

# **D. L. PHIPPS FOREST NURSERY BUSINESS PLAN**



**DEPARTMENT OF FORESTRY  
2424 WELLS ROAD  
ELKTON, OREGON  
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## EXECUTIVE SUMMARY

In March 2002, in response to questions about the long term viability of the Phipps Nursery, the Nursery Advisory Group, consisting of the three Area Directors, and Program Directors from Forest Practices, Forestry Assistance, and Forest Management, directed the Nursery Manager to write a business plan for the Nursery. This plan was to be a blueprint for the successful future operation of the Nursery. The following summary lists the major points in the Plan:

- January 2004 projections show that Phipps, an enterprise program funded entirely by the sale of seedlings, will finish FY 2004 with a positive cash flow but will be facing deficits in FY 2005 and 2006. This plan shows that these deficits can be managed with help from the revolving fund which will be a little over \$1.4 million at the beginning of FY 2005. By FY 2007 the budget will be back in the black again. A statutorily authorized revolving fund helps maintain long term stability in a volatile agricultural business.
- Factors contributing to projected deficits:
  - A general economic recession, a strong dollar, and surplus growing space have combined to make Canadian plugs an extremely good bargain at less than \$100/thousand for styro 2 plugs.
  - Reduced harvesting on Federal lands has reduced BLM seedling orders to less than 40% of historical amounts.
  - Failure to meet seedling orders for some customers as a result of the 2002 and 2003 October freezes.
- Action to improve Nursery long term viability
  - Reduced fixed overhead costs by reducing permanent workforce.
  - Improved loss reduction practices to reduce order shortfalls.
  - Using a combination of contract and seasonal labor.
  - Improved inventory process to reduce potential for shortfall
  - Grow hemlock plugs as transplants for 1 year. Sell as quality P+1's.
  - Improved irrigation system to provide protection for all at-risk stocktypes.

The Nursery "Niche" in the Oregon seedling market is to provide a stable source of well-adapted seedlings for the non-industrial private landowner (NIPL). These landowners often harvest based on volatile timber market conditions. Phipps grows seedlings speculatively to accommodate this need and offers an exclusive reservation period to family forest landowners. More specifically, a stable source of seedlings is provided by:

- Ensuring long range stability in a normally volatile seedling production market.
- Offering family forest landowners high quality natural and genetically improved stock appropriate for their planting site.
- Offering family forest landowners stock reservations and the security of knowing they will have seedlings available at planting.
- Assuming the risk of financial losses from unsold stock in low demand zones and elevations.
- Offering contract growers options to grow specialty stock for individualized sites.

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## THE BUSINESS

### **Description**

O.R.S. 526.235 empowers the State Forester to grow and sell forest seedlings to private, state and other public owners of forestland. The Oregon Department of Forestry has been operating a forest nursery since 1927, first near Corvallis and since 1957 as the D.L. Phipps Forest Nursery near Elkton, Oregon to provide forest tree seedlings for Oregon forestlands. Phipps Nursery is located on 109 state owned acres and 152 acres of leased land in Douglas County Oregon. The climate is mild with few temperature extremes. Summers are dry and allow for the proper conditioning of seedlings for winter hardiness. Phipps's geographic location is excellent because it is located near the center of the forested western portion of Oregon. It is close to sources of labor and close to forested areas.

Approximately 30 of the 109 state owned and 93 of the 152 leased acres are suitable for growing and lifting bare-root seedlings. This total of 123 acres contains soils that are medium to coarse textured and, while not the best for winter lifting operations, with proper care and use produces an excellent seedling.

During the past ten years, rapidly changing conditions in the management of Oregon's forests have caused Phipps to re-examine its purpose. Changing federal policy on function and use of BLM forest land has reduced demand for seedlings for reforestation and increased the need for grass seed for rehabilitation of decommissioned roads, old clearcuts, and burned areas. Fisheries concerns have increased the needs of landowners for riparian species for streambanks. Changes in State Forestland management to Structure Based Management have shifted species mixes from mostly Douglas fir to higher percentages of western hemlock, western cedar, and spruce. Swiss needle cast disease in the coastal forests has prompted a move from Douglas fir to western hemlock. More efficient utilization of forest products (e.g. oriented strand board replacing plywood) has resulted in lower demand for large old trees reducing rotation ages of some stands down to 60 years.

Achieving merchantable trees in 60 or less years requires large, fast growing seedlings, fertile soils, adequate soil moisture, and control of competing vegetation from the very beginning. To achieve merchantable stands in the shortest rotation possible, foresters continue to experiment with new stocktypes and recently have been trying large Canadian grown 1 year-old plugs with added fertilizer in the media, 8mm minimum caliper Plug+1 and bareroot 1+1 transplants.

### **Mission**

- Make available a stable supply of high quality, well-adapted seedlings of diverse plant species and sizes for reforestation and rehabilitation of Oregon's lands with special preference for Oregon's Family Forest Landowners.

### **Vision**

- To fulfill its mission, Phipps will be a fiscally sound Nursery producing 6 - 8 million seedlings per year. Phipps will have annual sales revenue of at least \$2,000,000 and be economically viable over the long term. It will be an employer of choice for the permanent and seasonal workers needed for growing and harvesting the crop and provide a safe working environment for its employees. It will strive to incorporate the latest technology into its operations to increase its efficiency.

### **Values**

- Honesty in personal interactions.

- Maintenance of professional working relationships built on mutual understanding and respect.
- Soliciting the participation of customers in how business is conducted.
- Acceptance and support of the Forestry Department's Working Guidelines.
- Commitment to a positive, friendly, professional and safe working environment.
- Maintenance of a high a level of trust with customers.

### Strategies For Successful Mission Completion

- Provide a special year around ordering opportunity for Family Forest Landowners with exclusive reservation periods each spring and summer to assure that seedlings are available to them for timely reforestation.
  - Offer a variety of target sizes of seedlings in a wide variety of seed zones so Family Forest Landowners may select the most appropriate sizes for their reforestation needs.
  - Provide a consistent supply of genetically improved seedlings of diverse species for Oregon forestlands.
    - Provide a wide assortment of seedlings and cuttings for increased riparian restoration in watersheds throughout Oregon.
    - Provide regional refrigerated distribution centers for Northern, Southern and Eastern Oregon Family Forest Landowner seedling customers to assure vigorous reforestation.
    - Promote community among Oregon nurseries growing reforestation seedlings by sharing technologies and practices to the betterment of Oregon seedling buyers.
    - Promote partnerships with other state agencies, landowners, and non-profit groups to enhance riparian area plantings for healthy streams; with various nurseries to improve seedling growing and handling methods; and with state and nearby agencies to hire workers in the region.
    - Continue support of Oregon State University's Nursery Technology Co-operative to promote co-operative forest nursery and reforestation research programs to the benefit of all Oregon's forest landowners.
      - Provide educational opportunities for local schools, colleges and other groups or individuals
      - Promote soil management and seedling growing techniques that enhance water quality

### **Product**

The Nursery's primary product is a bareroot 2-year old (P+1, 1+1, and 2+0) conifer seedling for reforestation. Other species grown include many of the species that are ecologically suited to the site, can produce a viable forest product, and are marketable in the foreseeable future. Ninety-five percent of production is conifer seedlings for reforestation of Oregon forestlands. Five percent of production is riparian shrubs, hardwood species and grass seed for re-vegetation of stream banks, abandoned roads, etc. Douglas fir makes up 70% of conifer species, with pine, cedar, true fir, hemlock, and spruce approximately 30%. Most species are offered for sale in all forested seed zones and elevations in Oregon in the following stocktypes:

- 1+1 transplants are grown for one year in a seedbed and one year in a transplant bed for all types of customers. They are planted either in the fall of the year preceding harvest or in the spring of the year of harvest. Fall transplants generally attain larger size because of the longer growing period. Transplants are generally larger than 2+0's.
  - 2+0 seedlings are grown from seed and spend 2 years in the same bed. They are the lowest priced seedlings and are purchased almost exclusively by family forest landowners.

- P+1 seedling are grown from seed in a greenhouse separate from Phipps then trucked to Phipps and transplanted in beds. P+1 prices are slightly higher than 1+1 prices because of the extra handling involved during transplanting. Ninety-seven percent of these seedlings are grown under contract with industrial landowners and public land managers.

## **Customers**

Customer sales are to four types of landowners:

**Family forest landowners** own relatively small acreages (5 - 5000 acres) and do much of the labor themselves. Many intend to pass the land and timber on to their heirs. Family forest landowners, in large part, harvest based on market conditions; i.e. they harvest when the market is up. It is difficult for them to plan a harvest the two or more years ahead that is required in order to contract for seedlings. Some have recently harvested some timber and must reforest to comply with the Forest Practices Act. Others are only interested in the esthetic value of their property. Still others manage their timber intensively as a business. All usually have a limited budget for reforestation and price is their highest priority. Many buy 2+0's and some buy transplants. This market has been growing in the last few years. In 1999, 31,078 acres of family forest landowners' land were reforested. At 300 trees per acre, family forest landowners planted 9.3 million seedlings in Oregon that year.

**Federal land managers** are interested in a greater variety of species to comply with multiple use demands and environmental concerns. It is important to them to get stock that survives well so as to reduce the chances of extra costs to replant. Since they are not allowed, by policy, to use herbicides, hardy seedling stock is vital. They are also moving more towards minor species such as cedar, hemlock, spruce, and true firs to try to reproduce natural stands. The P+1 stocktype works especially well for hemlock and cedar. Transplants are larger than 2+0's, so survivability and growth are better. These two characteristics lower the risk of plantation failures and lower the rotation age. Both of these outcomes are desirable from an economic and environmental standpoint justifying the higher cost of the seedlings. They buy mostly transplants. In 1998, the BLM planted approximately 4 million seedlings in Oregon. Phipps produced 25% (1 million) of the total. Phipps sales to BLM have dropped to less than 600,000 seedlings in 2003.

**ODF** has many of the same multiple use demands and environmental concerns as Federal land managers. In addition, the Northwest Oregon and Southwest Oregon Forest Plans, using a Structure-Based Management approach, and the Swiss needlecast problem on the coast have moved some districts away from traditional plantings of bare-root Douglas fir to containerized minor species. In 1999, Phipps produced all of the bareroot seedlings for Oregon Department of Forestry lands (about 1.5 million). That number dropped to less than 600,000 seedlings in 2003 but will be back up to 1.2 million by FY 2007.

**Industrial land managers** are concerned primarily with the maximum economic gain from their input. Therefore, they want only the most robust, hardy seedlings they can find. Transplants fit their needs. Quality and vigor of planting stock is most important because site preparation and planting costs are the majority of the costs to replant a site. They buy only transplants and specify caliper minimums of 7 and 8 millimeters. In 1999, forest industry planted 16.7 million seedlings in Oregon. Phipps produced approximately 15% (2.5 million) of the total. In 2003, Phipps' portion had dropped to 1 million. Sowing orders for 2004-2006 are increasing and now stand at 1.5 million.

## **Seedling Purchasing Options**

Phipps offers customers two ways to buy stock - under a 2-year contract or with no contract.

**Contract growing** is a way for customers to get a lower price on their stock. As a part of the contract, the purchaser must make progressive payments as the crop grows over the two years. This gives the Nursery money up front to help offset the cost of growing and cultivating the crop. This also helps the Nursery plan for the future. Most industry and public land managers prefer this method, as do most nurseries.

**Non-contract** fits the needs of the family forest landowner who usually harvests in response to market conditions. With such a short planning window, family forest landowners cannot plan 2 years ahead and grow seedlings under a 2-year contract. Thus, each year Phipps undertakes the risky procedure of sowing enough seed to provide an amount of seedlings sufficient to meet the projected demand 2 years in the future. To ensure that family forest landowners will have seedlings at harvest, they are offered an exclusive reservation period until October of the harvest year.

This is a highly volatile market because these customers usually order in small quantities with short notice. Other large production nurseries do not target this type of customer because of the high cost of handling small orders, intensive labor necessary to keep track of small lots, and the potential for having unsold inventory which must be thrown away at the end of the season.

## **Seedling Sources and Prices**

Each year the Oregon Department of Forestry publishes a handbook titled "Sources of Forest Nursery Seedlings." This publication is available from the Department and Phipps. It contains up-to-date information on seedling sources, prices and other information on nurseries throughout the Pacific Northwest.

Every year nurseries are given the opportunity to contribute their listing of available stocktypes and prices to this publication. In the 2003-2004 edition, Phipps 2+0 prices were about \$260/M compared to an average of \$210/M for other nurseries (about a 23% premium). Phipps bareroot 1+1 prices were \$417/M compared to an average of \$330/M (a 26% premium).

Sources of seedlings ranged from Northern California to Montana and Washington.

Sources of seedlings available to contract customers:

- **Weyerhaeuser** has bareroot nurseries in Rochester, WA, Aurora, Turner, and Medford, OR. Their minimum contract order size is 5,000 seedlings. Weyerhaeuser uses these nurseries to produce the seedlings needed to reforest their company lands. Extra space, if any, is used to grow for other industry. The acquisition of Willamette Industries could possibly reduce the space available to grow seedlings for other industry companies.

- **IFA** has nurseries in Toledo, WA, Canby, OR, and Humboldt, CA. IFA has been expanding rapidly in the last five years. IFA sells primarily under contract to industry and private consulting firms which can place orders greater than 3000 seedlings. They offer some speculative stock in selected seed zones.

- **Webster** nursery near Olympia, WA, is operated by the State of Washington Department of Natural Resources. Its customers are a cross section of the landowners of Washington State and Oregon. Washington has a much larger acreage of state managed lands than Oregon, so a higher proportion of its nursery's production is for state lands.

- The **J. Herbert Stone** nursery in Medford, OR is a federal nursery run by the U.S. Forest Service. This nursery may impact Phipps directly as an additional contract source for BLM seedlings. Currently, BLM contracts are a small part of Phipps production.

#### Sources of seedlings for family forest landowners:

Family forest landowners who don't order enough seedlings to meet minimum contract orders or don't want the limitations of a contract are left with the following choices:

- Purchase surplus stock which is left over after industry customers have what they need from their contract orders,
- Purchase from a limited number of private nurseries offering speculatively grown seedlings; often in limited seed zones and quantities.
- Join a group of family forest landowners that pools their orders to achieve minimum contract order requirements,
- Buy from other sources such as private forest consultants who are in the business of packaging harvesting and reforestation services for the family forest landowner, or
- Reserve seedlings with Phipps.

#### **Market Niche**

Following the direction of the Oregon Legislature, ODF originally established a forest nursery to serve the reforestation needs of all Oregon landowners with special attention to family forestland owners. Family forestland owners usually own parcels of less than 5,000 acres that are distributed throughout Oregon in most seed zones and elevations. Because harvest decisions are often made in response to volatile market conditions and/or personal need, they must be able to obtain seedlings on short notice, often in relatively small amounts.

Phipps has fulfilled that need by routinely growing seedlings in most of the 25 seed zone elevation combinations in Western Oregon (including those zones, which have historically low, or no demand) with an average of 3+ stock type choices in each zone/elevation.

By statute, Phipps must recover operating expenses through sale of stock. Operating costs are generally higher than operating costs of a private nursery. Higher costs result from:

- Wages and benefits in the state compensation system.
- Higher risk of maintaining seedling stock in all seed zones and elevations in case they might be needed. When these seedlings go unsold, the Nursery collects no income and cannot recover its growing costs from seedlings it must discard. This loss must be recovered as a premium added on to seedlings sold.
- Extra staff needed to handle the average of more than 2,000 individual orders in a variety of quantities.

Until 2002, the overall market for seedlings had been declining. Conifer seedling sales in Oregon peaked in the early to middle 90's at about 130 million of which Phipps provided about 10%. During the last few years, timber harvesting in the U.S. has been declining due to environmental challenges to sales on public lands, competition from timber imports, more efficient utilization of wood products and a general downturn in the economy. Oregon's seedling production has declined also to an estimated 70 million, with Phipps satisfying less than 10% of the market.

Since 2002, Phipps' orders have been increasing and projections show that production could be as high as 7 - 8 million seedlings in 2007. This is due in part to:

- Increased timber harvesting due to an improving economy and timber import protection

- Reforestation efforts following fires on BLM managed land
- Unseasonal freezes in October of 2002 and 2003 reducing inventories at all nurseries in Washington and Oregon
- Phipps's willingness to accommodate contract customers' desire for larger stock

There are about 39 (Nursery Review Task Force Report)<sup>1</sup> nurseries (container and bareroot) in Oregon. The largest 10 nurseries grow under contract mostly for their own lands, other industry customers, private consultants or public land managers. The smaller 29 nurseries are mostly family owned, wholesale ornamental nurseries which sell mainly for landscaping and grow for reforestation when demand is up and they can be sure to sell what they grow.

Allowing the reservation of seedlings in small order sizes on a speculation basis is a very low margin business other nurseries try to avoid because of the risk. Most nurseries do not sow many seedlings on speculation, preferring instead to over-sow contract lots and then sell the surplus - if any - at the end of the season. What they do sow for speculation usually is in zones and elevations with a history of high demand. In Oregon these zones and elevations are in the lower elevations of western Oregon particularly in the Willamette valley. By providing a reliable source of genetically suitable stock for family forestland owners' diverse locations in Oregon, the Phipps Nursery takes on this low margin, highly speculative market.

Phipps's "Niche" then is the following:

- Ensuring long range stability in a normally volatile seedling production market.
- Making available high quality, natural and genetically improved stock, appropriate to family forest landowners for their planting site.
- Offering family forest landowners stock reservations and the security of knowing they will have seedlings available at planting.
- Assuming the risk of financial losses from unsold stock in low demand zones and elevations.
- Offering contract growers options to grow specialty stock for individualized sites.

### **Marketing Strategy**

Phipps' marketing strategy is low key and designed to maintain its place as a minor, but viable, player in the seedling growing business. With Phipps' 30% price premium above other nurseries' comparable stock, Phipps is likely to be the last nursery where customers will buy seedlings. This fits Phipps' market niche. Phipps does not want to be the low cost - high volume seedling provider in Oregon. Its focus is on the higher risk - lower demand portion of the market, i.e., non-contract and specialized stock.

Advertising consists of small ads in local small woodland owner group publications, periodic news releases from the Oregon Department of Forestry (ODF) Public Affairs Team, attendance and information posters at industry meetings, and word of mouth with ODF Stewardship Foresters. Phipps also publishes a periodic newsletter sent to past and present customers and posted on its web site. The web site is part of the ODF web site and allows customers to keep up with Nursery activities, place orders, and provide input.

In 2001, sales to family forestland owners were approaching 70% of total sales, a precarious position for Phipps considering the speculative nature of this market. It is best for Phipps to try to keep this part of sales nearer 50% of the total. Recent projections now show that by 2007 NC sales

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<sup>1</sup> D.L. Phipps Forest Nursery Review Task Force Report, Department of Forestry, Salem, Oregon

will be about than 54% of the total. Increasing contract sales to private industry, state districts and BLM will help to lower future risk.

To increase sales to private industry, prices will have to be reasonable and order numbers will have to be met. For prices to be in an appropriate range, costs must come down by reducing fixed overhead costs to the extent possible. To meet ordered numbers, the Nursery must reduce its falldown. (Falldown occurs when tractors drive over seedlings in the bed while performing cultural practices such as spraying, mowing, root pruning, etc., or while transplanting, seedlings are planted too deep or too shallow.) Plans for reducing falldown include narrowing the width of the sowing and transplant beds. This will allow more space between the path and the seedlings so that fewer seedlings are lost to tractor damage.

To increase sales to the BLM there will need to be a change in Federal Policy to allow the BLM to harvest more trees. At present, Phipps is getting a share of seedlings that the BLM buys from nurseries in Oregon. We have been able to increase our revenue from the BLM by growing grass seed for them. The Healthy Forests Restoration Act and Initiative may result in increased timber harvest on BLM land.

State Districts purchase bareroot stock from Phipps where this type of seedling meets the silvicultural need. Increasing harvest on State Forest lands in northwest Oregon, as these forests mature, are resulting in increased sales.

### ***The Management Plan***

See Appendix III for the current Nursery Organization Chart. All permanent Nursery employees are state employees and are paid wages and full benefits according to the state compensation plan. The present Nursery organization includes a management team of a Manager, Business Manager, Grower, Field Supervisor, and Office Manager. The Field Supervisor oversees all field operations and seedling sorting and reports to the Grower. The Grower oversees seed storage, handling and stratification, irrigation, crop culturing, seedling handling and storage, soils fertility management, and plant pathology. The Office Manager supervises office staff and reports to the Business Manager who supervises retail and wholesales businesses. The Business Manager and Grower report to the Nursery manager who should have a complete knowledge of the business, crop culture, and equipment capabilities.

The manager reports directly to the Southern Oregon Area Director. Both the manager and SOA Director are members of the ODF Nursery Advisory Group made up of the three Area Directors and Program Directors from the Private and Community Forests and State Forests programs. This six-member group meets twice a year and advises the Nursery manager on future direction of the Nursery.

Growing seedlings is a seasonal business, just like farming. Seed must be planted, fertilized, irrigated, cultured and harvested. This is labor-intensive work, some of which can be mechanized, as with other crops. But lifting, sorting, and packing cannot be completely mechanized. Each seedling must be separated by hand from the others so it can be inspected during the sorting and grading operation to ensure that it meets customer requirements.

Field and harvest work is done with a combination of Nursery-hired seasonal employees and seasonal contract labor. Workers that are hired directly by the Nursery are state employees and work under a union contract. They are entitled to all of the benefits of the Oregon State compensation package – fully paid health insurance, retirement, leave, etc. In addition, when there is no work available they are able to collect unemployment insurance charged directly to the Nursery. Businesses providing labor bid on Nursery work such as lifting and grading. Presently, about 60% of the field and harvest work is done by contract crews.

## Finances

### ***General Description***

As a part of the Oregon Department of Forestry, the Nursery operates under State of Oregon accounting principles. The Nursery maintains a limited proprietary fund that is self-supporting. It does not receive nor request any general fund revenues. All revenue received is from the sale of nursery stock. Revenues are credited to the Nursery's Revolving Fund to pay for the cost of services and supplies necessary for the Nursery to produce its crop and are replenished through revenue derived from the crop. The Nursery strives to maintain a positive balance in its revolving fund (ORS 526.235). Crop insurance helps mitigate the impact of catastrophic loss. The revolving fund helps stabilize funding through high and low production cycles.

### ***Cash Flow Analysis***

The Cash Flow Analysis Table (Appendix I) shows that, except for the freeze year (FY 2003), revenue from general sales (to family forest landowners) has remained at about the same level for the last five years (1999 - 2003). Sales during that time reached a peak of a little over 4 million seedlings (\$1.5 million) in 2000 and have declined to a projected 2.8 million seedlings (\$960,000) for FY 2004. Sales are projected to again reach 4 million seedlings by 2007.

Revenue from sales to forest industry has dropped from \$1.1 million in 1999 to projected revenue of \$179,000 in FY 2004 due to freeze damage, oversupply and lower demand. Future confirmed orders and interest indicate that 2003 was the bottom and industry orders will stabilize at about 1.5 million seedlings (\$500,000) by 2007.

Revenue from seedling sales to ODF has declined significantly from the 1999 level. This is primarily the result of a change in stock type to accommodate Swiss Needle Cast impacted areas on the coast and to address planting and species needs under the Structure Based Management Strategy. ODF orders are expected to increase to more than 1.2 million seedlings (\$270,000) by 2007 as a result of increasing harvest levels as the northwest Oregon forests mature.

Revenue from seedling sales to the BLM has declined from 1999 but is expected to stabilize at about 600,000 seedlings (\$200,000) per year through 2007. As noted above, the Healthy Forests Restoration Act and Initiative may result in an increase in BLM sales.

### ***Cost of Seedlings Produced***

Costs of producing seedlings are either variable or fixed. Variable costs change with the size of the crop because they are associated with growing and producing the crop. Variable costs are primarily the costs of labor needed to sow, transplant, weed, shade, irrigate, cultivate, and harvest the crop. Variable costs also include supplies such as seedling bags, maintenance of equipment, electricity for coolers, etc. During the past five years, variable costs have averaged about 65% of total costs.

Fixed costs (sometimes referred to as "overhead") are administrative and management costs to keep the operation running and other costs such as: tractors, utilities, land rent, depreciation, taxes, agency administration costs, payroll entry, purchasing, sales, marketing, research, record keeping, capital expenditure, building maintenance and repair. These needs generally do not change with the size of the crop. Fixed costs have been averaging about 35% of expenditures.

During the past five years as revenue has fallen, actual variable expenses have also fallen. While this is expected, it also shows that workers have become more productive to make up for increased

expenses resulting from salary and annual inflation increases to costs of services and supplies. Being able to contract out some of the labor has also helped to keep costs down.

Fixed costs have decreased with the reduction in revenue. This has kept the percentage of costs associated with fixed expenses steady at about 35% of total expenditures. This is unusual because fixed costs, by definition, do not change with increases or decreases in revenue. Since fixed costs at Phipps are comprised mainly of permanent salaries, reductions can only be accomplished by laying off personnel. Between 1999 and 2003, five positions were cut reducing permanent staff from 12 to 7 full time positions. Layoffs can be shortsighted if they result in the long-term degradation of the Nursery's mission. In the case of these five positions, management felt that other positions could absorb the duties, or seasonal positions could be used to get the essential work accomplished. Further cuts in permanent positions could keep the Nursery from completing its mission.

### ***Future of Phipps Nursery***

#### **Expenses**

- Maintain permanent salaries in a range of 20 - 25% of Nursery budget.
- Lower Nursery variable costs (i.e. costs of producing seedlings) by continuing to contract a portion of the seasonal hand labor and by modernizing and upgrading facility equipment including the present irrigation system

#### **Sales**

- BLM - Seedling orders are trending up for the BLM, likely in response to reforestation needs on burned over land and increased thinning and harvesting.
- INDUSTRY - Industry orders are trending up in response to Phipps's attention to customers' requests for growing specialty stocktypes. Upgrading the irrigation system so that it is capable of frost protection is helping in this area.
- NIPL - Improvement in the timber market will result in increased sales.
- STATE DISTRICTS - Overall, District seedling purchases have risen in the last few years. Some of that increase has resulted in increased use of Phipps stock. Projections show that sales to districts will increase during the next few years.

#### **Seedling Falldown**

- Change sowing formulas to increase the amount of seed sown
- Narrow the width of the bed sown or transplanted to reduce the number of seedlings lost to tractor wheel damage.
- Reduce the height of the sown beds to keep the outside rows of seed from falling off of the bed.
- Improve the present irrigation system to increase crop coverage and frost protection

#### **Customer Involvement**

Establish a customer board made up of buyers from all four customer groups. Making customers a part of a Nursery Board will:

- Increase understanding of Phipps
- Provide input into the growing process.
- Promote a community of interest.



## APPENDIX I - Cash Flow Table

### D. L. PHIPPS NURSERY CASH FLOW TABLE FISCAL YEARS ENDING JUNE 30

<b>Sales Revenue</b>	<b>1999</b>	<b>2000</b>	<b>2001</b>	<b>2002</b>	<b>2003*</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>
Forest Industry	\$ 1,111,803	\$ 1,025,072	\$ 495,682	\$ 216,792	\$ 46,125	\$ 179,067	\$318,822	\$ 463,556	\$ 499,662
ODF	\$ 339,533	\$ 209,321	\$ 287,478	\$ 138,348	\$ 97,420	\$ 136,345	\$156,646	\$ 221,610	\$ 277,695
BLM	\$ 440,639	\$ 392,013	\$ 370,924	\$ 461,159	\$ 165,116	\$ 179,096	\$237,625	\$ 216,296	\$ 222,801
Contract sales (Total)	\$ 1,891,975	\$ 1,626,406	\$ 1,154,084	\$ 816,299	\$ 308,661	\$ 494,508	\$ 713,093	\$ 901,462	\$ 1,000,158
General Sales	\$ 1,324,868	\$ 1,479,710	\$ 1,358,551	\$ 1,345,962	\$ 199,992	\$ 960,755	\$ 1,275,000	\$ 1,348,050	\$ 1,481,374
Other Sales	\$ 145,266	\$ 3,522	\$ 2,020	\$ (8,029)	\$ (431)				
Crop Ins. Payment	\$ 497,964		\$ 396,598		\$ 2,756,934	\$ 747,935			
Other Revenues	\$ 35,106	\$ 13,725	\$ 3,376	\$ 1,152	\$ 27,959	\$ 34,064	\$ 32,600	\$ 32,600	\$ 32,600
Rental	\$ 22,053	\$ 22,435	\$ 22,917	\$ 14,505	\$ 17,453	\$ 8,255	\$ 9,819	\$ 9,819	\$ 9,819
Bad Debt Expense				\$ (3,302)	\$ (9,898)				
Revenue	\$ 3,917,232	\$ 3,145,798	\$ 2,937,546	\$ 2,166,587	\$ 3,300,670	\$ 2,245,517	\$ 2,030,512	\$ 2,291,931	\$ 2,523,951
Salem Admin Chg**	\$ (331,452)	\$ (278,754)	\$ (268,552)	\$ (295,935)	\$ (275,005)	\$ (226,567)	\$ (206,980)	\$ (230,795)	\$ (251,932)
Rev. w/Reductions	\$ 3,585,780	\$ 2,867,044	\$ 2,668,994	\$ 1,870,652	\$ 3,025,665	\$ 2,018,950	\$ 1,823,532	\$ 2,061,136	\$ 2,272,019
<b>Expenditures</b>									
Personal Services	\$ 2,110,933	\$ 1,948,163	\$ 1,615,161	\$ 1,264,080	\$ 995,147	\$ 1,076,537	\$ 1,119,598	\$ 1,186,774	\$ 1,210,510
Service & Supply	\$ 1,123,582	\$ 929,518	\$ 866,368	\$ 818,322	\$ 640,425	\$ 875,970	\$ 893,489	\$ 911,359	\$ 929,586
Research and Dev.	\$ 6,000	\$ 6,000	\$ 6,000	\$ 6,000	\$ 6,000	\$ 6,000	\$ 6,000	\$ 6,000	\$ 6,000
DAS Insurance Prem.	\$ 16,337	\$ 23,305	\$ 21,558	\$ 12,326	\$ 12,267	\$ 52,600	\$ 52,600	\$ 52,600	\$ 52,600
Total Expenditures	\$ 3,256,852	\$ 2,906,986	\$ 2,509,087	\$ 2,100,728	\$ 1,653,839	\$ 2,011,107	\$ 2,071,688	\$ 2,156,734	\$ 2,198,696
<b>Sales Rev. Less Expend.</b>									
Net Revenue/(Loss)	\$ 328,928	\$ (39,942)	\$ 159,907	\$ (230,076)	\$ 1,371,826	\$ 7,843	\$ (248,156)	\$ (95,598)	\$ 73,323
Capital Outlay	\$ (9,995)							\$ (50,000)	\$ (100,000)
<b>Revolving Fund Bal.</b>	<b>\$157,208</b>	<b>\$ 117,266</b>	<b>\$ 277,173</b>	<b>\$ 47,097</b>	<b>\$ 1,418,923</b>	<b>\$ 1,426,766</b>	<b>\$ 1,178,611</b>	<b>\$ 1,033,013</b>	<b>\$ 1,006,336</b>
	(\$161,725)								

\* FY 2003 was year of diminished sales from freeze losses.

FY 2005 - NC prices raised 6%, 4% increase in personal services and 2% increase in services and supplies.

FY 2006 - 4% price increase on all stock, 6% increase in pers. services and 2% for S&S, and \$50,000 to start 2 year irrigation upgrade.

FY 2007 - No price increases, 2% increase in personal services and S&S, and \$100,000 capital expenditure to finish irrigation upgrade

\*\* Figure includes ann. Chg. of 9.11% against revenue for Salem services and beginning 2003 a \$22,000 charge for capital outlay principal and interest for ODF Salem building construction.

## APPENDIX II - Nursery History

### OREGON DEPARTMENT OF FORESTRY FOREST NURSERY HISTORY

#### HISTORY AND ISSUES

1926

Oregon Department of Forestry opens the state's first forest nursery, the Oregon Nursery north of Corvallis with matching monies from the Clark-McNary Act of 1924. The Nursery's mission is to grow and sell seedlings for Oregon farmers to establish shelterbelts, windbreaks and woodlots.

1941

Production at the Oregon Forest Nursery is expanded to include Douglas-fir for reforestation after the passage of the Forest Conservation Act that required reforestation after harvesting

1948

The people of Oregon approve a \$10.5 million bond issue to rehabilitate the Tillamook Burn. The United States Department of Agriculture, Forest Service opens a forest nursery near Bend that will provide about 10 million seedlings for central and eastern Oregon.

1949

The first Douglas-fir seedlings from the Oregon Forest Nursery are planted in the Tillamook Burn

1957

A second ODF nursery is established in Douglas County, near Elkton. Advance monies from the Soil Bank Act of 1956 and Douglas County get the project going. A broad mission of soil and woodlot conservation as well as reforestation is maintained.

1958

Seedlings from the Elkton Nursery are planted in the Tillamook Burn

1961

The Industrial Forestry Association of Oregon opens a forest nursery near Canby. Oregon has four forest nurseries.

1964

The Oregon Forest Nursery near Corvallis is closed. All seedling production is shifted to the Elkton Nursery, renamed for the former state forester Dwight L. Phipps. The main Umpqua River floods with significant damage done to seedlings, fields, and buildings at the Phipps Nursery. Reforestation in Oregon totals about 115,000 acres and 60 million seedlings.

1969

Phipps Nursery expands production by leasing 90 acres in addition to the original 106 acres purchased in 1957. Oregon has 10 forest nurseries in operation. Seven private, 2 federal, and 1 state nursery. Annual production reaches 80 million to reforest 160,000 acres

1971

Oregon passes the landmark Forest Practices Act that requires prompt and successful reforestation after harvest. The Oregon legislature passes a forestry bill ORS 526.235:

"A state forest nursery may be operated by the forester and the board to provide forest tree seedlings to reforest forest land. Such nursery program is to provide for the growth, care, and maintenance of nursery stock and for the sale of such stock to private, state, and other public owners of forestland."

1973

The reforestation of the Tillamook Burn is completed. The state nurseries grow 72 million seedlings to enable 108,000 acres to be replanted of the 325 square miles reforested at a cost of nearly \$13 million.

1976

Phipps Nursery acquires an additional 65 acre lease to expand production. Total acreage is now 261 acres with about 170 farmable acres of 1.1 million feet of growing bed space or about 221 miles of nursery beds in 26 growing areas stretching more than a mile along the banks of the Umpqua River.

1978

ODF convenes a legislatively mandated task force to study the issue of the availability of seedlings for non-industrial private forest landowners in Oregon. Service Forestry director, Jim Brown, chairs the task force. As a result of the task force the Board of Forestry adopted several policies relative to the operation of the state nursery:

1. Raise and sell seedlings on a speculative and contract basis.
2. Grow multiple species and stock types from silviculturally proper sources of suitable seed zones and elevation bands for non-industrial private forest landowners.
3. Provide a reservation period exclusively for non-industrial private landowners to insure that seedlings can be obtained to complete planned reforestation projects.
4. Develop a seedling supply system featuring cold storage and refrigerated transport to various ODF district offices.

1979

A new 33,000 square foot seedling cold storage, sorting and packing buildings costing nearly \$1.5 million is completed and begins operation. The old packing plant is converted to an irrigation, carpenter shop, seed storage building. The Oregon legislature passes forestry bills to promote assistance to non-industrial private forest landowners. ORS 526.425, ORS 626.450-526.475. Oregon has 31 nurseries in operation. Annual forest nursery production about 110 million seedlings.

1982

A nursery soils task force recommendation concludes that the state nursery can improve soil management by recruiting a soils scientist. Oregon State University forms a reforestation co-operative for foresters and nurseries called the Nursery Technology Co-op. (NTC). ODF state forest nurseries (the Oregon and Phipps Nurseries) have grown 750 million seedlings.

1988

Oregon has 36 nurseries growing reforestation seedlings with an annual production in excess of 100 million seedlings.

1989

The processing plant is expanded to provide more space to handle grading and packing larger transplant seedlings.

1991

Oregon has 32 nurseries growing seedlings for reforestation. Demand for seedlings falls sharply. Small private nurseries object to the Phipps Nursery's surplus seedling street sales program. The state nursery responds with a policy of not selling ten or less seedlings in parking lots or cooler sales.

1993

Oregon has 28 forest nurseries. A small private nursery owner was concerned that the Phipps Nursery was unfairly undercutting the seedling market price. This issue was found to have no merit because the state nursery's seedling prices were found to be in the high to above average price range of the statewide market.

1996

Container nurseries from British Columbia, Canada begin to aggressively market plug seedlings in Oregon.

1999

Oregon has 24 forest nurseries. The US Forest Service closes the Bend Pine Nursery after 51 years of operation. Annual production for 1998/99 is less than 75 million seedlings. Competition from BC nurseries increases in Oregon. I.F.A. Nurseries question the state nursery's policy of growing and selling to contract customers.

2000

ODF's state forest nurseries (Oregon and Phipps) will have grown more than 1 billion seedlings or enough to replant over 2 million acres of Oregon's forest.

2002

Catastrophic freeze in October of 16° F. decimates Phipps crop. 75% of the crop is lost but is covered by insurance.

2003

State Forester convenes a task force made up of representatives from private nurseries, family forest landowners, and customers to examine Phipps Nursery's purpose. Task Force recommendations are:

- Phipps should continue to operate as currently established with the proviso that sowing plans should be reviewed periodically to reduce unnecessary duplication of stock normally and adequately provided by private forest nurseries.
- The ODF Nursery program should be reviewed periodically with the purpose of developing synergistic relationships with the private sector in an effort to cooperatively seek an optimum arrangement for providing the needed tree seedlings for reforestation on forest lands.

# APPENDIX III - Nursery Organization Chart

Shaded boxes are full time, permanent, Nursery positions currently filled.

**D.L. PHIPPS FOREST NURSERY  
ORGANIZATION CHART**  
Revised 1/27/04

