

FAMILY FORESTRY IN THE PACIFIC NORTHWEST: A LIFESTYLE OR A LIVING?

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ABSTRACT

Family Forestry is often synonymous with having made a lifestyle choice grounded in an appreciation of the beauty of nature while recognizing the responsibility of stewardship. Many owners also rejoice in producing a sustainable resource and understand the healthful contribution that working in the woods makes to their lives. Only rarely do they think of it as making a real contribution to supporting their families and themselves. Notwithstanding the personal importance many owners put on their forests, the economic viability of Family Forestry is threatened. The mammoth size and organizational clout of Industrial Forestry, consolidated mills and mega-scale retailing leave family foresters to the mercy of economic forces that they neither control nor fully understand. New and creative approaches are needed to meet this threat. Only by doing so will they be able to reverse a trend that involves a bleak choice between limiting Family Forestry to those who can afford a country estate for pleasure or treating it as a holding investment that will be cashed in when the right developer's offer comes along.

FAMILY FORESTS IN URBANIZING AREAS

The Road from Native Forest to Urban Sprawl

Historically the waters of Puget Sound provided a water highway for much of the region. The saltwater connected Olympia, Tacoma, Seattle, and Everett like pearls on a string. From their early beginnings as timber, agricultural and fishing communities these towns became diversified communities that now house and support approximately 3,657,000 people in a combined urban and rural setting. Most of this development has taken place since 1940. As a consequence it's not at all unusual to find family forest owners in the area who have experienced the transition from a life lived on forestry and logging and related occupations to one of manufacturing, retail trade and office work. Few of these families now make a sustainable living from forestry. If Family Forestry is to survive in this area, we will need to develop entirely new and innovative ways of dealing with the economics of our timberlands.

The Tribes of Family Forest Owners

Forestry is a unique economic endeavor. In a very real sense forestry involves the exercise of great faith that the efforts of today will be realized in a distant future. Few other human endeavors, including parenthood, require such commitment and resolve. Industrial and other large forest owners do that based on careful economic considerations. Family forest owners do so for more complex reasons.

Traditional Owners

Traditional Family Forest landowners are the archetypal forest owners. They often represent the pioneer families of the region, have the largest holdings, and are deeply involved in both the politics and social aspects of forest ownership. Most either inherited their land or, through some other mechanism, acquired it early in their lives. They often hold it with no particular intention to convert it out of forestry during their lifetime, though they may occasionally sell portions of it for economic or management reasons. As individuals and often as families, they often view forest ownership as an essential part of who and what they are. This group, more than any other, faces the problem of how to insure continuity of their forest to future generations. While many of these owners successfully pass on the love and value that they have in the land in ways that will insure that it remains in family forestry for many years to come, others are faced with problems of dividing the property among multiple heirs. Increasingly, the attractions of city life have resulting in their having heirs who are neither interested in nor capable of maintaining the family forest.

Investment Owners

These are forest owners who, after acquiring the land through inheritance or land sale, tend to see their forest as a raw land investment. They judge the value of their investment primarily on the basis of what land is selling for as real estate, and where they manage their forests at all, do so either with a view toward an incidental "last harvest" or as the foundation for a nice housing development. Lacking a better economic incentive to conversion, these landowners are likely to have very little involvement with their forest and indeed may have sound economic reasons for exercising limited forest stewardship.

Landed Gentry

These are forest owners who purchase their forestland for the recreational and esthetic values that it provides as a place to live. The major distinction between these owners and others is that they actually live, at least part of the time, on the land, are likely to manage it for many of the desirable values we see in sustainable forestry particularly wildlife and plant diversity but for the most part have limited interest in forest production. This group of forest owners runs the gambit from the ostentatiously wealthy estate owner to the retired schoolteacher who simply wants a cabin in the woods.

Dreamers and Idealists

These are the "back to fundamentals" forest owners. Having come into enough money to purchase some forest land, they see it as a refuge from the materialism and complexity of a modern world. They also live on the land and usually see doing so as central to their lives. They tend to be younger than the other groups, and are more likely to embrace lifestyle choices that involve living off the land. Less concerned about creature comforts and ease than other landowners, they are more likely to adopt living arrangements that involve innovative building materials and energy systems like solar or wind power. If they succeed in their efforts, these landowners may, over time, become traditional landowners, though the scarcity of available forest land and its

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high price are likely to require a different approach to traditional family forest ownership, particularly as regards the economic role that such ownership plays for the family.

COMMERCIAL VS. FAMILY FOREST INDUSTRIES

Large Landholdings, Including Public Forests

Large forest landholdings in Washington include Federal, State, Local Government and Tribal lands as well as several large industrial forest owners, making up approximately 81% of timber lands in Washington State and account for more than 70% of the actual timber harvested in recent years (Creighton, Baumgartner and Blatner, 2002). They easily dominate all aspects of the forest products industry from production to final sale of the finished product.

In combination with automated milling practices focused on 100% recovery of the biomass of the log, the development and extensive use of engineered wood products and the concentration of wood products distributors, large scale industrial forestry has significantly departed from compatibility with business characteristics found on most family forests.

Family Forests

Limited Landholdings

Though family forests represent approximately 20% of forestland not owned by industrial forestry in Washington State, a recent survey of forest owners (Creighton, Baumgartner and Blatner, 2002) indicated that approximately 59% of these holdings were less than 19 hectares (46.94 acres). In areas under urban pressures the size of these holdings tends to be smaller. Smallholdings set a definite upper bound to the return that a family forest owner can expect to get off his land in terms of harvested timber. For example if we assume a reasonable harvest of 25,000 BF per acre, stumpage of approximately \$350 MBF and the maximum forest size of 19 hectares, a landowner could hope to get a gross return of approximately \$410,725 every 50 years or so. Such a return represents approximately \$8200 for each year, and hardly results in a "living wage" or impressive return on capital invested. This reality suggests both that family and farm forest owners have reasons other than the value of timber production for their ownership and that any increase in the economic value of their forest will depend on something other than simply managing a dominant species forest.

Forests Diversified

Forests of the Pacific Northwest are naturally diverse. Though we have large stands of Douglas-fir (*Pseudotsuga menziesii*), western hemlock (*Tsuga heterophylla*) and western red cedar (*Thuja plicata*), natural developments and succession of our forests can create a significant intermixing of tree species. Though usually discouraged in heavily managed stands, less desirable species may actually prove to be prizewinners on the economic front. This has certainly been demonstrated with the red alder (*Alnus rubra*), whose excellent characteristics as a furniture wood have recently been recognized by the marketplace, and with figured bigleaf maple (*Acer macrophyllum*), where the visually stunning characteristics of the lumber from that tree have resulted in unimagined economic returns for those who have even a few good sized trees on their property.

A diverse forest is a healthy forest. It may well be that a diverse forest is also an economically appropriate way to view the investment that family forest owners are making because such a forest spreads the market risk associated with a particular species, and all species have some risk, by diversifying the portfolio. It can be argued that family and farm forest owners are better able to

exercise such diversity in their forests because they are able to more intensively manage their forests at the level of a small stand.

Prescriptive, Intensive Management

Though large forest owners have an advantage in the market place based on their ability to spread their risks out across multiple harvests and gain economy of scale when it comes to harvesting and shipping costs, managing a small forest also has its advantages. A small forest allows the owner to shift management strategies quickly in response to opportunities, particularly if the forest has a somewhat diversified tree species. One example of such flexibility is when small forest owners who were growing bigleaf maple and red alder, primarily as fuel wood, were able to capitalize on the newly recognized value of these trees as veneer and furniture stock.

As Family Forest owners, our chief advantage is a more intimate understanding of conditions in our forest. Our observational task is significantly smaller and with some training we're likely to have a far better understanding of exactly what is happening within a stand than would the manager working for a large timber company. In many cases we may be aware of the condition of individual trees or clumps of trees. We can quickly recognize and deal with a disease pocket by early selective harvesting and shifting the species in that pocket.

Social Recognition of Small Forest Ownership

Encouraging small forest ownership has environmental, social and cultural value that is well recognized, and often supported. In Washington state the value of family forests have been recognized in substantial ways, including land use planning that recognizes the unique value of retaining private forest land, favorable property tax status for those who actively manage woodlands, special accommodation in environmental regulatory issues that recognize the unique problems of owning small forest parcels, publicly funded educational opportunities for small forest landowners, and government funded assistance from professionals in forestry and wildlife management. Family and Farm Forest owners have also developed their own organizations such as the Washington Farm Forestry Association (WFFA) to represent their interests in governmental and industrial forums. Such organizations serve educational and social functions as well. Industrial forestry also provides significant financial and other support to small forest owners, in part because Family Forests do provide a significant amount of timber resource, but also because in many ways we have similar interests.

ESTABLISHING AND MAINTAINING VALUE

Up to this point we have discussed some of the characteristics of family and farm forestry. The remainder of the paper will be devoted to an examination of some of the elements that a new, and hopefully more effective, business model of family forest ownership might contain.

The Real Meaning of Sustainability

Perhaps the first element of a new business model for small forest owners needs to be a broader definition of the term sustainability. Historically, forest sustainability has meant the repeated ability to harvest a desired species of trees. Such a definition has limited value to a family who, because of its objectives or the size of its holdings, may only harvest once in a generation or perhaps not at all. A broader definition would be based on the sustainability of the forest as an entity that perpetuates the objectives that the owner has set. A sustainable family forest must recognize that, like markets, objectives can change. For the family forest owner sustainability is a process not an outcome. It includes, where

necessary, economic return that allows the owners to remain in family forestry. It also recognizes the fact that, though a family forest may not pass from one generation to another within the same family, it needs to be managed in a way that allows the forest characteristics so long valued by the family to pass from one owner to another, even if this happens through an open sale.

A recent survey of small forest owners in Washington State (Creighton, Baumgartner and Blatner, 2002) indicated that 44.7% of the respondents said that one of their reasons for ownership was as an investment for future resale of the land. The management strategies used on these properties range from doing nothing to intense activity. When active management is used owners have every right to expect that the effort will be reflected in the eventual selling price. Under a forest industry business model this added value would be reflected only by an increase in timber volume as established by a timber cruise. An improved business model for Family Forestry would account for all the efforts that the owner has made to bring the forest to its present condition. Elements of an improved business model for Family Forestry would include;

- a well designed and continuously updated Forest Management plan,
- accurate records of all efforts made to improve the forest including, but not limited to, silviculture, wildlife and ground cover enhancements,
- supporting systems to verify the completion of significant management actions on individual trees or stands, particularly those with potential long term value that are difficult to verify over long periods of time such as pruning and fertilizing,
- records of any non-timber income producing activities, e.g. special forest product sales, hunting leases, and government assistance,
- records and contact information for consultants, loggers and others who are familiar with the property with appropriate information on quality of their work.

The objective of these elements is to provide a new owner not only with records that substantiate the real value of the land and its forest resources but also to provide a seamless transition into ownership. Such a seamless transition from owner to owner, whether within a family or among total strangers, is a fundamental necessity of family forest sustainability.

Developing a Quality Assurance Forestry Model for Family Forestry

In response to changes in the way that houses are being built, the industrial forest business model has changed in recent years. The industry model now favors earlier harvests, smaller diameter logs, and production that favor lower quality framing lumber, chips and fiber rather than structural lumber (Eastin, Shook and Fleishman, 2001). This drift by industry away from high quality, cut lumber appears to be well entrenched and is likely to continue for a number of years because of its compatibility with mill automation. The shift in emphasis may provide a real opportunity for small forest owners prepared to meet consumer demands through a business model that emphasizes high quality wood products.

If a small forest owner is able to adopt a business model that allows him to avoid the constraints of the industrial forest system, the value of the timber on his land is governed less by the limitations of large volume markets and more by his ability to add value to the product through his own efforts. This will obviously include normal silviculture techniques such as pruning

and thinning. It may also include lesser recognized, management techniques such as the planting and propagating specific strains of trees with specific, desirable genetic characteristics. It may even include manipulation of tree components to encourage desirable shapes, structural properties and appearance. A great deal of research and experimentation needs to be done to meet these requirements. If the past is any indication, we can expect that individual forest owners whose curiosity and creativity drive them to trying new techniques will lead this effort. To be useful these efforts will need to be supported by the following elements:

- A Forest Management plan that specifically identifies the objective that is being sought as well as provides detailed information on the management technique being undertaken.
- Detailed records of the application of each management action taken.
- Careful selection and marking of trees that are to be included in special quality enhancement projects.
- Permanent identification and protection of trees included in special quality enhancement projects to prevent premature or accidental cutting or harvest.
- Maintenance of good records to support these activities in the event that ownership of the property takes place before harvest takes place.

Whether using well established silvicultural techniques or experimental approaches, owners who choose to make a significant labor or financial investment in building quality in their trees face a unique problem. To substantiate the effort it will usually be necessary to establish a way to reliably identify the trees involved 40 to 80 years after the action has actually taken place. While technological solutions to the problem can be proposed and are being developed, the authors are unaware of any good system to do this, in forestry or any other comparable industry.

Dealing with this problem will require the development of special strategies, techniques and technologies including:

- Keeping contemporaneous, sequential records of work done in the forest as part of the permanent business records of the property. This may involve techniques similar to those used in laboratory settings where lab books with numbered pages are used to record experiments.
- Marking and identification of specific trees that have received management treatments
- Third party record keeping through either government agencies or forestry related organizations such as the American Tree Farm System or local Forest Stewardship Program sponsor.
- Eventual development of self-verifying records. One example of such an approach would be to combine Radio Frequency Identification Device (RFID) tag unique identifier information (Wilson, Hoyt, St. John, and Diamond, 2001) with Precision Global Positioning System (GPS) time information and linking the date, time and management practice back to the RFID tag. When it is read (perhaps 80 years in the future when the tree is cut) tag information would show all management actions that had been taken and the dates they were done.

Utilization of The Forests, Not Just The Trees

The previous section dealt with some of the underlying considerations of business models specifically intended to provide the family forest owner with a viable approach for improving

economic return from the trees in his forest. Even if a forest owner does not intend to harvest trees in the foreseeable future other economic opportunities are available to him. In addition to the timber, most small forests have at least small quantities of special forest products. These include: floral greens; medicinal plants, edible berries; edible, medicinal and special use fungi, Christmas greenery and Christmas trees; craft material; special wood products such as figured wood, burls and uniquely structured wood; and landscaping materials. Landowners can often harvest these materials repeatedly within the rotation schedule of his trees and, when coupled with local "value added content" such as craft manufacturing or processing, they can provide a good profit from what would otherwise go "unused."

Incidental income from family forest land need not be restricted to the products being grown on the land. Other potential sources of income include granting the exclusive opportunity to hunt, fish, camp, or gather other forest materials in a picturesque or desired portion of the property. Another possible source of income may be found in either matching funds to conduct management practices having public value such as the creation of snags, installation of bird boxes and similar wildlife related activities. Where the owner's objectives for the property would be compatible with them, it may also be financially beneficial, either as a tax advantage or direct payment, to withdraw some of the land from timber production and put in a temporary or permanent conservation, trail or recreation easement.

It can be said that the future is a land of mist and opportunity. Many potential economic opportunities for family and farm forestry remain to be discovered. One example lurking on the horizon is the possibility of leasing growing trees to fossil fuel energy producers. Since the trees sequester carbon, they could be used to offset CO₂ emissions from these producers.

Marketing Strategies for Family and Farm Forestry

Selling timber products on a wholesale market that is based on Industrial Forest practices may not optimize the economic returns that family forest owners. The influence that large timber producers wield in the wholesale market suggests that distinctly different approaches need to be examined for ways that small forest owners can use their unique characteristics to optimize their profits.

Direct Use and Selling

The first and ultimately most profitable approach for the small forest owner to make money is to sell his products to himself. If he has a need and an ability to use the products of his own land he is insured of a return that greatly exceeds anything he could expect on the open market. By doing so he effectively puts into his own account most, if not all, of the overhead costs associated with acquiring any product, be it lumber to build house, a bookcase or a Christmas wreath to send his in-laws. In addition he gains personal satisfaction from the exchange and often gets a higher quality product.

Once the personal needs for forest products have been met the small forest owner may consider direct sales to the end user. Doing so requires that the owner invest time and energy in the process but results in the forest owner receiving all profits that would normally go to various middlemen, with the exception of appropriate tax levies. Such direct sales often take this form: "I've decided to harvest a few trees. I intend to have them milled if you know anyone who is looking for rough cut lumber..." Such informal contacts both eliminate many of the costs associated with marketing and, in an increasingly disassociated world, help to cement social and community relationships.

Other traditional and non-traditional outlets that a family or farm forest owner might use to sell his products are farmers markets, roadside stands and over the Internet. These outlets are often more suitable for finished products such as Christmas wreaths, handcrafted fine or rustic furniture, berries, edible fresh or dried mushrooms and craft products than larger wood products, but they have the advantage of "value added" processing. Overhead expenses are minimal though they are generally greater than with direct personal sales, as are the unrecorded costs associated with staffing a booth or responding to Internet sales.

A Special Place in the Marketplace

Underdeveloped markets for Family Forestry products are the local lumberyard and florist. Developing these potential markets involves producing a high quality product at a reasonable cost and developing a business relationship with retailers that will encourage sales of that product. A useful model for developing such a market has been the development of organic food movement from highly specialized and limited markets to mainstream grocery stores. Such a model could be adapted to lumber made from timber harvested on family forests. Doing so would have the added benefit of demonstrating that the production, harvest, and processing of sustainable forest products from locally owned forests is environmentally responsible forest management and use.

Developing and Using Strategic Alliances

The business model used by large forest owners is not limited to the way that they manage their forests. It is part of an integrated system of production, processing, distribution and marketing. Developing successful business models for family forest owners will depend on the same sort of integration.

One of the major challenges for maintaining a small forest is the need to use logging techniques that minimize the impact of the logging operation. Family forests owners have a great reluctance to conduct a clearcut harvest, especially if they are residing on the land. The specialized skills, techniques and equipment required for effective, small scale logging, suggest that a system to independently support Family Forestry operations would involve development of specialized loggers who focus their business primarily on working with harvests in small forests (Hull, Roberson, and Buhyoff, 2004)

Another challenge to obtaining good value from timber harvested on small forest properties is developing ways to get the lumber milled without excessive transportation costs or unacceptable mill specifications. One way to do this is through the use of local mills or portable ones that can be brought to the harvest site. Experience with these mills in other parts of the country suggest that, if properly managed, they can provide the most suitable cut of any log, result in the highest quality product, and turn a profit as well.

Once the timber has been felled and cut into lumber the remaining need is for development of marketing, distribution and sales outlets. Attempts in this area include the development of co-operative organizations of forest owners who combine, at least some of their resources, to obtain specialized professional help and to increase their influence on potential markets. Several feasibility studies are presently underway in this region (Family Forestry Foundation, 2003) to help determine if forest co-operatives are practical here and if so what form they might take.

Less formal associations among family and farm forest owners have a long history, particularly in the areas of education and representation of forest owners' interests to state legislatures and local governments. Organizations such as the Washington Farm Forestry Association, American Tree Farm System, Forest

Stewardship Council and others provide valuable social and informational networks to forest owners who might otherwise feel they are very much on their own. These organizations provide an essential building block for the creation of a strong, vigorous and sustainable Family Forestry community by bringing people with common problems together, helping them develop the technical skills needed to address their problems, and providing them a forum for doing so.

CONCLUSIONS

Throughout this paper we have attempted to describe the significant differences between the ways that Industrial Forestry and Family Forestry function in the marketplace, and to examine the disadvantages that this presents to the small forest owner. The point has not been to suggest that there is some conspiracy between large forest owners, mills and government agencies to deny Family Forestry the best return on its timber because we do not believe that such a conspiracy exists. Whatever disadvantage Family Forestry has in the marketplace is more likely a result of the fact that it represents multiple and diverse management objectives. Family Forestry is competing in a market driven by processes that function most efficiently for those who have lots of timber to sell, the ability to amortize a specific sale over a number of such sales, and the flexibility to work with large components. In the march from timber to finished product Industrial Forestry needs to insure itself a reasonable profit, and considerable negotiating power due to the magnitude of wood it can offer. All of which suggests that Family Forestry might well consider the desirability of creating a specialized market structure for their products, which would not place them in direct economic competition with large forest owners.

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