State Policies Addressing Agroforestry

by

Agus I. Rahmadi¹, Bruce E. Cutter², William B. Kurtz², Sandra Hodge²

ABSTRACT

In 1995, a nationwide survey of state-employed natural resource professionals in the United States was conducted to determine existing state legislation and programs pertaining to agroforestry. At that time, 30 states had no legislation that could be identified as pertaining to any of the five major agroforestry practices. Nine states had direct legislation specifically referring to one or more agroforestry practices, while the remaining 11 states had indirect legislation that could be construed as pertaining to agroforestry. Cost-sharing was the most commonly employed incentive in the direct legislation states and windbreaks were the most common practice in those states. Tax incentives and cost-sharing were the most favored approaches in the 11 states with indirect legislation.

INTRODUCTION

Agroforestry in all its varied forms has been an accepted land management practice in tropical regions for many years, if not centuries. However, the adoption of any or all of the forms of agroforestry in temperate regions such as the United States has been slow at best. Often, the reluctance to adopt new (or what are perceived to be new) agricultural practices -- such as agroforestry -- is assisted by the reluctance of governmental agencies -- both state and federal -- to support these practices. While federal legislative policies (Conservation Reserve Program--CRP, Stewardship Incentive Program -- SIP, Forestry Incentives Program -- FIP, Agricultural Conservation Program -- ACP, Environmental Easement Program --EEP, etc.) are usually readily apparent and uniformly applied, adoption and implementation of similar policies at the state level varies widely.

Ellefson et al. (1996) identified 38 states with various forms of forest regulatory programs. The focus of regulation is usually non-point source of water pollutants. Ten states were identified as having comprehensive forest practices regulatory programs. The legislative intent of these laws is to protect forest soils, fisheries, wildlife, water quantity and quality, air quality, recreation and scenic beauty while at the same time maintaining an economic atmosphere that is positive to healthy wood-based industries. All 10 states have developed detailed rules that describe permit application procedures and forest practice standards and related restrictions. Provisions are also made for site inspections, enforcement procedures and penalties for violations. In addition, since, 1989 almost all states having comprehensive forest practice laws have revised their practice rules, generally making them more focused and more intent on protecting natural resources (Ellefson et al., 1996).

Nair (1995) asserts that agroforestry is compatible with the non-common themes in the United States for sustainable agriculture, environmental protection, ‘green’ consumerism, new forestry, rural-urban interface and buffer-zone management, land stewardship ethics and carbon sequestration. Agroforestry directly addresses key issues such as soil erosion, water quality, wildlife habitat, field and landscape buffer zones, rural economic diversification, land retirement, ecosystem management, and rural/urban interface conflicts (Rietveld, 1995). However, translating the perceived desirable benefits of adopting agroforestry practices into reality requires research, communication, and institutional and political support (Henderson, 1991).

Widespread adoption of agroforestry requires that appropriate policies and effective program

¹ Planning and Programming Division, Planning and Programming Division, Directorate General of Reforestation and Land Rehabilitation, Ministry of Forestry, Bogor, Indonesia.

² Associate Professor of Forestry, Professor of Forestry and Research Assistant Professor respectively, 1-30 Agriculture Building, University of Missouri-Columbia, Columbia, MO 65211.
strategies be implemented (Cubbage et al., 1993). Furthermore, for a program to be implemented successfully, the underlying policy must be well-defined, logical, enjoy political support, have sufficient resources, be administratively simple, and have the support of the responsible administrative unit (Ellefson, 1992).

The research presented in this paper was conducted to identify, assemble and evaluate state-level legislative policies in the United States that involve one or more parts of agroforestry as defined in 1994 for the then USDA Soil Conservation Service (Committee on a Comprehensive Assessment of U.S. Agroforestry, 1994). These are alley cropping, forest farming, riparian buffers, silvopasture, and windbreaks (also referred to as shelter belts).

**METHODOLOGY**

In the summer and fall of 1995, a questionnaire was mailed to at least two potential contacts in each of the 50 states requesting information regarding any legislation pertaining to agroforestry. These questionnaires were directed to agencies and/or personnel involved in agricultural/forestry/natural resources programming. In many states, responsibility for such activities might reside in one or more agencies. There were three actual questionnaire mailings as well as one reminder letter and several follow-up telephone calls. This resulted in a 100% response rate -- all 50 states responded.

The questionnaire used was open-ended with three sections: data source, description of the law, and implementation of the law and/or program. The data source was simply the contact person/agency who responded to the questionnaire. The description of the law asked for information such as the title, reference, administering agency, and the purpose and provisions of the law. Respondents were requested to send a copy of the law as well. The section dealing with implementation asked for the name of the program or practices, what methods and procedures were used in implementation, the applicability of the law, any penalties associated with the law, and finally, how many participants were involved, how much acreage, and how many dollars were being spent. These state-level agroforestry legislative initiatives were further categorized as either “direct” -- law or section of a law directly devoted to agroforestry or as “indirect” -- legislation not specifically devoted to agroforestry; but which could encourage practices such as tree planting.

**RESULTS**

As mentioned, responses were received from all 50 states. Thirty of these had no legislation that could be either directly or indirectly related to agroforestry practices. Nine states had direct pieces of legislation while the remaining 11 states had indirect pieces of legislation. Two direct legislation states, Nebraska and South Dakota, and one indirect legislation state, North Dakota, had two separate laws related to agroforestry practices. The purposes of the legislation are summarized in Table 1. Specific information about each piece of legislation is available from the authors.

**Direct Legislation** -- The most popular practice under the direct pieces of legislation was windbreaks or shelterbelts with eight states reporting their use (Hawaii, Indiana, Iowa, Maryland, Missouri, Minnesota, Nebraska, and South Dakota). Alley cropping, also referred to as strip-cropping, was specifically referenced in five states: Iowa, Maryland, Missouri, Nebraska, and Virginia. Riparian buffers, sometimes referred to as vegetative buffer strips, were practices in four states: Iowa, Maryland, Minnesota, and Virginia, while silvopasture was a named practice in four states: Iowa, Missouri, Minnesota, and Virginia. Two states, Missouri and Virginia, had direct legislation referring to forest farming while three states encouraged critical area planting and field borders; Iowa, Maryland and

<table>
<thead>
<tr>
<th>Number of states</th>
<th>Purpose</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Agricultural diversification</td>
</tr>
<tr>
<td>2</td>
<td>Air quality</td>
</tr>
<tr>
<td>2</td>
<td>Conservation</td>
</tr>
<tr>
<td>6</td>
<td>Forest management</td>
</tr>
<tr>
<td>2</td>
<td>Marginal land removal</td>
</tr>
<tr>
<td>3</td>
<td>Natural resource protection</td>
</tr>
<tr>
<td>5</td>
<td>Soil erosion</td>
</tr>
<tr>
<td>8</td>
<td>Water quality</td>
</tr>
<tr>
<td>5</td>
<td>Wildlife habitat</td>
</tr>
</tbody>
</table>

Table 1. Summary of purposes of legislation. Some states have omnibus bills with more than one purpose.
Nebraska.

All nine states that had direct legislation provided technical assistance and education to landowners. Eight of these states provide some cost-sharing: Hawaii (50%), Iowa (75%), Maryland (87.5%), Missouri (75%), Minnesota (75%), Nebraska (75-90%), South Dakota ($50 to $125/acre), and Virginia (75%). Indiana provided a tax reduction by assessing certified windbreaks at only $1 per acre. Missouri and South Dakota also provided annual payments to landowners: Missouri for alley-cropping while South Dakota pays landowners $5 per acre for certified shelter belts.

**Indirect Legislation**—Of the 11 states that had some type of indirect legislation, four of them provided cost-sharing: Illinois (75%), Mississippi (75%), New Mexico (not specified), and Utah ($75 per acre). Delaware, Michigan, New Jersey, North Dakota, and Wisconsin provide assistance in the form of tax reductions while New Mexico and North Dakota also provide assistance with seedlings. New York has a specific regulation dealing with ginseng commerce which ties to forest farming. Washington has a law pertaining to coordinated resource management on state-owned agricultural and grazing lands.

**Specific examples**—To aid in understanding what some of the states do, two specific examples will be presented: one from a direct legislation state, Missouri; and the second from an indirect legislation state, New Jersey.

In 1990, Missouri passed the Missouri Economic Diversification and Afforestation Act (Missouri Revised Statutes Ch. 253.300-253.333). The act was then amended in 1993. The legislation has three purposes: to complement the federal CRP, to encourage soil conservation, and to encourage diversification of Missouri’s agriculture base through implementation of agroforestry practices. The policy is administered by the Missouri Department of Conservation and includes up to 75% cost-sharing and annual incentive payments for alley-cropping. Lands which already had been placed in the Conservation Reserve Program and lands with an Erodibility Index (EI) of 8, as determined by USDA-NRCS, are eligible for inclusion in the program for a period of 10 years. The practices that are permitted include alley-cropping (trees and row crops), silvopasture (trees and forage), forest farming (trees and alternative crops such as ginseng or other medicinals), and shelter belts or windbreaks (trees and horticulture crops).

This legislation has also been instrumental in the establishment of several forest farming operations where the production of medicinal crops such as ginseng, goldenseal, and purple coneflower is the objective. There are several other locations in the state where landowners are grazing cattle under pecans (Carya spp.). These are in areas where nut production from the trees is the principal interest.

The New Jersey legislature first passed the Farmland Assessment Act in 1964 and amended it in 1986. As an example of indirect legislation, this act was intended to enhance benefits from woodland (air and water quality, wildlife habitat) and to eliminate excessive cutting. The act is administered by the Bureau of Forest Management and provides for reduced taxes.

**CONCLUSIONS**

We found that 20 states had legislation in 1995 that pertained either directly or indirectly to agroforestry. Direct legislation was extant in Hawaii, Iowa, Maryland, Missouri, Minnesota, Nebraska, South Dakota, and Virginia. The states of Delaware, Illinois, Michigan, Mississippi, New Jersey, New Mexico, New York, North Dakota, Utah, Washington and Wisconsin had indirect effect legislation.

Under direct legislation, most states provide some type of cost-sharing for approved practices while tax reduction and cost-sharing were favored in the 11 indirect legislation states. Windbreak or shelterbelt planting was the most common agroforestry practice in the direct legislation states. While 18 of the states provided incentives to encourage or achieve their states’ particular objectives, New York and Washington -- both indirect legislation states -- enforce regulations to achieve their goals.

**Acknowledgements**

The authors wish to acknowledge the assistance of Daniel Cassidy, currently with the Missouri Farm Bureau, Jefferson City, MO in developing the questionnaire.

**Literature Cited**

Committee on a Comprehensive Assessment of U.S. Agroforestry. 1994. Agroforestry: an integrated land-use management system for production and farmland conservation. USDA SCS 68-3A75-3-134. Columbia, MO 58pp


