

Forestry in Japan has Similarities to PNW

BY ROBERT L. DEAL

Japan is truly a land of contrasts. This relatively small island country boasts one of the world's biggest economies and includes densely populated urban areas like Tokyo and Osaka with high-rise buildings and ultra-modern bullet trains. Japan also has farmlands and large upland forests and national parks. It has ancient traditions of forest management, but struggles to reconcile conflicts between modern urban and rural lifestyles. Different land use pressures in Japan are similar to urban/rural conflicts in the United States, and forestry issues in Japan have similarities with forest management here in the Pacific Northwest.

Forests cover nearly two-thirds of the total land area of Japan with approximately 60 million acres of forestland, 45 percent of which is in plantations. Forestlands dominate on steep hillsides and mountain slopes, and include both conifer plantations and natural mix-



tures of broadleaf and conifer species. Plantations are managed on more than 25 million acres in Japan and were established on a commercial scale following the World War II reconstruction. The most important plantation species are Japanese cedar or sugi (*Cryptomeria japonica*), Japanese cypress or hinoki (*Chamaecyparis obtusa*), Japanese larch (*Larix leptolepsis*) and Japanese pine. Hinoki is used for high-quality timber for palaces, temples, shrines and baths. Sugi is the national tree of Japan and is favored for all types of construction as well as interior paneling.

Approximately 60 percent of forestland is privately owned, 30 percent owned and managed by the government, and the remainder owned by cooperatives, shrines or temples. Much of the private land includes family forest landowners, a similar pattern as here in the United States. Some prefectures (similar to our counties) have large areas of government-owned forests and include more rural areas such as the Hokkaido prefecture. Other prefectures, such as Aomori, Iwate and Akita, produce relatively large amounts of forest products.

A significant portion of these forest



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A forest owner and manager near Mt. Fuji, Japan, discuss how to manage hinoki and sugi plantations to produce high-quality lumber.

plantations are mature or close to maturity: Almost 60 percent of the total plantation land area is more than 30 years old. Forest management in Japan is intensive with several thinning practices needed to produce high-quality lumber. Forest plantation expenses for site preparation, planting, weeding, pruning and thinning have more than doubled in the past 15 years, while stumpage prices for typical plantation species such as sugi have declined by almost half. This makes Japanese forestry difficult to be profitable.

The economic challenges for forestry has been further magnified with the global economic downturn as recent harvests have significantly declined, causing problems throughout the Japanese wood products industry. In 2000, round wood production totaled approximately 640 million cubic feet, down from about 1.7 billion cubic feet in 1965. In 2001, Japan's nearly 12,000 sawmills processed 17 million tons of logs, yet domestic production met less than half of Japan's total demand for lumber and pulp wood.

During the 1980s and 1990s, Japan became more reliant on imported wood to supply its domestic demand.



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Japanese forest researchers walk through a dense hinoki forest plantation in Japan.

In 2000, Japan imported \$13.3 billion in forest products, second only to the United States. Currently, Japan is one of the world's largest importers of softwood lumber.

The United States is the sixth largest exporter of wood products to Japan; the top three exporters are China, Malaysia and Canada, respectively. The Pacific Northwest (Washington, Oregon and Alaska) includes the three largest exporting states from the U.S. to Japan. However, there has been a 15-year decline in U.S. wood export to Japan, which includes a dramatic decline in exports of logs and lumber from the Pacific Northwest. In 1989, the Puget Sound region exported 2.4 billion board feet of logs and 1.1 billion board feet of softwood lumber to Japan. In 2008, these export totals were only 460 million board feet of logs and 97 million board feet of lumber. Most of this lumber is used in the residential market, with traditional Japanese post and beam construction accounting for three-fourths of the Japanese softwood lumber market. Douglas-fir has been a preferred lumber species; however, European products such as whitewood and redwood glulam have slowly eroded its market share.

Japan puts a great deal of emphasis on the protection of forest functions, and the important role of forests in maintaining critical ecosystem services is commonly accepted by the public. Japan is a mountainous country with heavy rainfall and seasonal flooding. Forests provide important functions to reduce landslides, prevent erosion, and provide high-quality water for drinking and irrigation. Rice has been the staple crop of Japan for hundreds of years, and rice paddies often occur in hillside terraces directly below forest stands. The Japanese are also quite concerned with air and water pollution. Forests and parks are widely used for recreation. However, in contrast to the USA, timber harvesting is allowed in most national parks. Japan also has serious problems with invasive species and forest insects and diseases. Invasive species are a global problem and Japan's international trade has created many opportunities for new pests to become established. Currently, one of the major concerns is an introduced beetle from North

America that has killed large areas of native Japanese pine.

In summary, Japan is a modern industrialized country with an economy closely associated with global international trade. Forestry in Japan shares many of the same opportunities and challenges that we have here in the Pacific Northwest. Forestlands include both private and publicly owned forests with many family forest landowners who have highly varied management objectives. Plantations tend to be native species and forests are well managed with the production of high quality wood products. Forests in Japan are recognized for the broad suite of goods and services that they provide to the public. The wood products industry, however, is increasingly challenged by international markets. Japan recognizes the value of its forests, but is struggling to reconcile some of the competing demands for the good and services that come from these forestlands. •

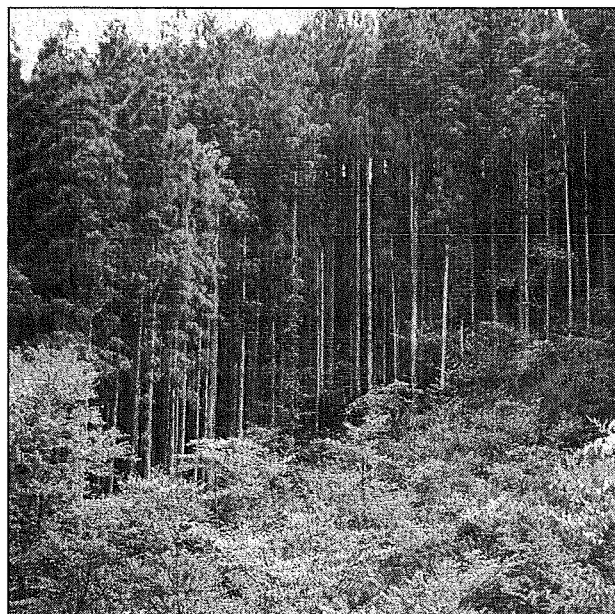


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A view through a small forest opening of a 40-year-old sugi plantation on Shikoku Island, Japan.

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