase the plant, 78 respondents would purchase the plant (46.4%), and 68 respondents (40.5%) were uncertain. When offered a bid of \$6.00, 32 respondents (16.2%) would not purchase the Nevada Grown plant, 70 respondents (35.4%) would purchase the plant, and 96 respondents (48.5%) were uncertain. When offered a price of \$6.50 for the Nevada Grown plant, 38 respondents (22.6%) would not purchase the plant, 51 respondents (30.4%) would purchase the plant, and 79 respondents (47.0%) were uncertain. When offered a bid of

\$7.00, 49 respondents (29.2%) would not purchase the plant, 36 respondents (21.4%) would purchase the plant, and 83 respondents (49.4%) were uncertain. When offered a price of \$8.00 for the labeled plant, 72 respondents (42.9%) would not purchase, 21 respondents (12.5%) would, and 75 respondents (44.6%) were uncertain. When offered a bid of \$9.00, 70 respondents (50.7%) would not purchase the Nevada Grown plant, 11 respondents (7.97%) would, and 57 respondents (41.3%) were uncertain. When offered a price of \$10.00 for the Nevada Grown plant, 83 respondents (49.4%) would not purchase the plant, 12 respondents (7.14%) would purchase the plant, and 73 respondents (43.5%) were uncertain.

IV. COOPERATIVE ECONOMIC FEASIBILITY

Organizational and Start-up Considerations

Legal

The legal considerations facing a cooperative involve the drafting of articles of incorporation, bylaws, membership applications, marketing and purchase agreements and revolving fund certificates. While the Capper-Volstead Act of 1922 and the Farm Credit Act of 1971 have aided cooperatives in their ability to act together in the handling, processing and marketing of their goods and allows them to borrow jointly, cooperatives are still subject to numerous antitrust laws and responsible for all tax codes relating to their enterprise.

Articles of Incorporation give the cooperative a distinct legal standing. It limits personal liability for debt incurred by the cooperative, excluding the amount of their initial investment. This article describes the nature of the business entity, its location, proposed duration of the association and the names of the principle parties involved. This form is then filed with the Secretary of State, activating the cooperative.

By laws express how the cooperative will conduct business. It describes membership requirements and lists the rights and responsibilities of members. It also discusses voting procedures and the board structure governing the cooperative.

Membership applications include five main parts: applicant's statement addressing membership, signature of applicant, statement of cooperative acceptance, signatures of the board president and secretary, and a statement of the intent and duties of the prospective member. A membership certificate may be issued to each member as evidence of entitlements to the organization.

Marketing and purchasing agreements set the standard of quality acceptable to the cooperative. It also states how proceeds will be distributed, less deductions for operating and capital expenditures. Often these documents are required when seeking outside financial backing.

The revolving funds certificate is a written receipt for capital investments and retained earnings that will eventually be revolved or redeemed. These investments may be deductions based on a per-unit of production, reinvested earnings and original capital subscription, if not issued in stock form.

All legal documents should be written with the help of a lawyer to ensure state provisions are addressed. There are a number of agricultural lawyers in the state of Nevada (Appendix B). They are all familiar with Nevada incorporation laws and cooperatives as a business identity.

Investing risk capital is the responsibility of all members. The amount of risk capital invested is an important decision. Members must invest enough capital to give them a financial stake in the success of the enterprise. It must cover a large portion of the start-up and operational costs, so that outside investors feel comfortable that the membership will work to make the operation successful.

Most private loan institutions will require members to assume at least 50% of the capital risk, but it may take many years for the members to acquire this percentage. Long-term credit is available through federal and state sponsored credit programs. Sources of facility loans include:

- USDA Rural Development
- Cobank
- St. Paul Bank for Cooperatives
- National Cooperative Bank

Many commercial banks and credit unions have local programs for small business start-up, such as Bank of the West. Cooperatives can apply for short-term loans to cover operating costs during the first year of operation. These are acquired through the Farm Credit System and the National Cooperative Bank (Rapp and Ely, 1996).

Loans

There are a variety of credit and loan options for start-up cooperatives. Short-term loans known as development loans are used for crop start-up and initial seed purchase for new businesses. Typically development loans are interest payment only loans for the first three years, and then the cooperative has seven years to repay the principle. The life of the loan is 10 years, and regular inspections occur to insure that the loan is used for crop or seed purchase only. Other short-term loans run for three to five years and can be used for the purchase of capital equipment, start-up costs and operational costs. Equipment loans, or lease lines, can be issued for capital equipment under \$1 million. These are five-year lines of credit, where loan funds are accessed only when equipment is purchased.

Most agribusiness loans are tied to the London Interbank Offered Rate (LIBOR), which is an international interest rate separate from the prime rate for private investment (Appendix I). The Bank of the West charges LIBOR plus 3% on most loans, averaging approximately 6% interest of both short and long term loans. This is the rate used in all financial statements throughout this document

Bank of the West requires cooperative members to hold 51% of the investment risk, however there are exceptions for start-up organizations. A new cooperative may be able to hold 30% of the investment risk, meaning 70% of the start-up capital is borrowed, if the cooperative agrees to distribute no more than 20% of the gross profits. All remaining profit must be

reinvested into the cooperative in order for the owner investment to increase to 51%. Copies of the bylaws and marketing and purchase agreements must accompany the credit application.

Owner Investment

Ownership options that can be exchanged between members within the cooperative are referred to as exchangeability. Redemption refers to the expectation that member ownership will be redeemed under specific conditions, such as retirement or death. Investment amounts should be determined by comparative usage requirements. Producers interested in owning more than their usage percentage can purchase additional preferred stock or capital certificates.

Cooperatives must maintain financial reserves to tie them over during periods of reduced production or environmental recession. These reserves can be earmarked for specific spending, such as debt reduction, facility improvements or operational growth. Reserves also provide peace of mind for members, allowing the cooperative to weather hard times without the need for additional investment by members.

After reserves have been established, the cooperative needs to develop a system to repay investors their initial cash outlays. Usually a percentage of operating revenues are dedicated for the repayment of owner equity and the purchase of stock or certificated of outgoing members. This can be done in two ways; either a payment amount is determined based on the input of each member, or the resources are pooled and distributed based on the percentage share owned in the cooperative. Both systems require a delayed payment for initial seed inputs, so that the cooperative pays for the initial seed and repays profits after the seed has been successfully sold.

Traditional Cooperatives: The initial investments in traditional cooperatives are very low, often less than \$100. Ownership is offered through the issuance of capital certificates and not stock options. Traditional cooperatives are generally more restrictive than other ownership types in allowing exchanges. This is usually done through the sale of certificates between members at the

board of director's discretion. Traditional cooperatives usually have an established par value for certificates that is determined at the time of buy-in. Traditional cooperatives allow new members to join at any time, so a par value must be established.

Traditional cooperatives use a set price system for profit distribution. Based on the number of certificates owned or the amount of seed produced, the cooperative will disperse profits as flat fees at the close of the business cycle.

New Generation Cooperatives: Members in NGCs typically invest \$10,000 - \$12,000 to purchase marketing rights (Coltrain, Barton, and Boland, 2001). NGCs do not normally establish a par value, so ownership stocks are valued at market price. It is highly correlated to the expected profitability of the organization; so certificate sales are usually done through a flat fee. Since NGCs are exchangeable, redemption obligations are not required.

NGCs commonly use the pooling system. In the pooling system, a pool is opened at the start of the production period, with payments made as seed is sold. An initial payment can be arranged at delivery time, with additional progress payments made until the pool is closed and the final margins are determined. The amount of profit distribution is directly tied to the amount of seed generated by each member and is tied to the producer's contract.

Investor Owned Firms: Stock certificates are purchased in owner operated firms. Stock value based directly on the profitability of the organization and profits are distributed through dividends. The value of a stock certificate is based on the future anticipated profitability of the enterprise. Stock sales and exchanges can occur through an open market, and non-producers can buy-in to the cooperative.

Cooperative Business Plan

Operating Revenue and Costs

Start-up costs include capital expenditures, as well as operating costs for the first year. Loan payments and a cushion to cover unexpected expenses must be incorporated into start-up figures. Costs involved in transforming a building into a viable seed storage facility can be extensive. Hence, initial capital loans are recommended. Loan repayment will also be considered in start-up assessments.

Revenue:

Start up revenue will come from short and long-term loans and owner investment. Operating revenue will come from the sale of seeds and plants. A seed price schedule is found in Table 4.1, all prices listed reflect prices in January 2005 (Native Seed Network, 2005).

Since there is a high demand for native seeds in Nevada, revenue figures are based on current supply potential. Based on our survey, 6300 acres of land are currently used for seed production, with 51% of seed producers showing interest in participating in the cooperative. Currently growers are focusing on winterfat, scarlet globemallow, blueflax, cliffrose, golden currant, bitterbrush, snake river wheatgrass, bluebunch wheatgrass, great basin wild rye, thickspike wheatgrass, squirreltail, desert needle grass, and indian ricegrass. Based on yield and maturity of the fields, an expected revenue table has been developed (Table 4.1). It is important to note that all prices reflect commercial catalogue prices (Native Seed Network, 2005), which are greatly discounted to federal and state agencies that purchase native seed in bulk. A 50% discount has been factored into the revenue figures. The total gross sales for the cooperative amount to \$6,232,791.60. Depending on producer seed selection and individual seed prices, these figures may vary.

Table 4.1: Revenue Based on Seed Varieties Grown in Nevada

Type	Yield in lbs*	Acres in Production**	Viability*	Price***	Discount****	Total
Winterfat	500	700	95%	\$ 30.00	50%	\$4,987,500.00
Bitterbrush	250	700	95%	\$ 40.00	50%	\$3,325,000.00
Bluebunch Wheatgrass	230	700	80%	\$ 5.00	50%	\$ 322,000.00
Blue Flax	300	700	90%	\$ 7.00	50%	\$ 661,500.00
Great Basin Rye	190	700	80%	\$ 6.75	50%	\$ 359,100.00
Indian Rice Grass	500	700	80%	\$ 9.00	50%	\$1,260,000.00
Scarlet Globemellow	130	700	80%	\$ 25.00	50%	\$ 910,000.00
Snake River Wheatgrass	230	700	80%	\$ 3.40	50%	\$ 218,960.00
Thickspike Wheatgrass	230	700	80%	\$ 2.75	50%	\$ 177,100.00
Total Revenue		6300				\$12,221,160.00
Interested Membership						51.00%
Total Revenue						\$6,232,791.60

*Stevens et al., 1996.

** Native Seed Survey Results, 2004.

*** Native Seed Network, 2005.

**** Discount reflects the price Federal agencies are currently paying for seed versus commercial catalogue prices

Start-up seed will be purchased based on marketing contracts with producing members.

While seed will be transferred to the processing facility once it has been harvested, payment to the producers will not occur until the seed is sold, so no borrowing will need to occur in order to pay for seed inventory.

Operating Expenses:

The operating expenses are self explanatory and detailed in Table 4.2. These include general expenses need to process the seeds and distribute them to the buyers. They include office expenses, such as telephones, office supplies and utilities, as well as transportation and packaging expenses, and maintenance and tool costs. Legal and accounting fees are also included in this category. Table 4.3 lists sample packaging expenses.

Table 4.2: Annual Expense Projections

Operating Costs	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Seed Costs	5,997,389	6,597,128	7,256,841	7,982,525	8,780,778	9,658,856
Phone/Utilities	12,000.00	12,000.00	13,000.00	13,000.00	14,000.00	14,000.00
Fuel and Lube	10,000.00	10,000.00	10,000.00	10,000.00	10,000.00	10,000.00
Shop and Tools	25,000.00	25,000.00	26,000.00	26,000.00	28,000.00	28,000.00
Freight/Trucking	10,000.00	10,000.00	10,000.00	12,000.00	12,000.00	12,000.00
Office Supplies	7,000.00	7,000.00	7,000.00	7,000.00	7,000.00	7,000.00
Maintenance	15,000.00	15,000.00	18,000.00	18,000.00	21,000.00	21,000.00
Packaging	6,000.00	6,000.00	6,000.00	7,000.00	7,000.00	7,000.00
Utilities	12,000.00	12,000.00	13,000.00	13,000.00	14,000.00	14,000.00
Insurance	5,000.00	5,000.00	5,000.00	5,000.00	5,000.00	5,000.00
Freight and Delivery	6,000.00	6,000.00	7,000.00	7,000.00	8,000.00	8,000.00
Building Expenses	19,800.00	19,800.00	19,800.00	19,800.00	19,800.00	19,800.00
Accounting and Legal Fees	5,000.00	3,000.00	3,000.00	3,000.00	3,000.00	3,000.00
Total Operating Costs	<u>6,130,189.37</u>	<u>6,727,928.31</u>	<u>7,394,641.14</u>	<u>8,123,325.25</u>	<u>8,929,577.78</u>	<u>9,807,655.55</u>
Labor						
Plant Manager	45,000.00	47,250.00	49,612.50	52,093.13	54,697.78	57,432.67
Labor	31,000.00	32,550.00	34,177.50	35,886.38	37,680.69	39,564.73
Seasonal	13,000.00	13,650.00	14,332.50	15,049.13	15,801.58	16,591.66
Office Staff	25,000.00	26,250.00	27,562.50	28,940.63	30,387.66	31,907.04
Benefit Package	33,750.00	35,437.50	37,209.38	39,069.84	41,023.34	43,074.50
Total Labor	<u>147,750.00</u>	<u>155,137.50</u>	<u>162,894.38</u>	<u>171,039.09</u>	<u>179,591.05</u>	<u>188,570.60</u>
Marketing						
Sales Rep	35,000.00	35,000.00	38,000.00	38,000.00	41,000.00	41,000.00
Travel	20,000.00	20,000.00	20,000.00	20,000.00	20,000.00	20,000.00
Consulting	5,000.00	5,000.00	5,000.00	5,000.00	5,000.00	5,000.00
Printing/Video	5,000.00	2,000.00	2,000.00	5,000.00	2,000.00	2,000.00
Total Marketing	<u>65,000.00</u>	<u>62,000.00</u>	<u>65,000.00</u>	<u>68,000.00</u>	<u>68,000.00</u>	<u>68,000.00</u>
Property Tax	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00
Short Term Debt Interest**	12,000.00	9,871.00	7,614.00	5,223.00	2,688.00	0.00
Total Interest/Tax Payments	<u>13,000.00</u>	<u>10,871.00</u>	<u>8,614.00</u>	<u>6,223.00</u>	<u>3,688.00</u>	<u>1,000.00</u>
Production Depreciation	\$4,850.27	\$4,850.27	\$4,850.27	\$4,850.27	\$4,850.27	\$4,850.27
Office Depreciation	\$3,500.00	\$3,500.00	\$3,500.00	\$3,500.00	\$3,500.00	\$3,500.00
Total Depreciation	<u>8,350.27</u>	<u>8,350.27</u>	<u>8,350.27</u>	<u>8,350.27</u>	<u>8,350.27</u>	<u>8,350.27</u>
Membership Fees						
Made in Nevada	30.00	30.00	30.00	30.00	30.00	30.00
Chamber of Commerce	45.00	45.00	45.00	45.00	45.00	45.00
Trademark Protection	4,084.00	4,084.00	4,084.00	4,084.00	4,084.00	4,084.00
Certification Fees	2,000.00	2,000.00	2,000.00	2,000.00	2,000.00	2,000.00
Total Membership Fees	<u>6,159.00</u>	<u>6,159.00</u>	<u>6,159.00</u>	<u>6,159.00</u>	<u>6,159.00</u>	<u>6,159.00</u>
Total Costs	<u>6,370,448.64</u>	<u>6,970,446.08</u>	<u>7,645,658.78</u>	<u>8,383,096.62</u>	<u>9,195,366.10</u>	<u>10,079,735.43</u>
* Increasing at 10% per year						
** See amortization schedule						

Table 4.3: Additional Start-up Costs

Catalogue Number	Description	Price
MODEL F	Fischbein Portable Bag Closer	\$ 750.00
1550	Suspension Unit	\$ 200.00
1650	Portable Tape Binding	\$ 410.00
D301	1 Gallon Cleaning	\$ 29.00
D302	Thread Lubricant for Model F	\$ 26.36
D303	Lubricating Oil for Model F	\$ 13.25
D305	8 oz Cone 13/4 Ply Blended	\$ 3.75
D310	2-1/2 lb Cone Thread	\$ 12.00
D311N	Crepe Paper Tape for Bag	\$ 25.60
D311W	Crepe Paper Tape	\$ 32.50
D318	20 lb Cone Polyester	\$ 107.75
DE5	Needles for Portable Bag	\$ 31.25
Total		\$ 1,641.46

Source: Seedburo, 2004.

Labor Expenses:

Salary expenses include one full time manager, one full time employee, one seasonal employee, and one office staff person. Most production will occur in the fall, between August and January, requiring an additional worker to meet production requirements. Plant managers are usually responsible for overall operations, marketing, and member services. This position requires formal training in agribusiness and plant production experience. The office employee should have secretarial and bookkeeping skills, although a certified accountant should be kept on retainer for profit distribution and tax filing. Plant employee experience will be determined by the plant manager.

A Plant manager usually receives a salary and full benefits package. Plant managers usually make approximately \$45,000 - \$75,000 depending on size and location of the facility. Benefit packages cost about 75% of salary expenses (Monster.com, 2005). Many management positions offer a base salary plus commission rates based on percentage of sales.

Plant labor requires experience, but no formal education. Typical rates vary depending on location, but in Northern Nevada, labor rates are approximately \$15 per hour. Benefits are optional. Office staff is usually paid \$12 per hour with or without benefits.

Marketing Costs:

Marketing costs include brochures, sales representatives and advertising. Sales representatives are usually paid on commission, earning 10-15% of accumulated sales (Monster.com, 2005). No benefits are included for commissioned contractors. Publication costs are usually higher in the first operating year due to set up and production costs. Brochures should be updated as changes in services offered are made, or at least bi-annually.

Capital Equipment

Machinery:

Table 4.4 lists equipment usage by plant variety (see Appendix D for a complete description). While used equipment is readily available, the prices listed below reflect new purchase costs. Using a percentage reduction for total capital expenses will provide a financial analysis reflecting actual costs for a combination of used and new equipment (See Appendix H for complete equipment specifications).

- Hammermill (Dewing) - Used to break the seed away from a hard outer coating.
- Clipper - Used to clean a variety of seeds and includes an air-screen separator. Proper seed conditioning greatly reduces the viability of seeds after they have been harvested.
- Germinator - Used for plant growth, propagation of seeds, germination test and incubation when requiring controlled hot/cold cycles and light/dark operations.
- Air Blower/Dehumidifier - Used to reduce moisture in the air. Seed must be reduced to a 15% moisture level for safe storage (Stevens et al., 1996).
- Hopper/Gravity Table - A standard divider required by all inspection agencies and meets USDA-FGIS (GIPSA) specifications.

Table 4.4: Capital Machinery and Equipment

Machinery and Equipment	Page	Cost	Salvage	Life span	Depreciation	
Clipper						
PR526A/F	Prelude Three Phase Cleaner	97	\$17,900	\$1,000	15	\$1,126.67
400/C	Clipper Office Tester 230 volt	96	\$1,735	\$300	15	\$95.67
Hopper						
34	Boerner Divider Complete	33	\$1,115	\$200	15	\$61.00
Hammermill						
PLM3100/B	Perten Lab Hammermill 3100	16	\$4,950	\$500	15	\$296.67
Scales						
8800SS	Computer Grain Scale, NTEP	22	\$1,535	\$300	15	\$82.33
Cooler						
A3820/C	Achieva Single Chamber Seed	73	\$7,129	\$800	15	\$421.93
A75SB/E	Una-Dyn Dehumidifier, Model 87		\$13,980	\$1,000	30	\$432.67
Delivery Truck			\$40,000	\$5,000	15	\$2,333.33
Total Capital Equipment			\$88,344	\$9,100		\$4,850.27

Source: Seedburo, 2004.

Seed Storage:

The relative storage index is determined by the use of three distinct categories. Each index requires 50% or more of the seeds to successfully germinate after a designated time period. These guidelines require proper storage under ambient condition at latitudes of approximately 35° to 48° N. Index 1 will germinate after 1 to 2 years of storage. Index 2 seeds can germinate after 3-5 years and index 3 can be stored for more than 5 years. All the plants listed for production in this study reflect an index 2 rating (Justice and Bass, 1978).

In arid climates, such as those found in Nevada, there are no special storage conditions needed. It is important to make sure the seeds are dried before placing them in storage, requiring a drying procedure after the seed is harvested. The seeds must be stored in clean bags that provide airflow, with low humidity and cool temperatures. All seeds need to time after processing before they will germinate. All the seeds in this study require 1 to 6 months of storage before they can be sold.

Office Equipment:

Additional capital equipment includes office equipment, such as computers, copy machines, fax machines and office furniture. Office equipment can also be depreciated over the life of the equipment. See Table 4.5 for a list of start-up office requirements.

Table 4.5: Capital Office Equipment

<u>Office Equipment</u>	<u>Cost</u>	<u>Life Span</u>	<u>Depreciation</u>
Copy Machine	\$ 5,000.00	5	\$ 1,000.00
Computers	\$ 4,000.00	5	\$ 800.00
Computer Network	\$ 1,000.00	5	\$ 200.00
Terminals (3)	\$ 1,500.00	5	\$ 300.00
Printer	\$ 500.00	5	\$ 100.00
Scanner	\$ 500.00	5	\$ 100.00
Office Furniture	\$ 3,000.00	5	\$ 600.00
Fax Machine	\$ 500.00	5	\$ 100.00
Phone System/Internet	\$ 1,500.00	5	\$ 300.00
Total Office Equipment	\$ 17,500.00		\$ 3,500.00

Source: Office Depot, 2004

Debt Financing

Short-term debt expenses reflect the amount of interest required for a start-up loan in the amount of \$200,000 needed to cover all capital costs and start-up operational costs. An amortization schedule is provided in Table 4.6. The schedule shows loan amount, a payoff schedule, and yearly interest charges over the five-year repayment time frame.

Table 4.6: Amortization Schedule

Loan summary							
	Loan amount	\$200,000.00			Scheduled payment	\$ 47,479.28	
	Annual interest rate	6.00 %			Scheduled number of payments	5	
	Loan period in years	5			Actual number of payments	5	
	Number of payments per year	1			Total early payments	-	
	Start date of loan	1/1/2005			Total interest	\$37,396.40	
		\$					
	Optional extra payments	-					

	Payment Date	Beginning Balance	Scheduled Payment	Total Payment	Principal	Interest	Ending Balance
1	1/1/2005	\$ 200,000.00	\$ 47,479.28	\$ 47,479.28	\$ 35,479.28	\$ 12,000.00	\$ 164,520.72
2	1/1/2006	\$ 164,520.72	\$ 47,479.28	\$ 47,479.28	\$ 37,608.04	\$ 9,871.24	\$ 126,912.68
3	1/1/2007	\$ 126,912.68	\$ 47,479.28	\$ 47,479.28	\$ 39,864.52	\$ 7,614.76	\$ 87,048.16
4	1/1/2008	\$ 87,048.16	\$ 47,479.28	\$ 47,479.28	\$ 42,256.39	\$ 5,222.89	\$ 44,791.77
5	1/1/2009	\$ 44,791.77	\$ 47,479.28	\$ 44,791.77	\$ 42,104.27	\$ 2,687.51	0.00

Source: E-Loan, 2004.

Profit/Loss Statement

An abbreviated version of the Profit and Loss statement is shown in Table 4.7. For a more detailed statement, see Appendix J. While the first two years of production show a net loss, the initial loan of \$200,000 and membership investment will keep the organization in a positive cash flow position (See Appendix L for a Cash Flow Analysis). As more producers become involved in the cooperative, total revenue is expected to grow by 10% each year. Depending on sales price and the amount of business conducted at the 50% reduced price (for federal agencies) revenue figures are purposely underestimated.

Table 4.7: Profit/Loss Statement

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Total Revenue	6,232,791.60	6,856,070.76	7,837,429.91	8,621,172.90	10,020,080.20	11,022,088.22
Total Costs	<u>6,370,448.64</u>	<u>6,970,446.08</u>	<u>7,645,658.78</u>	<u>8,383,096.62</u>	<u>9,195,366.10</u>	<u>10,079,735.43</u>
Total Profit/Loss	(137,657.04)	(114,375.32)	191,771.13	238,076.28	824,714.10	942,352.79

Breakeven Analysis

A breakeven analysis is provided in Appendix K. The breakeven analysis reflects the amount of seed revenue on an average per pound basis that must be generated to breakeven. If the cooperative operates at a lower level of production than the breakeven analysis, the enterprise will be unprofitable. In the first year of production, the cooperative must sell its seed at a minimum price of \$7.43 per pound. This amount falls off slightly across years. If the cooperative is able to gain a higher price, the cooperative will produce a profit.

Sensitivity Analysis

As seed prices fluctuate, cooperative members will see it reflected in both the revenue and expense side of the financial reports. Since seed is both sold to other agencies and the cooperative must reimburse producers for the seed processed, a sensitivity analysis has been devised to reflect profit margins and profit distribution. All other expenses have been held constant to show the impact of seed prices only.

Table 4.8: Sensitivity Analysis on Revenue

Current Market Conditions	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Quantity(Lbs) Produced in Nevada	1,679,941.00	1,847,935.10	1,847,935.10	1,847,935.10	1,847,935.10	1,847,935.10
Interest in Cooperative Participation 51%	856,769.91	942,446.90	1,036,691.59	1,140,360.75	1,254,396.83	1,379,836.51
Market Price per pound	\$ 7.00	\$ 7.00	\$ 7.00	\$ 7.00	\$ 7.00	\$ 7.00
Total Revenue	<u>\$5,997,389.37</u>	<u>\$6,597,128.31</u>	<u>\$7,256,841.14</u>	<u>\$7,982,525.25</u>	<u>\$8,780,777.78</u>	<u>\$9,658,855.55</u>
10% Price Increase						
Quantity(Lbs) Produced in Nevada	1,679,941.00	1,847,935.10	1,847,935.10	1,847,935.10	1,847,935.10	1,847,935.10
Interest in Cooperative Participation 51%	856,769.91	942,446.90	1,036,691.59	1,140,360.75	1,254,396.83	1,379,836.51
Market Price per pound	\$ 7.70	\$ 7.70	\$ 7.70	\$ 7.70	\$ 7.70	\$ 7.70
Total Revenue	\$6,597,128.31	\$7,256,841.14	\$7,982,525.25	\$8,780,777.78	\$9,658,855.55	\$10,624,741.11
Difference (Increased Revenue)	<u>\$599,738.94</u>	<u>\$659,712.83</u>	<u>\$725,684.11</u>	<u>\$798,252.53</u>	<u>\$878,077.78</u>	<u>\$965,885.56</u>
10% Price Decrease						
Quantity(Lbs) Produced in Nevada	1,679,941.00	1,847,935.10	1,847,935.10	1,847,935.10	1,847,935.10	1,847,935.10
Interest in Cooperative Participation 51%	856,769.91	942,446.90	1,036,691.59	1,140,360.75	1,254,396.83	1,379,836.51
Market Price per pound	\$ 6.30	\$ 6.30	\$ 6.30	\$ 6.30	\$ 6.30	\$ 6.30
Total Revenue	\$5,397,650.43	\$5,937,415.48	\$6,531,157.02	\$7,184,272.73	\$7,902,700.00	\$8,692,970.00
Difference (Decreased Revenue)	<u>\$599,738.94</u>	<u>\$659,712.83</u>	<u>\$725,684.11</u>	<u>\$798,252.53</u>	<u>\$878,077.78</u>	<u>\$965,885.56</u>

Table 4.9: Sensitivity Analysis on Profit

Current Market Condition	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Income	\$6,232,791.60	6,856,070.76	7,837,429.91	8,621,172.90	10,020,080.20	11,022,088.22
Operating Expenses	6,130,189.37	6,727,928.31	7,394,641.14	8,123,325.25	8,929,577.78	9,807,655.55
Labor	147,750.00	155,137.50	162,894.38	171,039.09	179,591.05	188,570.60
Marketing	65,000.00	62,000.00	65,000.00	68,000.00	68,000.00	68,000.00
Interest/Tax	13,000.00	10,871.00	8,614.00	6,223.00	3,688.00	1,000.00
Depreciation	8,350.27	8,350.27	8,350.27	8,350.27	8,350.27	8,350.27
Membership	6,159.00	6,159.00	6,159.00	6,159.00	6,159.00	6,159.00
Total Profit	<u>(\$137,657.04)</u>	<u>(\$114,375.32)</u>	<u>\$191,771.12</u>	<u>\$238,076.29</u>	<u>\$824,714.10</u>	<u>\$942,352.80</u>
10% Price Increase	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Income	6,597,128.31	7,256,841.14	7,982,525.25	8,780,777.78	9,658,855.55	10,624,741.11
Operating Expenses	6,130,189.37	6,727,928.31	7,394,641.14	8,123,325.25	8,929,577.78	9,807,655.55
Labor	147,750.00	155,137.50	162,894.38	171,039.09	179,591.05	188,570.60
Marketing	65,000.00	62,000.00	65,000.00	68,000.00	68,000.00	68,000.00
Interest/Tax	13,000.00	10,871.00	8,614.00	6,223.00	3,688.00	1,000.00
Depreciation	8,350.27	8,350.27	8,350.27	8,350.27	8,350.27	8,350.27
Membership	6,159.00	6,159.00	6,159.00	6,159.00	6,159.00	6,159.00
Total Profit	<u>\$226,679.67</u>	<u>\$286,395.06</u>	<u>\$336,866.46</u>	<u>\$397,681.17</u>	<u>\$463,489.45</u>	<u>\$545,005.69</u>
10% Price Decrease	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Income	5,397,650.43	5,937,415.48	6,531,157.02	7,184,272.73	7,902,700.00	8,692,970.00
Operating Expenses	6,130,189.37	6,727,928.31	7,394,641.14	8,123,325.25	8,929,577.78	9,807,655.55
Labor	147,750.00	155,137.50	162,894.38	171,039.09	179,591.05	188,570.60
Marketing	65,000.00	62,000.00	65,000.00	68,000.00	68,000.00	68,000.00
Interest/Tax	13,000.00	10,871.00	8,614.00	6,223.00	3,688.00	1,000.00
Depreciation	8,350.27	8,350.27	8,350.27	8,350.27	8,350.27	8,350.27
Membership	6,159.00	6,159.00	6,159.00	6,159.00	6,159.00	6,159.00
Total Profit	<u>(\$972,798.21)</u>	<u>(\$1,033,030.60)</u>	<u>(\$1,114,501.77)</u>	<u>(\$1,198,823.88)</u>	<u>(\$1,292,666.10)</u>	<u>(\$1,386,765.42)</u>

Cash Flow Analysis

Appendix L and M provide an analysis of cooperative cash flows in the first year of operation on a monthly basis and for the following five years on an annual basis. The assumptions made include 30 participating members, each investing \$5,000 in start-up capital, providing \$150,000. A short-term loan provides an additional \$200,000 of start-up funds. Initial purchases include all capital equipment, including office equipment, production equipment and a delivery truck.

V. SUMMARY AND RECOMMENDATIONS

The purpose of this study is to evaluate the potential markets for native plants and seed in Nevada, as well as gain an idea of the interest in forming a cooperative among Nevada native plant and seed producers. The following provides a summary of the study findings, as well as recommendations which the NWSPA may wish to consider as they move forward.

Producer Participation

A survey of native plant growers, seed collectors, and potential growers was completed to assess the organizational feasibility and production capabilities of a Nevada Wildland Seed Cooperative. A list of fifty-eight growers was provided by the NWSPA. Two separate mailings were sent out to growers, generating six completed surveys, or an 11% response rate. The six growers encompassed 6300 acres of production area. Of the six growers who responded, three stated that they would be willing to join a cooperative, listing set buying contracts and low interest loans as the primary benefits of joining a cooperative. Increased profits and discounts on inputs were secondary benefits.

The low producer survey response rate is concerning, as it is not clear if this is an indication of lack of interest in participating the cooperative or due to some other factor. If lack of interest is the issue the cooperative may have difficulty building the membership necessary to finance cooperative start-up costs. In the business feasibility analysis, we have estimated a need for 30 producer members, all of which invest \$5,000.00 to finance the cooperative start-up of \$150,000.00. Obviously fewer members making a larger investment would also be feasible. Many of the producer survey respondents did engage in contracts with buyers and are aware of many of the benefits of such contractual relationships. These producers may need to educate other producers on the benefits of cooperatives and contractual relationships, including reduced market and price risk. Native seed producers have often mentioned that they have difficulty

finding buyers for their products, and current buyers have fluctuating needs, and hence, don't provide a stable or constant market. A cooperative with buying or contract agreements with producers may provide a solution to this market situation.

On the production side, for the business feasibility analysis, we have used a 51% participation rate on 6300 acres to estimate total seed production for the cooperative. These estimates are based on yield per acre for nine native plant species (Table 4.1 and Appendix E). All revenue estimates in the profit and loss statement (Appendix J) and cash flow analysis (Appendix L) are tied to this level of production. Should production fall below these estimates the cooperative may no longer be a feasible business in the long-run.

Potential Markets

Current and potential markets for native plants, forbs, and grasses were assessed to determine the viability of such markets, including types and quantities needed, as well as pricing, delivery, packaging, and seasonal availability. Additionally, support for locally (Nevada) grown products and the willingness to pay premiums for local products was also assessed. A total of 935 surveys were sent to florists, nurseries, landscapers, mining companies, federal agencies, and natural health and beauty suppliers. Other than the natural health and beauty suppliers, which were located across the U.S., all others were located in Nevada. A total of 41 valid responses were returned, for a response rate of 3%. Additionally 1000 homeowners in Reno, NV were surveyed, with 173 valid responses returned, for a response rate of 17.3%.

The study results show that the majority of the markets surveyed currently purchase their plant and seed products from wholesalers and nursery's outside of Nevada. Native plant and seed purchases in Nevada range from 1-18% of total purchases. Since 81-99% of the market

share, depending on the product, has yet to be taped there is a definite market for Nevada native seed and plant products.

The aggregate market survey results show that there is an equal usage of native plant and seed products at 50% each. However, nursery and agency respondents used primarily seeds and landscapers used primarily plants. Hence, these markets have different needs and the cooperative will need to factor these needs into its product offerings. The market respondents identified quality, followed by price and service as the most influential factors in their choice of plant supplier, and price followed by quality and service as the most influential factors in their choice of seed supplier. Delivery method was very important in choice plant supplier, but less important in choice of seed supplier. However, all market respondents preferred that the supplier handle delivery requirements. Nevada owned, convenience, product availability, and toll-free contact number were also influential in the choice of supplier. Pre-established purchasing contracts were somewhat influential in choice of supplier. The packaging required was vendor specific and no general conclusion can be made. However, market respondents preferred that packaging provide origin, purity, and germination labeling. Indication of certified seed was a secondary preference.

Interestingly, 41% of the market respondents were willing to pay 10% extra for locally (Nevada) grown products (12% unwilling). At a premium of 20% for locally grown products, 30.8% of the market respondents were still willing to pay (18% unwilling). This general trend continued as the premium was increased. Many market respondents were uncertain (40-50%) if they would be willing to pay a premium for Nevada grown products, naming quality, price, and present supplier as their main concerns.

The homeowners surveyed in Reno, NV were willing to pay a premium for Nevada grown products over the non-Nevada alternative (53% would pay \$.25 more, 35% would pay \$1.00 more, and 21% would pay \$2.00 more). Additionally, 44% would choose products to support local business and 33% check labels for origin information. A good percentage of this market (34%) purchases their plant and seed products at specialty stores, local nurseries and through landscaping providers. These outlets may provide an excellent market for the cooperative's products. This market considers the draught resistance of native plants to be most important, followed by natural appearance and protection against invasive weeds. Interestingly, this market uses primarily plant products (84%), while only a small percentage (16%) use seeds.

Based on the information gathered in the marketing section of this study, there is definitely a niche market for locally produced Nevada native plant products for residential use. This niche market consists of consumers who are willing to pay premiums for locally grown products and shop for these products at small local nurseries and specialty stores. The cooperative may wish to sponsor educational seminars in conjunction with their nursery and floral buyers, to educate end consumers on the benefits and ease of native plant use in residential planning.

On the larger scale, the cooperative will need to set up purchasing contracts with government agencies and larger residential and commercial landscapers. These markets have different requirements, but quality, availability, and delivery play a significant role in the decision process.

Financial Recommendations

The New Generation Cooperative (NGC) provides the optimal legal situation for the cooperative, as its investment options, distribution on owner's equity, and marketing options

seem to best fit the current needs of native plant and seed producers in Nevada. Using the stock option of ownership, each member invests a start-up amount equal to the amount of seed they plan to provide to the cooperative for production. This seed is bought at market value, with sales revenues repaying the cost of the seed, plus a percentage share in the profits at the end of each season are paid out to each member. This ensures adequate seed to maximize production capabilities and provide an initial investment based on ownership, providing an adequate cash flow for start-up operations. It is recommended that the cooperative collect 40% of all start-up costs through the distribution of common stock to the initial investors. Short-term loans can be used to cover first year operation costs and long-term loans can be used to finance any additional capital investments required. It may also be advisable for the cooperative to apply for a USDA-RD value-added production grant to help finance first year operation costs. According to the current year grant specifications, the cooperative could apply for up to \$150,000.00, as long as it is able to secure an equal amount through member investment or loans from non-federal sources (USDA-RD, 2005).

For the first five years, it is recommended that the cooperative focus on retaining its earnings (profits) and establish a cash reserve to weather possible negative economic conditions. These retained earnings offer additional ownership to members, based on the number of shares purchased at the cooperative inception. Native plant and seed producers will require full payment of their seed deliveries at market value in order to replenish their fields for the following season, and hence these payments must be made annually.

VI. REFERENCES

- Bonnet, Celine and Michel Simioni. "Assessing Consumer Response to Protected Destination of Origin Labeling: A Mixed Multinomial Logit Approach." *European Review of Agricultural Economics*, vol. 28, no. 4, December 2001, pp. 433-49.
- Coltrain, David, David Barton, and Michael Boland. "Differences Between New Generation Cooperatives and Traditional Cooperatives." Publication of the Arthur Capper Cooperative Center, University of Kansas, 2001.
- E-Loan. Calculators & Tools 2004. Online. Available at <http://www.eloan.com>.
- E-Rate. 6 Month LIBOR Adjustable Rate Mortgage Index History 2004. Online. Available at <http://www.erate.com>.
- Giddens, Nancy and Amanda Hofmann. "Building Your Brand." *Vantage* vol. 2, no. 4, November 2001. Publication of the Missouri Value Added Development Center. Online. Available at <http://valueadded.missouri.edu/vantage/v2n4/vanews2.htm>.
- Gluten Intolerance Group. "What is Celiac Disease?" 2005. Online. Available at <http://www.gluten.net>.
- Goodman, Carla. "A Growth Industry - Comstock Seed Co - Company Profile." *Nation's Business*, Jan 1997. Publication of the US Chamber of Commerce.
- Harris, A, B. Stefanson, and M. Fulton. "New Generation Cooperatives and Cooperative Theory." *Journal of Cooperatives* vol. 11, 1996, pp. 15-28.
- Justice, Oren L. and Louis N. Bass. "Principles and Practices of Seed Storage." 1978 *Agriculture Handbook* no. 506, pp. 57-77.

Kitchen, Stanley and Stanford Young. "Operational Procedures of the Association of Official Seed Certifying Agencies." Publication of the Association of Official Seed Certifying Agencies, 2001. Online. Available at <http://www.aosca.org>.

Loureiro, Maria L. and Jill J. McCluskey. "Assessing Consumer Response to Protected Geographical Identification Labeling." *Agribusiness* vol. 16, no. 3, Summer 2000, pp. 309-320.

Monster.com. Salary Wizard 2005. Online. Available at <http://www.monster.com>.

Native Seed Network. Marketplace 2005. Online. Available at <http://www.nativeseednetwork.org>.

Office Depot. Online. Available at <http://www.officedepot.com>.

Rapp, Galen and Gerald Ely. "How to Start a Cooperative." Report number 7, USDA Rural Business Cooperative Service, September 1996.

Seedburo. Equipment Catalog 2004. Online. Available at <http://www.seedburo.com>.

Stevens, Richard, Kent Jorgensen, Stanford Young, and Stephen Monsen. "Forb and Shrub Production Guide for Utah." A publication of Utah State University Extension, 1996, pp. 13-64.

Tucson Clinic of Botanical Medicine (TCBMed). "Globemallow." *The Collection* vol. 3, no. 4, Winter 2001-2002. Online. Available at <http://www.tcbmed.com/Newsletters/Volume3-Issue4-Sphaeralcea.html>.

USDA-AMS. "Plant Variety Protection Office (PVPO) - Cost of Protection and Other Fees." 2005. Online. Available at <http://www.ams.usda.gov/science/PVPO/fee03.htm>.

USDA-RD. Value-Added Producer Grants 2005. Online. Available at <http://www.rurdev.usda.gov>.

Utah State University Extension. "Range Plants of Utah: Cliffrose." 2004. Online. Available at <http://extension.usu.edu/rangeplants/Woody/cliffrose.htm>.

VII. APPENDIX

Appendix A - Seed Purchases by Industry

Industry	Type	Unit	Amount
Landscape Companies	4 wing saltbrush	1 pound	3500
	antelope bitterbrush	1 pound	3500
	blue flax	1 pound	3500
	bluebunch wheatgrass	1 pound	3500
	bottlebrush squirreltail	1 pound	3500
	indian ricegrass	1 pound	3500
	sandberg bluegrass	1 pound	3500
	scarlet globemallow	1 pound	3500
	western yarrow	1 pound	3500
	wyoming big sagebrush	1 pound	3500
	Total Seed		
Nurseries	4 wing saltbrush	50 lb	100
	antelope bitterbrush	50 lb	100
	blue flax	50 lb	100
	desert bitterbrush	50 lb	100
	great basin wildrye	50 lb	100
	indian ricegrass	50 lb	100
	mountain big sagebrush	50 lb	100
	shadscale	50 lb	100
	thickspike wheatgrass	50 lb	100
Total Seed			900
Mining	4 wing saltbrush	50 lb sacks	4000
	antelope bitterbrush	varies	8500
	basin big sagebrush	50 lb sacks	4500
	black sagebrush	50 lb sacks	3000
	blue flax	50 lb sacks	6000
	bluebunch wheatgrass	50 lb sacks	65000
	crested wheatgrass	50 lb sacks	3500
	desert bitterbrush	50 lb sacks	2000
	great basin wildrye	50 lb sacks	6500
	idaho fescue	50 lb sacks	1500
	indian ricegrass	50 lb sacks	4500
	mountain big sagebrush	50 lb sacks	3500
	palmer penstemon	50 lb sacks	2000
	penstemon	50 lb sacks	2000
	prostrate summer cyp	50 lb sacks	1500
	quailbush	varies	1500
	sandberg bluegrass	50 lb sacks	1500
	scarlet globemallow	50 lb sacks	3000
	shadscale	50 lb sacks	4500
	slender wheatgrass	50 lb sacks	2500
	snake river wheatgrass	50 lb sacks	3500
	thickspike wheatgrass	50 lb sacks	5000
	western wheatgrass	varies	3500
	western yarrow	varies	6000
winterfat	50 lb sacks	5000	
wyoming big sagebrush	50 lb sacks	4000	
Total Seed			100000

Appendix A Cont. - Plant Purchases by Industry

Industry

Landscape Companies

Type	Unit	Amount
blue flax	1 gal	50
blue juniper bush	5 gal	200
blue-chip juniper bush	5 gal	200
buffalo juniper bush	5 gal	200
golden arborvitae tree	16 in	60
hollywood twister juniper tree	16 in	20
modell pine tree	24 in	40
seal green juniper bush	5 gal	200
spearment juniper tree	16 in	150
western yarrow	1 gal	600
yellow eronymous golden tip bushes	5 gal	300
Total Plants		2020

Nurseries

apache plume	1 gal	200
archtostaphylis patula	5 gal	200
cercocarpis ledifolia	1 gal	620
ephedra nevadense	1 gal	200
opuntia prickley pear cactus	4 in	300
pinus jeffreyii	1 gal	75
prunus andresonii	2 gal	600
ribes nevadense	1 gal	1000
Total Plants		1175

Mining

4 wing saltbrush	1 gal	3000
alkali sacaton	1 gal	4000
bluebunch wheatgrass	1 gal	3000
cicer milkvetch	1 gal	3000
crested wheatgrass	1 gal	3000
great basin wildrye	1 gal	3000
idaho fescue	1 gal	3000
indian ricegrass	1 gal	3000
lewis blue flax	1 gal	3000
palmer penstemon	1 gal	3000
prostrate summer cyp	1 gal	3000
quailbush	1 gal	3000
quickguard	1 gal	3000
sandberg bluegrass	1 gal	3000
shadscale	1 gal	4000
slender wheatgrass	1 gal	3000
small burnet	1 gal	3000
thickspike wheatgrass	1 gal	3000
western wheatgrass	1 gal	3000
wyoming big sagebrush	1 gal	4000
yellow sweetclover	1 gal	3000
Total Plants		66000

Appendix B - Native Nevada Plant Varieties

<u>Common Name</u>	<u>Scientific Name</u>
Indian ricegrass	<i>Achnatherum hymenoides</i>
Great Basin wildrye	<i>Elymus cinereus</i>
Snake River wheatgrass	<i>Elymus wawawaiensis</i>
Bluebunch wheatgrass	<i>Pseudoroegneria spicata</i>
Thickspike wheatgrass	<i>Elymus macrourus</i>
Bottlebrush squirrel tail	<i>Elymus elymoides ssp. Brevifolia</i>
Sandberg's bluegrass	<i>Poa secunda</i>
Thruher's needle grass	<i>Achnatherum thurberianum</i>
Needle and thread grass	<i>Hesperostipa comata</i>
Desert needle grass	<i>Achnatherum speciosum</i>
4-wing saltbush	<i>Atriplex canescens</i>
Shadscale	<i>Atreplex confertifolia</i>
Torrey's saltbush	<i>Atreplex torreyi</i>
Wyoming big sagebrush	<i>Artemesia tridentata (wyomingensis)</i>
Mountain big sagebrush	<i>Artemesia tridentata (vaseyana)</i>
Basin big sagebrush	<i>Artemesia tridentata (tridentata)</i>
Low sagebrush	<i>Artemesia arbuscula</i>
Black sagebrush	<i>Artemesia nova</i>
Winterfat	<i>Krascheninnkovia lanata</i>
Antelope bitterbrush	<i>Purshia tridentate</i>
Desert bitterbrush	<i>Purshia glandulosa</i>
Stansbury cliffrose	<i>Purshia stansburiana</i>
Mexican cliffrose	<i>Purshia mexicana</i>
Blue flax	<i>Linum lewisii var lewisii</i>
Scarlet globemallow	<i>Sphaeralcea coccinea</i>
Western Yarrow	<i>Achillea millifolium</i>

Appendix C - Nevada Agricultural Lawyers

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Appendix D - Capital Equipment Needs by Seed

	Air				Minimum				
	Hammermill (Dewing)	screen separator	Debearder	Gravity table	Air Blower	Chopper	Storage required	Seed longevity	Viability
Winterfat *	x	x					6 months	20 years	60%-80%
Globemallow **		x	x				1 month	16 years	90%
Blueflax				x	x		1 month	10-15 years	90%
Bitterbrush **		x	x				6 months	20+ years	90%
Saltbrush **	x	x					6 months	20+ years	70%
Big Moutain Sagebrush		x	x				1 month	3 years	50%-80%
Wyoming Sagebrush		x	x				1 month	3 years	50%-80%
Western Yarrow		x	x	x			1 month	4 years	Decreasing

* Up to 2 months of moist, cool conditions required prior to germination

** Acid scarification or 1 to 3 months of cold, moist stratification is required to germinate seeds

Source: Stevens et al., 1996.

Appendix E - Yield Data

Seed Variety	Yield/ Acre	1st			3rd			5th year yield	Purity	Longevity of field	Harvest month
		year yield	2nd year yield	3rd year yield	4th year yield	5th year yield					
Winterfat	500	0	40	80	90	100	95%	15 years	Oct-Feb		
Globemellow	130	0	45	100	100	100	80%	4 - 6 years	Aug		
Blueflax	300	40	100	100	100	100	90%	10 years	Aug		
Bitterbrush*	250	0	10	10	10	10	95%	25+ years	July		
Saltbrush	500	0	40	80	100	100	95%	15+ years	Oct-Feb		
Big Basin	1500	0	30	85	85	100	15%	15+ years	Nov-Jan		
Sagebrush	1500	0	40	95	95	95	15%	15-20 years	Oct-Nov		
Wyoming Big Sagebrush	1500	0	40	85	100	100	100%	15-20 years	Nov- Dec		
Western Yarrow	350	60	90	100	100	100	30%	10-15 years	Aug-Sep		

Based on seedling plantings

Direct seed planting greatly reduces the yield

* Requires 9 years for 85% production

Source: Stevens et al., 1996.

Appendix F - Seed Production Schedule

	January	February	March	April	May	June	July	August	September	October	November	December
Incoming Seed												
Winterfat		-----								-----		
Globemallow								-----				
Blueflax								-----				
Bitterbrush							-----					
Saltbrush			-----							-----		
Big Basin Sagebrush				-----							-----	
Big Mountain Sagebrush									-----			
Wyoming Big Sagebrush											-----	
Western Yarrow								-----				

Source: Stevens et al., 1996.

Appendix G - Important Phone Numbers

NEVADA FOUNDATION SEEDSTOCKS

PO Box 230, Lovelock NV 89419

Telephone 702/273-2923

Fax 702/273-7647

The Association of Official Seed Certifying Agencies, (AOSCA) represents a network of independent seed certification agencies that are committed to providing official unbiased field inspection and lab testing services within their respected boundaries or domain. The Association was originally established in 1919 as the International Crop Improvement Association. Currently, membership consists of 44 state certification agencies within the United States and seven national agencies: Argentina, Australia, Canada, Chile, New Zealand, Panama and South Africa. Programs offered include, but are not limited to: Seed Certification, Quality Assurance, Identity Preserved, OECD Seed Schemes and Organic Certification.

Appendix H - Capital Equipment Description

CLIPPER PRELUDE MODEL 526 SERIES CLEANER

- Flexible Scalp/Sift Screen Arrangements
- Precision Air Separation With Optional Fan/Blower Configuration
- Tubular Steel Frame for Portability and Operational Stability
- Self Feeding Vibratory Hopper
- Ball Tray Screen Cleaning
- 3-Year Manufacturers Warranty

The Prelude 526 series air screen cleaner offered by Seedburo is designed for precision seed cleaning for many applications. The Prelude will efficiently clean most varieties of cereal grains, oilseeds, flower and vegetable seeds, legumes and many more.

The Prelude utilizes a 54" wide screen and provides adaptable screen arrangements. The cleaner has three screen decks with a total of five (5) 54" W x 26" L screens. The top deck has one 26" long screen for scalping. The next two decks have two 26" long screens that can be set up for scalp/sift or a spilt sift configuration. With a screening capacity of more than 50 square feet, precision separations can be made efficiently. More than 175 different sizes of perforated metal or wire cloth screens are available. A complete set of five (5) screens in your choice of perforation is provided.

Portability and operational stability distinguish the Prelude 526 from other similar sized cleaners. The 3" x 3" tubular steel frame and smooth eccentric motion allow for many portable and permanent applications. The optional air system is designed to take full advantage of quick and efficient air lift separation. Fan velocity adjustments are easily made and will accommodate a wide range of commodities in various conditions.

The Prelude Model 526 base model is available without the optional fan/air system, while our Model 526A includes the fan/air system. Other optional accessories include: an AC controlled, adjustable vibratory hopper, an AC controlled, adjustable eccentric (shoe shake), a centralized grease line package, a hopper agitator kit and an enclosed panel system to reduce noise and dust in plants and laboratories.

Actual dims. 92" L x 80" W x 91" H. Ship wt. 3400 lbs. Prelude 526 Ship dims. (crated) 96" L x 85" W x 92" H. Optional Fan/Air System: Ship wt. 800 lbs. Ship dims. (crated) 48" L x 55" W x 35" H.

CLIPPER OFFICE TESTER & CLEANER

The Clipper Model 400 Office Tester & Cleaner offered by Seedburo is an extremely efficient cleaner for office and laboratory use. This machine will provide accurate, dependable performance for small lot cleaning, testing or sampling. It is commonly used in seed plants for sampling large lots of seed for correct screen selection on larger, commercial size cleaners. It is also widely used in university laboratories for agronomy research and testing and flower and vegetable growers use the Model 400 for specialized cleaning, grading and sizing. The Model 400 has a compact, portable design and features an eccentric (shoe) drive that uses two (2) 10" x 15" screens. One top screen for scalping, one bottom screen for cleaning and grading. Perforated metal or wire cloth screens are available in over 175 different sizes. Other features include a powerful bottom blast fan driven by a three-step pulley, adjustable slide on the air intake openings to provide intermediate air regulation and an optional, removable catchall with removable trays (shown) to catch air screenings.

Actual dims. 25" L (42" L with catchall) x 17" W x 23" H. Ship wt. 85 lbs. Dims. 32" L x 20" W x 32" H.

BOERNER DIVIDER

Our Boerner Divider is the standard divider for all federal, state, and local grain inspection offices. It is built to meet USDA-FGIS (GIPSA) specifications for official inspections and is referenced in the equipment handbook.

The 34 divider is gravity operated. Sample is placed in the hopper and released by moving a slide gate located in the hopper throat. The product is evenly dispersed over a cone that has 38 pockets. The grain, after initial separation, is rejoined into two chutes which empty out of the bottom hopper.

The Boerner is calibrated to provide accurate splits of +/- 1% on a 1000g sample.

The Seedburo Boerner divider is made from brass and copper, which makes it rust resistant. The legs and supports are brass plated steel. A divider is supplied complete with two brass pans with handles for easy transport of divided samples. The 34 stands 31" high with 3" clearance under the spouts.

Net wt. 32 lbs, Ship wt. 34 lbs., Dims. 19" L x 19" W x 38" H.

PERTEN LABORATORY MILL 3100

The Lab Mill 3100 is a hammer type cyclone mill, built into a soundproofed casing. An airflow feeder regulates feeding of a sample into a metallic grinding chamber. A hardened steel hammer rotates at high speed, forcing the sample through a stainless steel sieve. The fine, homogeneous sample is separated from the air in a cyclone and collected in a quick release stainless steel container. The cyclone principle makes the mill self-cleaning and thus cleaning between samples is not normally required.

Standard sieve 0.8mm is used for Falling Number, Glutomatic/Gluten Index and NIR-analyses. Sieves of 0.5 - 2.0mm are available.

The standard mill approved for three major tests: FALLING NUMBER TEST to determine the alpha-amylase activity in wheat and rye. GLUTOMATIC/-GLUTEN INDEX TEST to determine wet gluten quantity and quality, NIR-ANALYSIS to determine protein, fat, hardness, ash and moisture after grinding. Operation is belt drive, 1:6, 16,800RPM. Capacity is 300g in 30-50 seconds depending on moisture content. Dims. 23" L x 20" W x 26" H (560 x 510 x 630mm). Net wt. 120 lbs. (51Kg)

SEEDBURO COMPUTER GRAIN SCALE

The Seedburo Model 8800SS Computer Grain Scale is the industry leader in grading scales. Used worldwide, this scale is capable of providing the user with dockage (foreign material) percentage, test weight results in pounds per bushel or kilograms per hectoliter and gram weight all by the push of a button. Ruggedly built, with time-proven technology the 8800SS is easy to use. Built-in memory function allows a sample to be stored and recalled for easy calculation of percentages.

Additional features allow for set-up procedures of standard or reciprocal percentage modes, cup selection (quart, pint or liter), active/frozen percent and test weight selection and many other internal scale functions. The 8800SS is NTEP certified and is provided with a No. 64P triangular plastic sample pan. The 8800SS also has RS232C interface capabilities that allow for computer or printer connection. The Scale is available in 115V, 50/60Hz or 230V, 50/60Hz.

Specifications:

Capacity 8800SS 0-2000g x 0.2g
Test Weight & FM 0.01 (Lbs./Bu, Kg/Hl and %)
Scale Dims 11.5" L x 9" W x 5" H
Ship Dims 17" L x 13" W x 13" H
Net Wt. 10 lbs.
Ship Wt. 12 lbs.

ACHIEVA BASIC STYLE CONSOLE GERMINATOR

The Achieva Basic Style Console Germinator is packed with all the features you expect from Seedburo. Used for plant growth, propagation of seeds, germination test and incubation that requires a controlled environment (hot/cold cycles and light dark operations).

The Achieva features include an advanced cooling refrigeration system that is hermetically sealed and uses an oil-cooler to improve operation in high ambient conditions. Walls use thick, foam-in place insulation.

Chamber environment can be controlled via solid state humidity controller. Built in heavy duty misting pump has a unique air flow assuring continuous humidity circulation for more reliable seed testing in both hot and cold cycles. Flexible humidity range from below ambient in the cold cycle to near saturation on continuous run selection. Bottom reservoir location and interior drain replenishes water supply, reducing the need for technician to monitor water level.

Exterior is white texture-coated steel. Smooth white interior produces an enhanced light refraction (lumens) for propagation tests. Interior stainless steel air duct and fan/evaporator cover assures greater air circulation. Oversize heavy-duty door, handle and door edge protector provide greater operator safety. External Dims. 33" L x 32¼" W x 88¾" H. Internal Dims. 21" L x 27" W x 52" H. Net wt. 395 lbs., ship wt. 480 lbs. Compressor 1/3 HP, Refrigerant R-134a, amp load: 13.65A, 120V, 1PH.

Easy to operate controls:

- Illuminated motor on/off switch
- Mode selector switch
- Two (2) single setpoint temperature controllers in both F/C, one for heat mode and one for cool mode. Operational range of 0° C to 38° C (32° F to 100° F) with variation factor of +/- 2° C
- Three (3) fluorescent tubes per chamber producing 9,828 lumens
- Two (2) reset timers w/pilot lights, automatically and individually control heat and cool modes.
- 7-day recording/ indicating thermometer is extremely accurate, requires no inking. Pressure sensitive charts, sapphire tip stylus, w/ illuminated manual on/off switch (Model A3920)
- Exterior mounted 5" dial thermometer (°F and °C) on all other models.

Source: Seedburo, 2004.

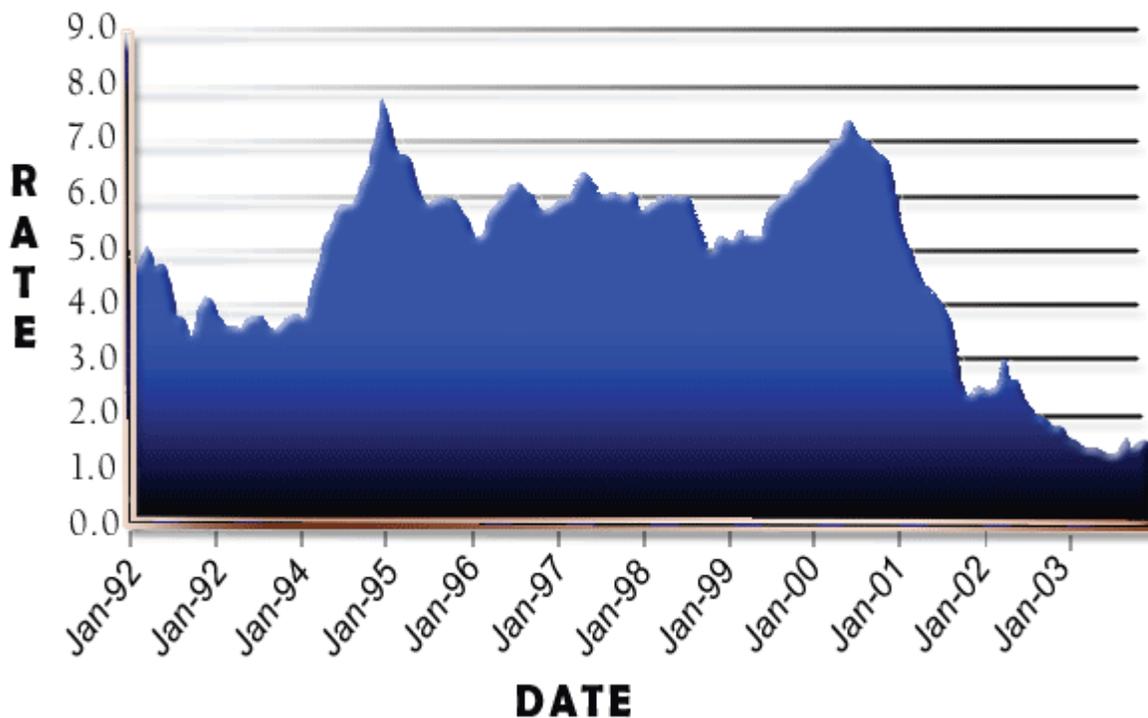
Appendix I - 6 Month LIBOR Adjustable Rate Mortgage Index History

LIBOR is an abbreviation for "London Interbank Offered Rate," and is the interest rate offered by a specific group of London banks for U.S. dollar deposits of a stated maturity. LIBOR is used as a base index for setting rates of some adjustable rate financial instruments, including Adjustable Rate Mortgages (ARMs) and other loans.

Six Month Libor History (6 Month Libor)

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2004	1.211	1.203	1.160	1.368	1.579	1.942	1.986	1.991	2.170	2.301	2.624	2.775
2003	1.353	1.336	1.262	1.290	1.223	1.124	1.151	1.210	1.180	1.221	1.230	1.219
2002	1.989	2.068	2.332	2.100	2.090	1.948	1.863	1.815	1.751	1.618	1.471	1.383
2001	5.361	4.955	4.711	4.231	3.990	3.827	3.694	3.479	2.532	2.173	2.101	1.983
2000	6.238	6.328	6.530	6.614	7.064	7.014	6.887	6.831	6.761	6.721	6.678	6.208
1999	5.036	5.168	5.083	5.075	5.193	5.633	5.680	5.913	5.974	6.144	6.063	6.136

One Year Libor 1992 through 2003



Source: E-Rate, 2004.

Appendix J - Profit/Loss Statement

Revenue	2005	2006	2007	2008	2009	2010
Winterfat	4,987,500.00	5,486,250.00	6,034,875.00	6,638,362.50	7,302,198.75	8,032,418.63
Bitterbrush	3,325,000.00	3,657,500.00	4,023,250.00	4,425,575.00	4,868,132.50	5,354,945.75
Bluebunch Wheatgrass	322,000.00	354,200.00	389,620.00	428,582.00	471,440.20	518,584.22
Blue Flax	661,500.00	727,650.00	800,415.00	880,456.50	968,502.15	1,065,352.37
Great Basin Rye	359,100.00	395,010.00	434,511.00	477,962.10	525,758.31	578,334.14
Indian Rice Grass	1,260,000.00	1,386,000.00	1,524,600.00	1,677,060.00	1,844,766.00	2,029,242.60
Scarlet Globemellow	910,000.00	1,001,000.00	1,101,100.00	1,211,210.00	1,332,331.00	1,465,564.10
Snake River Wheatgrass	218,960.00	240,856.00	264,941.60	291,435.76	320,579.34	352,637.27
Thickspike Wheatgrass	177,100.00	194,810.00	214,291.00	235,720.10	259,292.11	285,221.32
10% yearly Increase	0.51	0.51	0.53	0.53	0.56	0.56
Total Revenue	<u>6,232,791.60</u>	<u>6,856,070.76</u>	<u>7,837,429.91</u>	<u>8,621,172.90</u>	<u>10,020,080.20</u>	<u>11,022,088.22</u>
Operating Costs						
Seed Costs	5,997,389	6,597,128	7,256,841	7,982,525	8,780,778	9,658,856
Phone/Utilities	12,000.00	12,000.00	13,000.00	13,000.00	14,000.00	14,000.00
Fuel and Lube	10,000.00	10,000.00	10,000.00	10,000.00	10,000.00	10,000.00
Shop and Tools	25,000.00	25,000.00	26,000.00	26,000.00	28,000.00	28,000.00
Freight/Trucking	10,000.00	10,000.00	10,000.00	12,000.00	12,000.00	12,000.00
Office Supplies	7,000.00	7,000.00	7,000.00	7,000.00	7,000.00	7,000.00
Maintenance	15,000.00	15,000.00	18,000.00	18,000.00	21,000.00	21,000.00
Packaging	6,000.00	6,000.00	6,000.00	7,000.00	7,000.00	7,000.00
Utilities	12,000.00	12,000.00	13,000.00	13,000.00	14,000.00	14,000.00
Insurance	5,000.00	5,000.00	5,000.00	5,000.00	5,000.00	5,000.00
Freight and Delivery	6,000.00	6,000.00	7,000.00	7,000.00	8,000.00	8,000.00
Building Expenses	19,800.00	19,800.00	19,800.00	19,800.00	19,800.00	19,800.00
Accounting and Legal Fees	5,000.00	3,000.00	3,000.00	3,000.00	3,000.00	3,000.00
Total Operating Costs	<u>6,130,189.37</u>	<u>6,727,928.31</u>	<u>7,394,641.14</u>	<u>8,123,325.25</u>	<u>8,929,577.78</u>	<u>9,807,655.55</u>
Labor						
Plant Manager	45,000.00	47,250.00	49,612.50	52,093.13	54,697.78	57,432.67
Labor	31,000.00	32,550.00	34,177.50	35,886.38	37,680.69	39,564.73
Seasonal	13,000.00	13,650.00	14,332.50	15,049.13	15,801.58	16,591.66
Office Staff	25,000.00	26,250.00	27,562.50	28,940.63	30,387.66	31,907.04
Benefit Package	33,750.00	35,437.50	37,209.38	39,069.84	41,023.34	43,074.50
Total Labor	<u>147,750.00</u>	<u>155,137.50</u>	<u>162,894.38</u>	<u>171,039.09</u>	<u>179,591.05</u>	<u>188,570.60</u>
Marketing						
Sales Rep	35,000.00	35,000.00	38,000.00	38,000.00	41,000.00	41,000.00
Travel	20,000.00	20,000.00	20,000.00	20,000.00	20,000.00	20,000.00
Consulting	5,000.00	5,000.00	5,000.00	5,000.00	5,000.00	5,000.00
Printing/Video	5,000.00	2,000.00	2,000.00	5,000.00	2,000.00	2,000.00
Total Marketing	<u>65,000.00</u>	<u>62,000.00</u>	<u>65,000.00</u>	<u>68,000.00</u>	<u>68,000.00</u>	<u>68,000.00</u>
Property Tax	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00
Short Term Debt Interest**	12,000.00	9,871.00	7,614.00	5,223.00	2,688.00	0.00
Total Interest/Tax Payments	<u>13,000.00</u>	<u>10,871.00</u>	<u>8,614.00</u>	<u>6,223.00</u>	<u>3,688.00</u>	<u>1,000.00</u>
Production Depreciation	\$4,850.27	\$4,850.27	\$4,850.27	\$4,850.27	\$4,850.27	\$4,850.27
Office Depreciation	\$3,500.00	\$3,500.00	\$3,500.00	\$3,500.00	\$3,500.00	\$3,500.00
Total Depreciation	<u>8,350.27</u>	<u>8,350.27</u>	<u>8,350.27</u>	<u>8,350.27</u>	<u>8,350.27</u>	<u>8,350.27</u>
Membership Fees						
Made in Nevada	30.00	30.00	30.00	30.00	30.00	30.00
Chamber of Commerce	45.00	45.00	45.00	45.00	45.00	45.00
Trademark Protection	4,084.00	4,084.00	4,084.00	4,084.00	4,084.00	4,084.00
Certification Fees	2,000.00	2,000.00	2,000.00	2,000.00	2,000.00	2,000.00
Total Membership Fees	<u>6,159.00</u>	<u>6,159.00</u>	<u>6,159.00</u>	<u>6,159.00</u>	<u>6,159.00</u>	<u>6,159.00</u>
Total Costs	<u>6,370,448.64</u>	<u>6,970,446.08</u>	<u>7,645,658.78</u>	<u>8,383,096.62</u>	<u>9,195,366.10</u>	<u>10,079,735.43</u>
Total Profit/Loss	<u>(137,657.04)</u>	<u>(114,375.32)</u>	<u>191,771.13</u>	<u>238,076.28</u>	<u>824,714.10</u>	<u>942,352.79</u>
* Increasing at 10% per year						
** See amortization schedule						

Appendix K – Break Even Analysis Per Pound of Seed

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Total Variable Costs	6,195,189.37	6,789,928.31	7,459,641.14	8,191,325.25	8,997,577.78	9,875,655.55
Total Administrative Costs	147,750.00	155,137.50	162,894.38	171,039.09	179,591.05	188,570.60
Total Fixed Costs	27,509.27	25,380.27	23,123.27	20,732.27	18,197.27	15,509.27
Total Costs	175,259.27	80,517.77	186,017.65	191,771.36	197,788.32	204,079.87
Pounds of Seed	856,769.91	942,446.90	1,036,691.59	1,140,360.75	1,254,396.83	1,379,836.51
Variable Costs per/Lb.	0.23	0.20	0.20	0.18	0.17	0.16
Seed Costs per/Lb.	7.00	7.00	7.00	7.00	7.00	7.00
Administrative Cost per/Lb.	0.17	0.16	0.16	0.15	0.14	0.14
Fixed Cost per/Lb.	0.03	0.03	0.02	0.02	0.01	0.01
Total Costs per/Lb.	7.43	7.39	7.38	7.35	7.32	7.31

Appendix L – Year 1 Monthly Cash Flow Analysis

	January	February	March	April	May	June
Revenue						
Incoming Seed Type						
Winterfat						
Bitterbrush	1,662,500.00	1,662,500.00				
Wheatgrass, Bluebunch	161,000.00	161,000.00				
Blueflax		330,750.00	330,750.00			
Wildrye, Great Basin	179,550.00	179,550.00				
Indian Ricegrass	630,000.00	630,000.00				
Scarlet Globemellow		455,000.00	455,000.00			
Wheatgrass, Crested	109,480.00	109,480.00				
Sagebrush				29,515.00	29,516.00	29,517.00
Interested Parties	.51 %	.51 %	51 %	51 %	51 %	.51
Total Revenue	\$ 1,398,690.30	\$ 1,799,422.80	\$ 400,732.50	\$ 15,052.65	\$ 15,053.16	\$ 15,053.67
Percentage of Sales	22.4%	28.9%	6.4%	0.2%	0.2%	0.2%
Expenses						
Seed Costs*	1,345,863.74	1,731,461.14	385,597.40	14,484.13	14,484.62	14,485.11
Operating Costs Less Seed	11,066.67	11,066.67	11,066.67	11,066.67	11,066.67	11,066.67
Labor Costs	12,312.50	12,312.50	12,312.50	12,312.50	12,312.50	12,312.50
Marketing Costs	5,416.67	5,416.67	5,416.67	5,416.67	5,416.67	5,416.67
Interest Costs	1,083.33	1,083.33	1,083.33	1,083.33	1,083.33	1,083.33
Membership Fees	513.25	513.25	513.25	513.25	513.25	513.25
Total Costs	\$ 1,376,256.16	\$ 1,761,853.56	\$ 415,989.81	\$ 44,876.55	\$ 44,877.04	\$ 44,877.53
Total Cash Flow	\$ 22,434.14	\$ 37,569.24	\$ (15,257.31)	\$ (29,823.90)	\$ (29,823.88)	\$ (29,823.86)

	January	February	March	April	May	June
30 owners at \$5000	150000.00					
Loan	200000.00					
Capital Expenses	96644.00					
Prior Month	0.00	272,833.62	307,446.36	289,232.46	256,451.95	223,671.46
Revenue	1,398,690.30	1,799,422.80	400,732.50	15,052.65	15,053.16	15,053.67
Less Costs	1,376,256.07	1,761,853.45	415,989.79	44,876.55	44,877.04	44,877.53
Loan Principle	2,956.61	2,956.61	2,956.61	2,956.61	2,956.61	2,956.61
Net Cash	\$ 272,833.62	\$ 307,446.36	\$ 289,232.46	\$ 256,451.95	\$ 223,671.46	\$ 190,891.00

Appendix L Cont.

Revenue	July	August	September	October	November	December	Total
Incoming Seed Type							
Winterfat				1,662,500.00	1,662,500.00	1,662,500.00	8,312,500.00
Bitterbrush							322,000.00
Wheatgrass, Bluebunch							661,500.00
Blueflax							359,100.00
Wildrye, Great Basin							1,260,000.00
Indian Ricegrass							910,000.00
Scarlet Globemellow							218,960.00
Wheatgrass, Crested							88,548.00
Sagebrush	29,518.00	29,517.00	29,517.00				88,555.06
Interested Parties	51 %	51 %	51 %	51 %	51 %	51 %	51 %
Total Revenue	\$ 15,054.18	\$ 15,053.67	\$ 15,053.67	\$ 847,875.00	\$ 847,875.00	\$ 847,875.00	\$ 6,232,793.16
Percentage of Sales	0.2%	0.2%	0.2%	13.6%	13.6%	13.6%	100%
Expenses							
Seed Costs*	14485.60	14485.11	14485.11	815851.91	815851.91	815851.91	5,997,389
Operating Costs Less Seed	11066.67	11066.67	11066.67	11066.67	11066.67	11066.67	132800.00
Labor Costs	12312.50	12312.50	12312.50	12312.50	12312.50	12312.50	147750.00
Marketing Costs	5416.67	5416.67	5416.67	5416.67	5416.67	5416.67	65000.00
Interest Costs	695.86	695.86	695.86	695.85	695.84	695.84	10675.09
Membership Fees	513.25	513.25	513.25	513.25	513.25	513.25	6159.00
Total Costs	\$ 44,490.55	\$ 44,490.06	\$ 44,490.06	\$ 845,856.84	\$ 845,856.83	\$ 845,856.83	\$ 6,359,773.09
Total Cash Flow	\$ (29,436.37)	\$ (29,436.39)	\$ (29,436.39)	\$ 2,018.16	\$ 2,018.17	\$ 2,018.17	\$ (126,979.99)

	July	August	September	October	November	December
Prior Month	190,891.00	158,498.02	126,105.02	93,712.03	92,773.57	91,835.13
Revenue	15,054.18	15,053.67	15,053.67	847,875.00	847,875.00	847,875.00
Less Costs	44,490.55	44,490.06	44,490.06	845,856.84	845,856.83	845,856.83
Loan Principle	2,956.61	2,956.61	2,956.61	2,956.61	2,956.61	2,956.61
Net Cash	\$ 158,498.02	\$ 126,105.02	\$ 93,712.03	\$ 92,773.57	\$ 91,835.13	\$ 90,896.69

Appendix M – Five Year Cash Flow Analysis

	Year 2	Year 3	Year 4	Year 5	Year 6
Prior Year	90,896.69	(57,586.67)	102,670.21	306,840.37	1,097,800.47
Revenue	6,851,220.49	7,837,429.91	8,621,172.90	10,020,080.20	11,022,088.22
Less Costs	6,962,095.81	7,645,658.78	8,374,746.35	9,195,366.10	10,071,385.16
Loan Principle	37,608.04	31,514.25	42,256.39	33,754.00	0.00
Net Cash	(\$57,586.67)	\$102,670.21	\$306,840.37	\$1,097,800.47	\$2,048,503.54

* Costs exclude depreciation, a non-cash expense.

Appendix N – Producer Survey

1. What is your title or position within this company?
 1. Owner
 2. Manager
 3. Marketing
 4. Purchaser
 5. Other: _____

2. How is this company owned?
 1. Sole proprietorship
 2. Partnership
 3. S Corp
 4. C Corp
 5. Limited liability company (LLC)
 6. Other: _____

3. Where is your farm/ranch located? _____

4. How many active acres do you have? _____

5. How many full-time employees does your company retain?
 1. Summer: _____
 2. Year-round: _____

6. How many part-time employees does your company retain?
 1. Summer: _____
 2. Year-round: _____

7. What is the average wage of a full-time employee?
 1. \$_____/hour
 2. Prefer not to answer

8. What is the average salary of a part-time employee?
 1. \$_____/hour
 2. Prefer not to answer

9. What are your company's average net earnings per year?
 1. \$_____
 2. Prefer not to answer

10. What is your company's average profit margin on plants?
 1. _____%
 2. Prefer not to answer

11. What is your company's average profit margin on seeds?
 1. _____%

2. Prefer not to answer

12. Do you presently engage in contracts with your customers?

1. Yes (go to 14)
2. No

13. Would you consider entering into a contract with a buyer (customer) of your products?

1. Yes
2. No

What is a cooperative?

A cooperative is a type of business that is owned by its members and incorporated under local state laws. While a cooperative does involve an initial investment and possible fees from its members, the purpose of the cooperative is to bring higher overall profits to each of its members by lowering overhead and providing services or products of a consistent quality that a lone producer may not be able to achieve on his or her own. Cooperatives are able to accomplish this by allowing members to pool their resources to purchase higher quality equipment and supplies, which in turn allows them to produce a larger quantity of a higher quality good. A cooperative for Nevada native plants and seeds would clean, mill, and package seed and plant products. The cooperative would market and sell these products under its own label to buyers under contract. The cooperative would provide its members advantages such as pest and risk management education, start up seed, and capital at reduced rates.

14. Are you presently a member of a producer cooperative?

1. Yes
2. No

15. Would you consider joining a Nevada native seed/plant producers' cooperative?

1. Yes. Preferred location: _____
2. No. Why? _____

16. Do you currently use a milling facility?

1. Yes. Location: _____
2. No

17. The following list is made up of potential benefits associated with cooperatives. Please rank their importance to your business on a scale of 1-6 (or 1-8), with the rank of "1" having the most importance to your business.

Potential Benefit	Rank
1. Set buying contract	
2. Reduced input prices (seed, fertilizer, machinery, etc.)	
3. Profit return on value-added products	
4. Lower interest-rate capital	
5. Pest management education	
6. Risk management education	
7. Other: _____	
8. Other: _____	

18. Do you use a label on your packaged products?
 1. Yes
 2. No (go to 21)

19. Does your label specify that the product is grown/produced in the state of Nevada?
 1. Yes
 2. No (go to 21)

20. Do your customers respond positively to the portion of the label specifying Nevada origin?
 1. Yes
 2. No
 3. Unsure

21. What percent of your total business comes from each of the following categories?

Purchaser	% of total sales
Homeowners/residential	
Landscaping companies	
Nurseries	
Wholesalers	
Federal agencies, such as BLM	
Mining or reclamation companies	
Other farms/agricultural facilities	
Other:	

The following list is comprised of grass, shrub, and forb species considered to be native to the state of Nevada. Please take these species into consideration when filling out the purchasing chart in this survey.

GRASSES	SHRUBS	FORBS
Indian ricegrass	4-wing saltbush	Blue flax
Great Basin wildrye	Shadscale	Scarlet globemallow
Snake River wheatgrass	Torrey's saltbush	Western yarrow
Bluebunch wheatgrass	Wyoming big sagebrush	
Thickspike wheatgrass	Mountain big sagebrush	
Bottlebrush squirrel tail	Basin big sagebrush	
Sandberg's bluegrass	Low sagebrush	
Thruer's needle grass	Black sagebrush	
Needle and thread grass	Antelope bitterbrush	
Desert needle grass	Stansbury cliffrose	

22. Please fill out the chart on the following page(s) in reference to the native plants, seeds and/or grasses you produce or plan to produce in an average year. If you do not currently produce native species, please indicate the number of acres you may wish to use for native species production in the future. _____

1. Common name: The common name of the plant or seed. Scientific names optional.
2. Type: Please specify whether you produce this as a plant ("P"), grass ("G"), or seed ("S"). If you produce the plant as more than one type, please use a separate line for each type.
3. Quantity: How much of this plant you produce each year. For example, "100 pounds" or "50 plants."
4. Quality: What is the average PLS (pure live seed) or germination percent of actual seed material?

5. When: What time of year the plant is “ready” for sale. You may specify this time using either months, or the following guidelines:
 - I. Winter: December-January-February
 - II. Spring: March-April-May
 - III. Summer: June-July-August
 - IV. Fall: September-October-November
6. Current price: The price you believe you would earn from selling that quantity of the product. Please specify units (“per plant” or “per pound”)
7. Delivery method: How is this plant delivered to your customers? Please specify whether the customer picks up the product, whether you deliver it yourself, or if you have a third party deliver it.
8. Delivery cost: On average, how much does it cost you to deliver products, and is this cost included in the price?

Common Name	Type	Quantity	Quality (seeds)	When	Current price	Delivery method	Delivery cost
1.							
2.							

Appendix O-Agency Survey

1. What is your title or position within this company?

1. Reclamation/rehabilitation supervisor
2. Environmental engineer
3. Manager
4. Purchaser
5. Marketing
6. Other _____

2. Do you have free will to decide where to purchase native plants and seeds for reclamation or rehabilitation purposes?

1. Yes (go to 4)
2. No

3. If you answered “no” to the previous questions, then how is that decision made?

4. On a scale of 1-10, please rank whether you use mostly plants or seeds for reclamation purposes, with 1 as “use all seeds” and 10 as “use all plants.”

1 2 3 4 5 6 7 8 9 10

5. From which of the following categories of suppliers do you purchase your plants? Please give the percent of total plants purchased from each category of supplier:

Supplier	% of total
1. Have own nursery in Nevada	
2. Have own nursery in another state	
3. Local (Nevada) nursery	
4. Non-local nursery	
5. Local (Nevada) wholesaler	
6. Non-local wholesaler	
7. Other:	

7. What factors influence your choice of plant supplier? Please rank the following factors according to their influence upon your choice of plant supplier. Give the rank value “1” to the factor that has the strongest influence on your decision and “7” or “8” to the factor that has the least influence on your decision.

Factor	Rank
1. Price	
2. Convenience/location	
3. Contract	
4. Service	
5. Quality of plants	
6. Ownership of supplier/relationship with company	
7. Delivery method	
8. Other:	

8. When purchasing plants, does the location of the greenhouse (within Nevada or outside Nevada) in which the plants were grown affect your decision?

1. Yes
2. No

9. Please rank the importance of the price of plants vs. location of the greenhouse where the plants were grown on a scale of 1-10, with 1 as “price is all important” and 10 as “location of greenhouse is all important.”

1 2 3 4 5 6 7 8 9 10

10. Which of the following suppliers do you purchase your seeds from? Please give the percent of total seeds purchased from each category of supplier:

Supplier	% of total
1. Have own facility in Nevada	
2. Have own facility in another state	
3. Local (Nevada) nursery (or seed grower)	
4. Non-local nursery (or seed grower)	
5. Local (Nevada) wholesaler	
6. Non-local wholesaler	
7. Other	

12. What factors influence your choice of seed supplier? Please rank the following factors according to their influence upon your choice of seed suppliers. Give the rank value “1” to the factor with the strongest influence on your decision and the value of “7” or “8” to the factor with the least influence on your decision.

Factor	Rank
1. Price	
2. Convenience/location	
3. Contract	
4. Service	
5. Quality	
6. Ownership of supplier/relationship with company	
7. Delivery method	
8. Other:	

13. When purchasing seeds, does the location of the facility (within Nevada or outside Nevada) in which the seeds were milled affect your decision?

1. Yes
2. No

14. Please rank importance of the price of seeds vs. the location of the facility where the seeds were milled on a scale of 1-10, with 1 as “price is all important” and 10 as “location of facility is all important.”

1 2 3 4 5 6 7 8 9 10

15. Please fill out the form on the following page according to the amount and type of native Nevada plants and seeds you typically purchase each year. Please include this information:

1. **Common name** (scientific name optional): the common name of the plant.
2. **Type**: Please indicate whether you are referring to plants (“P”) or seeds (“S”). If you purchase the product as both plant and seed, please use a separate line for each type.
3. **Size**: the size of the plant or the quantity of seeds that you will be ordering, such as “1 gallon” or “1 ounce.”
4. **Current price** (\$/plant): the price you expect to pay per plant/seed of that size/quantity.
5. **Quantity**: the number of plants/seeds of that size that you typically order each year.
6. **Quantity2**: the total quantity of that plant/seed that you have purchased over the past ten years (a rough estimate is okay).
7. **Packaging**: the type of packaging that you would prefer the plants to arrive in: plastic tubs, peat pots, etc.
8. **Labeling**: Do the plants/seeds arrive bearing a label that states their origin? Would you like them to?
9. **When**: What time of year you expect to order these plants/seeds? You may do this on a monthly or seasonal basis, with the following guidelines:
 - I. Spring: March-April-May
 - II. Summer: June-July-August
 - III. Fall: September-October-November
 - IV. Winter: December-January-February
10. **Arrive**: when would you want these plants/seeds to arrive? Please use the same guidelines for the “when” category.
11. **Delivery method**: how the plants/seeds will arrive. For example, will the plants be delivered or will you send your own truck to pick them up?

GRASSES	SHRUBS	FORBS
Indian ricegrass Great Basin wildrye Snake River wheatgrass Bluebunch wheatgrass Thickspike wheatgrass Bottlebrush squirrel tail Sandberg’s bluegrass Thurber’s needle grass Needle and thread grass Desert needle grass	4-wing saltbush Desert bitterbrush Shadscale Winterfat Torrey’s saltbush Mexican cliffrose Wyoming big sagebrush Mountain big sagebrush Basin big sagebrush Low sagebrush Black sagebrush Antelope bitterbrush Stansbury cliffrose	Blue flax Scarlet globemallow Western yarrow

Common Name	Type	Size	Current Price	Quantity	Quantity2	Packaging	Labeling	When	Arrive	Delivery Method
1.										

What is the Nevada Grown program?

The “Nevada Grown” label is a third-party government-funded marketing and certification program. In order to qualify for Nevada Grown certification, an agricultural producer must either reside or own property in the state of Nevada. Raw agricultural products, such as plants or seeds, must be grown entirely in Nevada. Processed agricultural products, such as feed, need to have at least 60% of their composition grown in Nevada. Membership is a cost-free process and is reevaluated on an annual basis. The use of the Nevada Grown logo is restricted to members in good standing.

16. In the following table you will be given ten bid amounts representing a percentage increase in price for native plant/seed products featuring the “Nevada Grown” label over the standard price for native plant/seed products without the “Nevada Grown” label. For each bid amount specify if you would definitely not be willing (1), probably not be willing (2), not sure (3), probably be willing (4), or definitely be willing (5) to pay the percent increase in price for products with the “Nevada Grown” label by circling the appropriate number (1-5).

Bid Amount	Definitely No	Probably No	Not sure	Probably Yes	Definitely Yes
1. 10%	1	2	3	4	5
2. 40%	1	2	3	4	5
3. 60%	1	2	3	4	5
4. 100%	1	2	3	4	5
5. 30%	1	2	3	4	5
6. 20%	1	2	3	4	5
7. 80%	1	2	3	4	5
8. 50%	1	2	3	4	5
9. 70%	1	2	3	4	5
10. 90%	1	2	3	4	5

17. If you chose 2, 3, or 4 in the above table for one of more bids (prices) please specify the reason why you could not make a definitely yes, or definitely no decision. Please write your response next to the bid in question.

Bid Amount	Reason
1. 10%	
2. 40%	
3. 60%	
4. 100%	
5. 30%	
6. 20%	
7. 80%	
8. 50%	
9. 70%	
10. 90%	

18. Does your agency use contracts with plant and seeds providers?
 1. Yes
 2. No

19. Would your agency consider contracting with a supplier that had certified Nevada grown products or with a Nevada seed producers' cooperative?
 1. Yes
 2. No, why? _____

20. What type of labeling or certification would you prefer?
 1. Independent "Product of Nevada" label
 2. Third party certification, such as the "Nevada Grown" program
 3. Not needed

What are important features of native plants?

In addition to providing a more natural-looking landscape, native Nevada species are also highly drought resistant, meaning they require little water and can withstand long hours of direct sun. The low-cost and low-maintenance benefits of these plants make them attractive to both residential and commercial users. Native Nevada species have also been shown to resist the intrusion of invasive species, a continuing problem along the West Coast and inter-mountain region. Invasive species have difficulty penetrating the root systems of native species, making it more difficult for the invasive species to survive. Another benefit to the promulgation of native species is the fact that they can prevent erosion by providing protection for Nevada's extremely erodible soils, which makes native species a popular choice for land rehabilitation and reclamation following wildfires, mining, storms and the like. Please take these species into consideration when answering plant-specific questions.

Appendix P-Floral Survey

1. What is your relationship to this company? (circle one)

1. Owner
2. Manager
3. Marketing
4. Purchasing
5. Other _____

2. Are you free to decide where to purchase decorative grasses for floral arrangements?

1. Yes (go to 4)
2. No

3. If you answered “no” to question 2, then how is the decision made?

4. What type of supplier do you use when purchasing decorative grasses, and what percent of the total grasses you purchase come from each supplier?

Supplier	% of total
1. Grow own in Nevada	
2. Grow own in another state	
3. Local (Nevada) nursery	
4. Non-local nursery	
5. Local (Nevada) wholesaler	
6. Non-local wholesaler	
7. Other:	

5. Please list the name, address, and telephone number of your grass suppliers:

Name	Address	Telephone Number

6. When purchasing decorative grasses, does the location of the greenhouse where the grass was grown influence your decision?

1. Yes
2. No

7. On a scale of 1-10, please rank price vs. the location of the greenhouse where the grass was grown, with 1 as “price is all important” and 10 as “location is all important.” (circle one)

1 2 3 4 5 6 7 8 9 10

8. What factors influence your decision of where to purchase decorative grasses? Please rank the following factors according to their influence on your purchasing decision, giving the rank of “1” to the factor that has the strongest influence on your decision, and “7” or “8” to the factor with the least influence.

Factor	Rank
9. Price	
10. Convenience/location	
11. Contract	
12. Service	
13. Quality	
14. Ownership of supplier/relationship with company	
15. Delivery method	
16. Other:	

9. Does your facility sell individual or potted plants?

1. Yes
2. No (go to page 5)

10. Do you sell any native Nevada species? Please consult the list of native species at the end of this survey.

1. Yes
2. No

11. What type of supplier do you use when purchasing plants for resale, and what percent of the total plants you purchase come from each supplier?

Supplier	% of total
1. Grow own in Nevada	
2. Grow own in another state	
3. Local (Nevada) nursery	
4. Non-local nursery	
5. Local (Nevada) wholesaler	
6. Non-local wholesaler	
7. Other:	

12. Please list the name, address, and telephone number of your plant suppliers:

Name	Address	Telephone Number

13. What factors influence your decision of where to purchase plants for resale? Please rank the following factors according to their influence on your purchasing decision, giving the rank of "1" to the factor that has the strongest influence on your decision, and "7" or "8" to the factor with the least influence.

Factor	Rank
1. Price	
2. Convenience/location	
3. Contract	
4. Service	
5. Quality	
6. Ownership of supplier/relationship with company	
7. Delivery method	
8. Other:	

14. When purchasing plants for resale, does the location of the greenhouse where the plants were grown influence your decision?

1. Yes
2. No

15. On a scale of 1-10, please rank price vs. the location of the greenhouse where the plants were grown, with 1 as “price is all important” and 10 as “location is all important.” (*circle one*)

1 2 3 4 5 6 7 8 9 10

16. Please fill out the form(s) on the following pages according to the amount and type of native Nevada plants and grasses you typically purchase in a year (a list of species native to Nevada and the benefits of such species can be found on page 8). Please include this information:

12. Common name (scientific name optional): the common name of the plant or grass.
13. Type: Plant or grass. If the species is a plant you purchase, please put a “P” in this column, if it is a grass, please put a “G” in this column.
14. Size: the size of the plant or the quantity of grass that you will be ordering, such as “1 gallon” or “1 ounce.”
15. Current price: the price you expect to pay per plant/grass of that size/quantity.
16. Quantity: the number of plants/grasses of that size that you believe you order in a year.
17. Packaging: the type of packaging that you would like the plants/grasses to arrive in. For example, would you like the plants to arrive in 5-gallon tubs that you can re-sell them in?
18. Labeling: Do the plants/grasses arrive with a label specifying their origin or the name of the supplier or nursery where they were grown? If not, would you like them to?
19. When: what time of year you expect to order these plants/grasses-you may do this on a monthly or seasonal basis, with the following guidelines:
 - I. Spring: March-April-May
 - II. Summer: June-July-August
 - III. Fall: September-October-November
 - IV. Winter: December-January-February
20. Arrive: when would you want these plants/grasses to arrive? Please use the same guidelines for the “when” category.
21. Delivery method: how the plants/grasses will arrive. For example, will they arrive via ground mail or delivery truck, or will your company have to send someone to pick the products up?

Common Name	Type	Size	Current Price	Quantity	Packaging	Labeling	When	Arrive	Delivery Method
1.									

What is the Nevada Grown program?

The “Nevada Grown” label is a third-party government-funded marketing and certification program. In order to qualify for Nevada Grown certification, an agricultural producer must either reside or own property in the state of Nevada. Raw agricultural products, such as plants or seeds, must be grown entirely in Nevada. Processed agricultural products, such as feed, need to have at least 60% of their composition grown in Nevada. Membership is a cost-free process and is reevaluated on an annual basis. The use of the Nevada Grown logo is restricted to members in good standing.

17. In the following table you will be given ten bid amounts representing a percentage increase in price for native plant/grass products featuring the “Nevada Grown” label over the standard price for native plant/grass products without the “Nevada Grown” label. For each bid amount specify if you would definitely not be willing (1), probably not be willing (2), not sure (3), probably be willing (4), or definitely be willing (5) to pay the percent increase in price for products with the “Nevada Grown” label by circling the appropriate number (1-5).

Bid Amount	Definitely No	Probably No	Not sure	Probably Yes	Definitely Yes
1. 10%	1	2	3	4	5
2. 40%	1	2	3	4	5
3. 60%	1	2	3	4	5
4. 100%	1	2	3	4	5
5. 30%	1	2	3	4	5
6. 20%	1	2	3	4	5
7. 80%	1	2	3	4	5
8. 50%	1	2	3	4	5
9. 70%	1	2	3	4	5
10. 90%	1	2	3	4	5

18. If you chose 2, 3, or 4 in the above table for one of more bids (prices) please specify the reason why you could not make a definitely yes, or definitely no decision. Please write your response next to the bid in question.

Bid Amount	Reason
1. 10%	
2. 40%	
3. 60%	
4. 100%	
5. 30%	
6. 20%	
7. 80%	
8. 50%	
9. 70%	
10. 90%	

19. Does your company use contracts with suppliers?

1. Yes
2. No

20. Would your company consider contracting with a supplier that had certified Nevada grown products or with a Nevada seed producers' cooperative?

1. Yes
2. No. Why? _____

21. What type of labeling or certification would you prefer?

1. Independent "Product of Nevada" label
2. Third party certification, such as the "Nevada Grown" program
3. Not needed

22. How many full time employees does your company retain?

1. Summer: _____
2. Year-round: _____

23. How many part time employees does your company retain?

1. Summer: _____
2. Year-round: _____

24. What is the average wage of a full-time employee?

1. \$_____/hour
2. Prefer not to answer

25. What is the average salary of a part-time employee?

1. \$_____/hour
2. Prefer not to answer

26. What are your company's average net earnings per year?

1. \$_____
2. Prefer not to answer

27. What is your company's average profit margin on plants?

1. _____%
2. Prefer not to answer

28. What percent of your business comes from the following categories?

Purchaser	% of total sales
Private consumers	
Landscaping companies	
Nurseries	
Corporate	
Catering or decorating companies	
Other (please list all):	

The following list is comprised of grass, shrub, and forb species considered to be native to the state of Nevada. Please take these species into consideration when filling out the purchasing chart in this survey.

Common Name	Scientific Name
GRASSES	
Indian ricegrass	<i>Achnatherum hymenoides</i>
Great Basin wildrye	<i>Elymus cinereus</i>
Snake River wheatgrass	<i>Elymus wawawaiensis</i>
Bluebunch wheatgrass	<i>Pseudoroegneria spicata</i>
Thickspike wheatgrass	<i>Elymus macrourus</i>
Bottlebrush squirrel tail	<i>Elymus elymoides ssp. Brevifolia</i>
Sandberg's bluegrass	<i>Poa secunda</i>
Thruher's needle grass	<i>Achnatherum thurberianum</i>
Needle and thread grass	<i>Hesperostipa comata</i>
Desert needle grass	<i>Achnatherum speciosum</i>
SHRUBS	
4-wing saltbush	<i>Atriplex canescens</i>
Shadscale	<i>Atreplex confertifolia</i>
Torrey's saltbush	<i>Atreplex torreyi</i>
Wyoming big sagebrush	<i>Artemisia tridentata (wyomingensis)</i>
Mountain big sagebrush	<i>Artemisia tridentata (vaseyana)</i>
Basin big sagebrush	<i>Artemisia tridentata (tridentata)</i>
Low sagebrush	<i>Artemisia arbuscula</i>
Black sagebrush	<i>Artemisia nova</i>
Winterfat	<i>Krascheninnkovia lanata</i>
Antelope bitterbrush	<i>Purshia tridentate</i>
Desert bitterbrush	<i>Purshia glandulosa</i>
Stansbury cliffrose	<i>Purshia stansburiana</i>
Mexican cliffrose	<i>Purshia mexicana</i>
FORBS	
Blue flax	<i>Linum lewisii var lewisii</i>
Scarlet globemallow	<i>Sphaeralcea coccinea</i>
Western yarrow	<i>Achillea millefolium</i>

What are important features of native plants/grasses?

In addition to providing a more natural-looking landscape, native Nevada species are also highly drought resistant, meaning they require little water and can withstand long hours of direct sun. The low-cost and low-maintenance benefits of these plants make them attractive to both residential and commercial users. Native Nevada species have also been shown to resist the intrusion of invasive species, a continuing problem along the West Coast and inter-mountain region. Invasive species have difficulty penetrating the root systems of native species, making it more difficult for the invasive species to survive. Another benefit to the promulgation of native species is the fact that they can prevent erosion by providing protection for Nevada's extremely erodible soils, which makes native species a popular choice for land rehabilitation and reclamation following wildfires, mining, storms and the like. Please take these species into consideration when answering plant-specific questions.

Appendix Q-Health and Beauty Company Survey

1. What is your title or position within this company?

1. Owner
2. Manager
3. Purchaser
4. Marketing
5. Research and Development
6. Other _____

2. Do you use raw plants and seeds in your products?

1. Yes
2. No

3. Do you have free will to decide where to purchase raw plants and seeds for your products?

1. Yes (go to 5)
2. No

4. If you answered “no” to the previous questions, then how is that decision made?

5. What factors influence your choice of plant supplier? Please rank the following factors according to their influence upon your choice of plant suppliers. Give the rank value “1” to the factor that has the strongest influence on your decision and “7” or “8” to the factor that has the least influence on your decision.

Factor	Rank
1. Price	
2. Convenience/location	
3. Contract	
4. Service	
5. Quality of plants	
6. Ownership of supplier/relationship with company	
7. Delivery method	
8. Other:	

6. Please list the name, address, and telephone number of your plant suppliers:

Name	Address	Telephone Number

7. When purchasing plants, does the location of the greenhouse (in terms of city or state) in which the plants were grown affect your purchasing decision?

1. Yes
2. No

8. Please rank the importance of the price of plants vs. location of the greenhouse where the plants were grown on a scale of 1-10, with 1 as “price is all important” and 10 as “location of greenhouse is all important.”

1 2 3 4 5 6 7 8 9 10

9. What factors influence your choice of seed supplier? Please rank the following factors according to their influence upon your choice of seed suppliers. Give the rank value “1” to the factor with the strongest influence on your decision and the value of “7” or “8” to the factor with the least influence on your decision.

Factor	Rank
1. Price	
2. Convenience/location	
3. Contract	
4. Service	
5. Quality	
6. Ownership of supplier/relationship with company	
7. Delivery method	
8. Other:	

10. Please list the name, address, and telephone number of your seed suppliers:

(If any of your seed suppliers were listed above as a plant supplier, you may omit the address and telephone number)

Name	Address	Telephone Number

11. When purchasing seeds, does the location of the facility (city or state) in which the seeds were milled affect your purchasing decision?

1. Yes
2. No

12. Please rank importance of the price of seeds vs. the location of the facility where the seeds were milled on a scale of 1-10, with 1 as “price is all important” and 10 as “location of facility is all important.”

1 2 3 4 5 6 7 8 9 10

13. Please fill out this form according to the amount and type of native plants and seeds you typically purchase each year (a list of native species can be found on page 6). Please include this information:

1. Common name (scientific name optional): the common name of the plant.

2. Type: Please indicate whether you are referring to plants (“P”) or seeds (“S”). If you purchase the product as both plant and seed, please use a separate line for each type.
3. Size: the size of the plant or the quantity of seeds that you will be ordering, such as “1 gallon” or “1 ounce.”
4. Current price (\$/plant): the price you expect to pay per plant/seed of that size/quantity.
5. Quantity: the number of plants/seeds of that size that you typically order each year.
6. Quantity2: the total quantity of that plant/seed that you have purchased over the past ten years (a rough estimate is okay).
7. Packaging: The type of packaging that you would prefer the plants to arrive in: plastic tubs, peat pots, etc.
8. Labeling: Do the plants/seeds to arrive bearing a label that states their origin? Would you like them to?
9. When: What time of year you expect to order these plants/seeds? You may do this on a monthly or seasonal basis, with the following guidelines:
 - I. Spring: March-April-May
 - II. Summer: June-July-August
 - III. Fall: September-October-November
 - IV. Winter: December-January-February
10. Arrive: When would you want these plants/seeds to arrive? Please use the same guidelines for the “when” category.
11. Delivery method: How you would like the plants or seeds to arrive? Would you like to have them delivered in a truck or send your own truck? Air mail?

Common Name	Type	Size	Current Price	Quantity	Quantity2	Packaging	Labeling	When	Arrive	Delivery Method
1.										

14. Does your company ever use contracts with plant and seed providers?
 1. Yes
 2. No

What is the Nevada Grown program?

The “Nevada Grown” label is a third-party government-funded marketing and certification program. In order to qualify for Nevada Grown certification, an agricultural producer must either reside or own property in the state of Nevada. Raw agricultural products, such as plants or seeds, must be grown entirely in Nevada. Processed agricultural products, such as feed, need to have at least 60% of their composition grown in Nevada. Membership is a cost-free process and is reevaluated on an annual basis.

15. In the following table you will be given ten bid amounts representing a percentage increase in price for native plant/seed products featuring the “Nevada Grown” label over the standard price for native plant/seed products without the “Nevada Grown” label. For each bid amount specify if you would definitely not be willing (1), probably not be willing (2), not sure (3), probably be willing (4), or definitely be willing (5) to pay the percent increase in price for products with the “Nevada Grown” label by circling the appropriate number (1-5).

Bid Amount	Definitely No	Probably No	Not Sure	Probably Yes	Definitely Yes
1. 10%	1	2	3	4	5
2. 40%	1	2	3	4	5
3. 60%	1	2	3	4	5
4. 100%	1	2	3	4	5
5. 30%	1	2	3	4	5
6. 20%	1	2	3	4	5
7. 80%	1	2	3	4	5
8. 50%	1	2	3	4	5
9. 70%	1	2	3	4	5
10. 90%	1	2	3	4	5

16. If you chose 2, 3, or 4 in the above table for one of more bids (prices) please specify the reason why you could not make a definitely yes, or definitely no decision. Please write your response next to the bid in question.

Bid Amount	Reason
1. 10%	
2. 40%	
3. 60%	
4. 100%	
5. 30%	
6. 20%	
7. 80%	
8. 50%	
9. 70%	
10. 90%	

17. Would your company consider contracting with a supplier that had certified Nevada grown products or with a Nevada seed producers' cooperative?

1. Yes
2. No, why? _____

18. What type of labeling or certification would you prefer?

1. Independent "Product of Nevada" label
2. Third party certification, such as the "Nevada Grown" program
3. Not needed

19. How many full time employees does your company retain?

1. Summer: _____
2. Year-round: _____

20. How many part time employees does your company retain?

1. Summer: _____
2. Year-round: _____

21. What is the average wage of a full-time employee?

1. \$ _____/hour
2. Prefer not to answer

22. What is the average salary of a part-time employee?

1. \$ _____/hour
2. Prefer not to answer

23. What are your company's average net earnings per year?

1. \$ _____
2. Prefer not to answer

24. What percent of your business comes from the following categories?

Purchaser	% of total sales
Grocery stores	
Specialty or natural food stores	
Department stores	
Wholesale distributors	
On-line distributors	
Private consumers	
Other:	

The following list is comprised of grass, shrub, and forb species considered to be native. Please take these species into consideration when filling out the purchasing chart in this survey.

Common Name **Scientific Name**

GRASSES

Indian ricegrass	<i>Achnatherum hymenoides</i>
Great Basin wildrye	<i>Elymus cinereus</i>
Snake River wheatgrass	<i>Elymus wawawaiensis</i>
Bluebunch wheatgrass	<i>Pseudoroegneria spicata</i>
Thickspike wheatgrass	<i>Elymus macrourus</i>
Bottlebrush squirrel tail	<i>Elymus elymoides</i> ssp. <i>Brevifolia</i>
Sandberg's bluegrass	<i>Poa secunda</i>
Thruher's needle grass	<i>Achnatherum thurberianum</i>
Needle and thread grass	<i>Hesperostipa comata</i>
Desert needle grass	<i>Achnatherum speciosum</i>

SHRUBS

4-wing saltbush	<i>Atriplex canescens</i>
Shadscale	<i>Atreplex confertifolia</i>
Torrey's saltbush	<i>Atreplex torreyi</i>
Wyoming big sagebrush	<i>Artemisia tridentata</i> (wyomingensis)

Mountain big sagebrush
Basin big sagebrush
Low sagebrush
Black sagebrush
Winterfat
Antelope bitterbrush
Desert bitterbrush
Stansbury cliffrose
Mexican cliffrose

Artemesia tridentata (vaseyana)
Artemesia tridentata (tridentata)
Artemesia arbuscula
Artemesia nova
Krascheninnkovia lanata
Purshia tridentate
Purshia glandulosa
Purshia stansburiana
Purshia mexicana

FORBS

Blue flax
Scarlet globemallow
Western yarrow

Linum lewisii var lewisii
Sphaeralcea coccinea
Achillea millifolium

Appendix R-Landscaping Survey

1. What is your title or position in this company?

1. Owner
2. Manager
3. Purchaser
4. Marketing
5. Other _____

2. Do you have free choice to purchase your plants and seeds at will?

1. Yes (go to 4)
2. No

3. If you answered “no” to the previous question, how is the decision made?

4. On a scale of 1-10, please rank whether you purchase mostly seeds or mostly plants, with the value of 1 as “purchase all seeds” and the value of 10 as “purchase all plants.”

1 2 3 4 5 6 7 8 9 10

5. Which of the following categories of suppliers do you purchase your plants from? Please give the percent of total plants purchased from each category of supplier:

Supplier	% of total
1. Have own nursery in Nevada	
2. Have own nursery in another state	
3. Local (Nevada) nursery	
4. Non-local nursery	
5. Local (Nevada) wholesaler	
6. Non-local wholesaler	
7. Other	

7. What factors influence your choice of plant supplier? Please rank the following factors in according to their influence upon your choice of plant suppliers. Give the rank value “1” to the factor that has the strongest influence upon your decision.

Factor	Rank
1. Price	
2. Convenience/location	
3. Contract	
4. Service	
5. Quality of plants	
6. Ownership of supplier/relationship with company	
7. Delivery method	
8. Other:	

8. Does the location of the greenhouse (within Nevada or outside Nevada) in which the plants were grown affect your purchasing decision?

1. Yes
2. No

9. Please rank the importance of the price of plants vs. location of the greenhouse where the plants were grown on a scale of 1-10, with 1 as “price is all important” and 10 as “location of greenhouse is all important.”

1 2 3 4 5 6 7 8 9 10

10. Which of the following suppliers do you purchase your seeds from? Please give the percent of total seeds purchased from each category of supplier:

Supplier	% of total
1. Have own facility in Nevada	
2. Have own facility in another state	
3. Local (Nevada) nursery (or seed grower)	
4. Non-local nursery (or seed grower)	
5. Local (Nevada) wholesaler	
6. Non-local wholesaler	
7. Other	

12. What factors influence your choice of seed supplier? Please rank the following factors in according to their influence upon your choice of seed suppliers. Give the rank value “1” to the factor with the strongest influence upon your decision.

Factor	Rank
1. Price	
2. Convenience/location	
3. Contract	
4. Service	
5. Quality	
6. Ownership of supplier/relationship with company	
7. Delivery method	
8. Other:	

13. Does the location of the facility (within Nevada or outside Nevada) in which the seeds were milled affect your purchasing decision?

1. Yes
2. No

14. Please rank importance of the price of seeds vs. the location of the facility where the seeds were milled on a scale of 1-10, with 1 as “price is all important” and 10 as “location of facility is all important.”

1 2 3 4 5 6 7 8 9 10

15. Please fill out the form on the following page according to the amount and type of native Nevada plants and seeds you typically order each year. Please include this information:

1. Common name (scientific name optional): the common name of the plant.
2. Type: Please indicate whether you are referring to plants (“P”) or seeds (“S”). If you purchase the species in both plant and seed form, please use a separate line for each type.
3. Size: the size of the plant or the quantity of seeds that you will be ordering, such as “1 gallon” or “1 ounce.”
4. Current price (\$/plant): the price you expect to pay per plant/seed of that size/quantity.
5. Quantity: the number of plants/seeds of that size that you typically order each year.
6. Packaging: the type of packaging that the plants will arrive in. For example, will the plants arrive in 5-gallon tubs that you can re-sell them in?
7. Labeling: Do the plants/seeds arrive with a label specifying their origin or the name of the company/nursery where they were grown? Would you like them to?
8. When: what time of year you expect to order these plants/seeds-you may do this on a monthly or seasonal basis, with the following guidelines:
 - V. Spring: March-April-May
 - VI. Summer: June-July-August
 - VII. Fall: September-October-November
 - VIII. Winter: December-January-February
9. Arrive: when would you want these plants/seeds to arrive? Please use the same guidelines for the “when” category.
10. Delivery method: how the plants/seeds will arrive. For example, ground mail, semi truck, delivery truck, etc.

The following list is comprised of grass, shrub, and forb species considered to be native to the state of Nevada. Please take these species into consideration when filling out the purchasing chart in this survey.

GRASSES	SHRUBS	FORBS
Indian ricegrass	4-wing saltbush	Blue flax
Great Basin wildrye	Desert bitterbrush	Scarlet globemallow
Snake River wheatgrass	Shadscale	Western yarrow
Bluebunch wheatgrass	Winterfat	
Thickspike wheatgrass	Torrey’s saltbush	
Bottlebrush squirrel tail	Mexican cliffrose	
Sandberg’s bluegrass	Wyoming big sagebrush	
Thurber’s needle grass	Mountain big sagebrush	
Needle and thread grass	Basin big sagebrush	
Desert needle grass	Low sagebrush	
	Black sagebrush	
	Antelope bitterbrush	
	Stansbury cliffrose	

What are important features of native plants?

In addition to providing a more natural-looking landscape, native Nevada species are also highly drought resistant, meaning they require little water and can withstand long hours of direct sun. The low-cost and low-maintenance benefits of these plants make them attractive to both residential and commercial users. Native Nevada species have also been shown to resist the intrusion of invasive species, a continuing problem along the West Coast and inter-mountain region. Invasive species have difficulty penetrating the root systems of native species, making it more difficult for the invasive species to survive. Another benefit to the promulgation of native species is the fact that they can prevent erosion by providing protection for Nevada’s extremely erodible soils, which makes native species a popular choice for land rehabilitation and reclamation following wildfires, mining, storms and the like. Please take these species into consideration when answering plant-specific questions.

Common Name	Type	Size	Current Price	Quantity	Packaging	Labeling	When	Arrive	Delivery Method
1.									

What is the Nevada Grown program?

The “Nevada Grown” label is a third-party government-funded marketing and certification program. In order to qualify for Nevada Grown certification, an agricultural producer must either reside or own property in the state of Nevada. Raw agricultural products, such as plants or seeds, must be grown entirely in Nevada. Processed agricultural products, such as feed, need to have at least 60% of their composition grown in Nevada. Membership is a cost-free process and is reevaluated on an annual basis. The use of the Nevada Grown logo is restricted to members in good standing.

16. In the following table you will be given ten bid amounts representing a percentage increase in price for native plant/seed products featuring the “Nevada Grown” label over the standard price for native plant/seed products without the “Nevada Grown” label. For each bid amount specify if you would definitely not be willing (1), probably not be willing (2), not sure (3), probably be willing (4), or definitely be willing (5) to pay the percent increase in price for products with the “Nevada Grown” label by circling the appropriate number (1-5).

Bid Amount	Definitely No	Probably No	Not sure	Probably Yes	Definitely Yes
1. 10%	1	2	3	4	5
2. 40%	1	2	3	4	5
3. 60%	1	2	3	4	5
4. 100%	1	2	3	4	5
5. 30%	1	2	3	4	5
6. 20%	1	2	3	4	5
7. 80%	1	2	3	4	5
8. 50%	1	2	3	4	5
9. 70%	1	2	3	4	5
10. 90%	1	2	3	4	5

17. If you chose 2, 3, or 4 in the above table for one of more bids (prices) please specify the reason why you could not make a definitely yes, or definitely no decision. Please write your response next to the bid in question.

Bid Amount	Response
1. 10%	
2. 40%	
3. 60%	
4. 100%	
5. 30%	
6. 20%	
7. 80%	
8. 50%	
9. 70%	
10. 90%	

18. Does your company use contracts with suppliers?
 1. Yes
 2. No

19. Would your company consider contracting with a supplier which had certified Nevada grown products or with a Nevada seed producers' cooperative?
 1. Yes
 2. No. Why? _____

20. What type of labeling or certification would you prefer?
 1. Independent "Product of Nevada" label
 2. Third party certification, such as "Nevada Grown" program
 3. Not needed

21. How many full time employees does your company retain?
 1. Summer: _____
 2. Year-round: _____

22. How many part time employees does your company retain?
 1. Summer: _____
 2. Year-round: _____

23. What is the average wage of a full-time employee?
 1. \$ _____/hour
 2. Prefer not to answer

24. What is the average salary of a part-time employee?
 1. \$ _____/hour
 2. Prefer not to answer

25. What are your company's average net earnings per year?
 1. \$ _____
 2. Prefer not to answer

26. What is your company's average profit margin on plants?
 1. _____%
 2. Prefer not to answer

27. What is your company's average profit margin on seeds?
 1. _____%
 2. Prefer not to answer

Appendix S-Mine/Reclamation Company Survey

1. What is your title or position within this company?
 1. Reclamation supervisor
 2. Environmental engineer
 3. Manager
 4. Purchaser
 5. Marketing
 6. Other _____

2. Do you have free will to decide where to purchase native plants and seeds for reclamation purposes?
 1. Yes (go to 4)
 2. No

3. If you answered “no” to the previous questions, then how is that decision made?

4. On a scale of 1-10, please rank whether you purchase mostly seeds or mostly plants for reclamation/rehabilitation purposes, with 1 as “purchase all seeds” and 10 as “purchase all plants.”

1 2 3 4 5 6 7 8 9 10

5. From which of the following categories of suppliers do you purchase your plants? Please give the percent of total plants purchased from each category of supplier:

Supplier	% of total
1. Have own nursery in Nevada	
2. Have own nursery in another state	
3. Local (Nevada) nursery	
4. Non-local nursery	
5. Local (Nevada) wholesaler	
6. Non-local wholesaler	
7. Other	

7. What factors influence your choice of plant supplier? Please rank the following factors according to their influence upon your choice of plant suppliers. Give the rank value “1” to the factor that has the strongest influence upon your decision and “7” or “8” to the factor with the least influence.

Factor	Rank
1. Price	
2. Convenience/location	
3. Contract	
4. Service	
5. Quality of plants	
6. Ownership of supplier/relationship with company	
7. Delivery method	
8. Other:	

8. Does the location of the greenhouse (within Nevada or outside Nevada) in which the plants were grown affect your purchasing decision?

1. Yes
2. No

9. Please rank the importance of the price of plants vs. location of the greenhouse where the plants were grown on a scale of 1-10, with 1 as “price is all important” and 10 as “location of greenhouse is all important.”

1 2 3 4 5 6 7 8 9 10

10. Which of the following suppliers do you purchase your seeds from? Please give the percent of total seeds purchased from each category of supplier:

Supplier	% of total
1. Have own facility in Nevada	
2. Have own facility in another state	
3. Local (Nevada) nursery (or seed grower)	
4. Non-local nursery (or seed grower)	
5. Local (Nevada) wholesaler	
6. Non-local wholesaler	
7. Other	

12. What factors influence your choice of seed supplier? Please rank the following factors in according to their influence upon your choice of seed suppliers. Give the rank value “1” to the factor with the strongest influence upon your decision and “7” or “8” to the factor with the least influence.

Factor	Rank
1. Price	
2. Convenience/location	
3. Contract	
4. Service	
5. Quality	
6. Ownership of supplier/relationship with company	
7. Delivery method	
8. Other:	

13. Does the location of the facility (within Nevada or outside Nevada) in which the seeds were milled affect your decision?

1. Yes
2. No

14. Please rank importance of the price of seeds vs. the location of the facility where the seeds were milled on a scale of 1-10, with 1 as “price is all important” and 10 as “location of facility is all important.”

1 2 3 4 5 6 7 8 9 10

15. Please fill out the form on the following page according to the amount and type of native Nevada plants and seeds you typically purchase each year. Please include this information:

1. Common name (scientific name optional): the common name of the plant.
2. Type: Please indicate whether you are referring to plants (“P”) or seeds (“S”). If you purchase the species in both plant and seed form, please use a separate line for each type.
3. Size: the size of the plant or the quantity of seeds that you will be ordering, such as “1 gallon” or “1 ounce.”
4. Current price (\$/plant): the price you expect to pay per plant/seed of that size/quantity.
5. Quantity: the number of plants/seeds of that size that you typically order each year in that size.
6. Quantity2: the total quantity of that plant/seed that you have purchased over the past ten years.
7. Packaging: the type of packaging that you would prefer the plants to arrive in (plastic tubs, peat pots, etc).
8. Labeling: Do the plants/seeds arrive bearing a label that states their origin? Would you like them to?
9. When: What time of year you expect to order these plants/seeds? You may do this on a monthly or seasonal basis, with the following guidelines:
 - IX. Spring: March-April-May
 - X. Summer: June-July-August
 - XI. Fall: September-October-November
 - XII. Winter: December-January-February
10. Arrive: When would you want these plants/seeds to arrive? Please use the same guidelines for the “when” category.
11. Delivery method: How you would like the plants/seeds to arrive? Would you send a truck to pick them up, or would you prefer to have them delivered?

The following list is comprised of grass, shrub, and forb species considered to be native to the state of Nevada. Please take these species into consideration when filling out the purchasing chart in this survey.

GRASSES	SHRUBS	FORBS
Indian ricegrass	4-wing saltbush	Blue flax
Great Basin wildrye	Desert bitterbrush	Scarlet globemallow
Snake River wheatgrass	Shadscale	Western yarrow
Bluebunch wheatgrass	Winterfat	
Thickspike wheatgrass	Torrey’s saltbush	
Bottlebrush squirrel tail	Mexican cliffrose	
Sandberg’s bluegrass	Wyoming big sagebrush	
Thurber’s needle grass	Mountain big sagebrush	
Needle and thread grass	Basin big sagebrush	
Desert needle grass	Low sagebrush	
	Black sagebrush	
	Antelope bitterbrush	
	Stansbury cliffrose	

Common Name	Type	Size	Current Price	Quantity	Quantity2	Packaging	Labeling	When	Arrive	Delivery Method
1.										

What is the Nevada Grown program?

The “Nevada Grown” label is a third-party government-funded marketing and certification program. In order to qualify for Nevada Grown certification, an agricultural producer must either reside or own property in the state of Nevada. Raw agricultural products, such as plants or seeds, must be grown entirely in Nevada. Processed agricultural products, such as feed, need to have at least 60% of their composition grown in Nevada. Membership is a cost-free process and is reevaluated on an annual basis. The use of the Nevada Grown logo is restricted to members in good standing.

16. In the following table you will be given ten bid amounts representing an increased price for native plant/seed products featuring the “Nevada Grown” label over the standard price for native plant/seed products without the “Nevada Grown” label. For each bid amount specify if you would definitely not be willing (1), probably not be willing (2), not sure (3), probably be willing (4), or definitely be willing (5) to pay the percent increase in price for products with the “Nevada Grown” label by circling the appropriate number (1-5).

Bid Amount	Definitely No	Probably No	Not sure	Probably Yes	Definitely Yes
1. 10%	1	2	3	4	5
2. 40%	1	2	3	4	5
3. 60%	1	2	3	4	5
4. 100%	1	2	3	4	5
5. 30%	1	2	3	4	5
6. 20%	1	2	3	4	5
7. 80%	1	2	3	4	5
8. 50%	1	2	3	4	5
9. 70%	1	2	3	4	5
10. 90%	1	2	3	4	5

17. If you chose 2, 3, or 4 in the above table for one of more bids (prices) please specify the reason why you could not make a definitely yes, or definitely no decision. Please write your response next to the bid in question.

Bid Amount	Reason
1. 10%	
2. 40%	
3. 60%	
4. 100%	
5. 30%	
6. 20%	
7. 80%	
8. 50%	
9. 70%	
10. 90%	

18. Does your company ever use contracts with plant and seeds providers?
1. Yes
 2. No
19. Would your company consider contracting with a supplier that had certified Nevada grown products or with a Nevada seed producers' cooperative?
1. Yes
 2. No, why? _____
20. What type of labeling or certification would you prefer?
1. Independent "Product of Nevada" label
 2. Third party certification, such as the "Nevada Grown" program
 3. Not needed

What are important features of native plants?

In addition to providing a more natural-looking landscape, native Nevada species are also highly drought resistant, meaning they require little water and can withstand long hours of direct sun. The low-cost and low-maintenance benefits of these plants make them attractive to both residential and commercial users. Native Nevada species have also been shown to resist the intrusion of invasive species, a continuing problem along the West Coast and inter-mountain region. Invasive species have difficulty penetrating the root systems of native species, making it more difficult for the invasive species to survive. Another benefit to the promulgation of native species is the fact that they can prevent erosion by providing protection for Nevada's extremely erodible soils, which makes native species a popular choice for land rehabilitation and reclamation following wildfires, mining, storms and the like. Please take these species into consideration when answering plant-specific question.

Appendix T-Nursery Survey

1. What is your title or position within this company?

1. Owner
2. Manager
3. Purchaser
4. Marketing
5. Other _____

2. Do you have free choice to purchase your plants and seeds at will?

1. Yes (go to 4)
2. No

3. If you answered “no” to the previous question, how is the decision made?

4. Which of the following categories of suppliers do you purchase your plants from? Please give the percent of total plants purchased from each category of supplier:

Supplier	% of total
1. Have own nursery in Nevada	
2. Have own nursery in another state	
3. Local (Nevada) nursery	
4. Non-local nursery	
5. Local (Nevada) wholesaler	
6. Non-local wholesaler	
7. Other	

5. What factors influence your choice of plant supplier? Please rank the following factors in according to their influence upon your choice of plant suppliers. Give the rank value “1” to the factor that has the strongest influence upon your decision, and “7” or “8” to the factor with the least influence.

Factor	Rank
1. Price	
2. Convenience/location	
3. Contract	
4. Service	
5. Quality of plants	
6. Ownership of supplier/relationship with company	
7. Delivery method	
8. Other _____	

6. When purchasing plants, does the location of the greenhouse (within Nevada or outside Nevada) in which the plants were grown affect your decision?

1. Yes
2. No

7. Please rank the importance of the price of plants vs. location of the greenhouse where the plants were grown on a scale of 1-10, with 1 as “price is all important” and 10 as “location of greenhouse is all important.”

1 2 3 4 5 6 7 8 9 10

8. Which of the following suppliers do you purchase your seeds from? Please give the percent of total seeds purchased from each category of supplier:

Supplier	% of total
1. Have own facility in Nevada	
2. Have own facility in another state	
3. Local (Nevada) nursery (or seed grower)	
4. Non-local nursery (or seed grower)	
5. Local (Nevada) wholesaler	
6. Non-local wholesaler	
7. Other	

9. What factors influence your choice of seed supplier? Please rank the following factors in according to their influence upon your choice of seed suppliers. Give the rank value “1” to the factor with the strongest influence upon your decision and “7” or “8” to the factor with the least influence.

Factor	Rank
1. Price	
2. Convenience/location	
3. Contract	
4. Service	
5. Quality	
6. Ownership of supplier/relationship with company	
7. Delivery method	
8. Other _____	

10. When purchasing seeds, does the location of the facility (within Nevada or outside Nevada) in which the seeds were milled affect your decision?

1. Yes
2. No

11. Please rank importance of the price of seeds vs. the location of the facility where the seeds were milled on a scale of 1-10, with 1 as “price is all important” and 10 as “location of facility is all important.”

1 2 3 4 5 6 7 8 9 10

12. Please fill out the form on the following page according to the amount and type of native Nevada plants and seeds you typically purchase each year. Please include this information:

1. Common name (scientific name optional): the common name of the plant.
2. Type: Please indicate whether you purchase the species as a plant (“P”) or seed (“S”). If you purchase the species in both plant and seed form, please use a separate line for each type.
3. Size: the size of the plant or the quantity of seeds that you will be ordering, such as “1 gallon” or “1 ounce.”

4. Current price (\$/plant): the price you expect to pay per plant/seed of that size/quantity.
5. Quantity: the number of plants/seeds of that size that you typically order for that size.
6. Packaging: the type of packaging that you want the plants to arrive in. For example, would you like the plants to arrive in 5-gallon plastic tubs that you can re-sell them in?
7. Labeling: Do the plants/seeds arrive bearing a label specifying their origin or the name of the company/nursery where they were grown? Would you like them to?
8. When: what time of year you expect to order these plants/seeds-you may do this on a monthly or seasonal basis, with the following guidelines:
 - XIII. Spring: March-April-May
 - XIV. Summer: June-July-August
 - XV. Fall: September-October-November
 - XVI. Winter: December-January-February
9. Arrive: when would you want these plants/seeds to arrive? Please use the same guidelines for the “when” category.
10. Delivery method: how the plants/seeds will arrive. For example, does the nursery deliver the plants/seeds or does your company have to pick them up?

The following list is comprised of grass, shrub, and forb species considered to be native to the state of Nevada. Please take these species into consideration when filling out the purchasing chart in this survey.

GRASSES	SHRUBS	FORBS
Indian ricegrass	4-wing saltbush	Blue flax
Great Basin wildrye	Desert bitterbrush	Scarlet globemallow
Snake River wheatgrass	Shadscale	Western yarrow
Bluebunch wheatgrass	Winterfat	
Thickspike wheatgrass	Torrey’s saltbush	
Bottlebrush squirrel tail	Mexican cliffrose	
Sandberg’s bluegrass	Wyoming big sagebrush	
Thurber’s needle grass	Mountain big sagebrush	
Needle and thread grass	Basin big sagebrush	
Desert needle grass	Low sagebrush	
	Black sagebrush	
	Antelope bitterbrush	
	Stansbury cliffrose	

Common Name	Type	Size	Current Price	Quantity	Packaging	Labeling	When	Arrive	Delivery Method
1.									

What is the Nevada Grown program?

The “Nevada Grown” label is a third-party government-funded marketing and certification program. In order to qualify for Nevada Grown certification, an agricultural producer must either reside or own property in the state of Nevada. Raw agricultural products, such as plants or seeds, must be grown entirely in Nevada. Processed agricultural products, such as feed, need to have at least 60% of their composition grown in Nevada. Membership is a cost-free process and is reevaluated on an annual basis. The use of the Nevada Grown logo is restricted to members in good standing.

13. In the following table you will be given ten bid amounts representing an increased price for native plant/seed products featuring the “Nevada Grown” label over the standard price for native plant/seed products without the “Nevada Grown” label. For each bid amount specify if you would definitely not be willing (1), probably not be willing (2), not sure (3), probably be willing (4), or definitely be willing (5) to pay the percent increase in price for products with the “Nevada Grown” label by circling the appropriate number (1-5).

Bid Amount	Definitely No	Probably No	Not sure	Probably Yes	Definitely Yes
1. 10%	1	2	3	4	5
2. 40%	1	2	3	4	5
3. 60%	1	2	3	4	5
4. 100%	1	2	3	4	5
5. 30%	1	2	3	4	5
6. 20%	1	2	3	4	5
7. 80%	1	2	3	4	5
8. 50%	1	2	3	4	5
9. 70%	1	2	3	4	5
10. 90%	1	2	3	4	5

14. If you chose 2, 3, or 4 in the above table for one of more bids (prices) please specify the reason for why you could not make a definitely yes, or definitely no decision. Please write your response next to the bid in question.

Bid Amount	Reason
1. 10%	
2. 40%	
3. 60%	
4. 100%	
5. 30%	
6. 20%	
7. 80%	
8. 50%	
9. 70%	
10. 90%	

15. Does your company use contracts with suppliers?

1. Yes
2. No

16. Would your company consider contracting with a supplier that had certified Nevada grown products or with a Nevada seed producers’ cooperative?

1. Yes
2. No. Why? _____

17. What type of labeling or certification would you prefer?
 1. Independent "Product of Nevada" label
 2. Third party certification, such as the "Nevada Grown" program
 3. Not needed

18. How many full time employees does your company retain?
 1. Summer: _____
 2. Year-round: _____

19. How many part time employees does your company retain?
 1. Summer: _____
 2. Year-round: _____

20. What is the average wage of a full-time employee?
 1. \$ _____/hour
 2. Prefer not to answer

21. What is the average salary of a part-time employee?
 1. \$ _____/hour
 2. Prefer not to answer

22. What are your company's average net earnings per year?
 1. \$ _____
 2. Prefer not to answer

23. What is your company's average profit margin on plants?
 1. _____%
 2. Prefer not to answer

24. What is your company's average profit margin on seeds?
 1. _____%
 2. Prefer not to answer

Appendix U-Homeowner Survey

1. Which category best represents your primary residence? (circle one)

1. Own home
2. Rent home
3. Rent apartment or townhouse
4. Other _____

2. In what zip code is your primary residence located? _____

3. If you own your own home, please circle the range that best describes the current value of your home. (circle one)

1. Less than \$100,000
2. \$100,000 to \$200,000
3. \$200,000 to \$300,000
4. \$300,000 to \$450,000
5. \$450,000 to \$600,000
6. Above \$600,000
7. Refuse

4. How much do you pay per month in either rent or mortgage payments?

1. less than \$500
2. \$500 to \$700
3. \$700 to \$1000
4. \$1000 to \$1300
5. \$1300 to \$1500
6. Above \$1500
7. Refuse

5. Are you the primary shopper for landscaping and gardening materials in your household? (circle one)

1. Yes
2. No

6. Where do you usually purchase your landscaping and gardening materials? (circle all that apply)

1. Nursery/specialty store
2. Landscaping company
3. Inclusive hardware store (Home Depot, Lowe's)
4. Discount store (Kmart, Shopko, Walmart)
5. Warehouse store (Sam's Club, Costco)
6. Mail order or internet
7. Other _____

7. How much do you spend per year on gardening and landscaping supplies? (circle one)

1. Less than \$200
2. \$200 to \$400
3. \$400 to \$600

4. \$600 to \$800
5. \$800 to \$1000
6. \$1000 or more
7. Unknown

8. On a scale of 1-10, please rank whether you purchase mostly seeds or mostly plants for your landscaping and gardening projects, with 1 being “all seeds” and 10 being “all plants.” (circle one)

1 2 3 4 5 6 7 8 9 10

9. When purchasing seeds, do you check the label to see where the seeds were milled? (circle one)

1. Yes
2. No

10. When purchasing a plant, do you check the label to see where the plant was grown? (circle one)

1. Yes
2. No

11. On a scale of 1-10, please rank the importance of price vs. the origin of the plants or seeds you purchase, with 1 as “price is all important,” and 10 as “origin is all important.” (circle one)

1 2 3 4 5 6 7 8 9 10

12. On a scale of 1-10, rank importance of price vs. supporting the local community, with 1 as “price is all important,” and 10 as “supporting the local community is all important.” (circle one)

1 2 3 4 5 6 7 8 9 10

13. The following is a list of six different factors that may influence the decision you make about where to purchase landscaping and gardening supplies. Please rank the factors from most to least important, with the rank of 1 being the most important.

Factor	Rank
1. Price	
2. Location/Convenience	
3. Selection	
4. Service	
5. Quality	
6. Supporting the owner/local community	
7. Other _____	

14. Are you familiar with the “Nevada Grown” certification program? (circle one)

1. Yes
2. No

The **Nevada Grown** program is a government sponsored third-party certification program. For a producer of agricultural or food goods to be considered for Nevada Grown certification, he or she must either reside or own property in the state of Nevada. For a raw agricultural product, such as a plant, to be certified as Nevada Grown, it must be grown in the state of Nevada. Processed agricultural products, such as feed, must have at least 60% of their composition grown in Nevada. The use of the Nevada Grown logo and label are restricted to members in good standing. Certification is a cost-free process and membership is reconsidered on an annual basis.

One of the benefits of native Nevada plants and grasses is that they are drought resistant, meaning they require less water and can sustain long periods of direct sunlight. In addition to this, native Nevada species provide a more natural looking landscape and since these breeds are native to this area, they can endure the great range of temperatures common to this region. Native plants have also been shown to prevent invasive plant/weed infestation and prevent soil erosion and dust caused by low water levels and high winds common to Nevada.

15. The following is a list of 4 characteristics Nevada native plants exhibit. Please rank the characteristics from most important to least important in your purchasing decision, with the rank of 1 being the most important.

Characteristic	Rank
1. Drought resistant (need little water)	
2. Natural looking landscape	
3. Prevention of invasive weeds/plants	
4. Prevention of soil erosion	
5. Other _____	

16. In the following table you will be given ten bid amounts representing an increased price for plant/seed products featuring the “Nevada Grown” label over a standard price of \$5.00 for plant/seed products without the “Nevada Grown” label. For each bid amount specify if you would definitely not be willing (1), probably not be willing (2), not sure (3), probably be willing (4), or definitely be willing (5) to pay the increased price for products with the “Nevada Grown” label by circling the appropriate number (1-5).

Bid Amount	Definitely No	Probably No	Not Sure	Probably Yes	Definitely Yes
1. \$5.00	1	2	3	4	5
2. \$6.50	1	2	3	4	5
3. \$9.00	1	2	3	4	5
4. \$5.50	1	2	3	4	5
5. \$8.00	1	2	3	4	5
6. \$5.75	1	2	3	4	5
7. \$10.00	1	2	3	4	5
8. \$6.00	1	2	3	4	5
9. \$7.00	1	2	3	4	5
10. \$5.25	1	2	3	4	5

17. If you chose 2, 3, or 4 in the above table for one of more bids (prices) please specify the reason for why you could not make a definitely yes, or definitely no decision. Please write your response next to the bid in question.

Bid Amount	Reason
1. \$5.00	
2. \$6.50	
3. \$9.00	
4. \$5.50	
5. \$8.00	
6. \$5.75	
7. \$10.00	
8. \$6.00	
9. \$7.00	
10. \$5.25	

18. How many members are in your household, including yourself? (circle one)

1. 1-2
2. 3-4
3. 5-6
4. 7 or more

19. Are there any children under 18 in your household? (circle one)

1. Yes
2. No

20. What is your marital status? (circle one)

1. Married
2. Single

21. Which of the following categories best represents your 2003 annual household income? (circle one)

1. less than \$30,000
2. \$30,000 to \$45,000
3. \$45,000 to \$60,000
4. \$60,000 to \$75,000
5. \$75,000 to \$100,000
6. above \$100,000
7. Refuse

22. Which of the following categories best represents your completed level of education? (circle one)

1. Middle school
2. High school
3. Some college
4. 2-year associates degree

5. 4-year college degree
6. Graduate degree

23. Which of the following categories best represents your employment status? (circle one)

1. Full time employed
2. Part time employed
3. Unemployed
4. Homemaker
5. Retired
6. Student

24. What is your gender? (circle one)

1. Male
2. Female

25. In what year were you born?

1. _____
2. Refuse