

Editorial

The Need for Comprehensive Planning and Budgeting in Ecosystem Management

As you know, the trend towards ecosystem management is gaining strength and will undoubtedly change the way in which natural resources are managed. It's still early, but the Clinton Administration has given strong signals that they favor an ecosystem approach to natural

resource management - especially restoration projects such as replanting riparian areas and forest health.

Restoration planting projects will generate a demand for a wide variety of plant materials, and forest and conservation nurseries are both willing and able to meet this demand (see Proceedings, Western Forest Nursery Association in Special Publications section). However, one of the most

Year	Activity	Months											
		J	F	M	A	M	J	J	A	S	O	N	D
One	Planning				•	•	•	•	•	•			
	Collect Seed									•	•	•	•
	Stratification											•	•
Two	Stratification	•	•	•	•	•	•	•	•	•	•	•	•
	Transplanting		•	•	•	•	•	•	•	•	•	•	•
	Growing				•	•	•	•	•	•	•	•	•
Three	Growing	•	•	•	•	•	•	•	•	•	•	•	•
	Hardening					•	•	•	•	•	•	•	•
	Shadehouse									•	•	•	•

serious disadvantages of using nursery stock is the high initial cost - where is the money going to come from? Many government organizations have no established funding source for purchasing and planting non-commercial species; for example, the budget for nurseries and reforestation in the USDA Forest Service is closely tied to commercial timber sales. One proposal is to establish an "ecosystem management fund" using receipts from salvage timber sales, and the Forest Service has projected that \$30 million could be used for ecosystem restoration projects. Other potential funding sources include initiatives for \$246 million over the next four years to promote tree planting in urban areas and nonindustrial forest land, and \$170 million for international programs, some of which would be used to reforest degraded lands.

Just as serious as the lack of established funding sources, is the need for good long-range planning. Many program administrators just don't understand that forest and conservation nursery stock is not an "off-the-shelf" item. As you know only too well, even after a seedling order is received it takes time to plan, order the seed, and stratify it even before it can be sown in the nursery. Many propagation schedules for the diverse species that will be used in ecosystem management projects take as long as 3 years (Figure A). One possible solution to this dilemma is multi-year contracts. Growing contracts that extend across fiscal years are irritating to contracting officers or budget analysts, but they make sense from an ecosystem management standpoint. Multi-year growing contracts also result in lower seedling cost and higher seedling quality. As nurseries become more proficient in growing a given species or stock type, per-unit costs will go down and seedling quality will go up. "Grow-and-plant" contracts, in which a nursery does everything from collecting the seed to outplanting their seedlings, make good sense from an ecosystem management standpoint and should also be more widely used.

Nursery managers also need to take more time for planning and marketing. Issues like biodiversity and ecosystem management mean that nursery managers will no longer just be dealing with traditional reforestation personnel. A variety of different resource professionals will be needing plant materials, so nursery managers will be communicating with wildlife biologists, recreation specialists, and other new, inexperienced customers. Nurseries that can provide a full range of services from seed collection and processing to seedling storage, and outplanting will also receive more business. Natural resource managers are specialists who do not want, or have the time, to work with a series of different businesses and so will prefer to work with one full-service facility.

The trend towards ecosystem management will change the way that forest and conservation nurseries interact with their customers. Successful nurseries will become proactive and devote a significant amount of time to marketing their products and services and establishing better communications with natural resource managers and planners.

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