

# *forest* **GUILD**

## Position Statement:

### **High-Yield Production Forestry**

Approved by the members Summer, 2000

Escalating population and per capita consumption are causing a steady increase in demand for lumber and paper, creating unprecedented pressure on forests at a global scale. This demand is being met by exploitation of the world's remaining primary forests, harvesting of secondary forests, and by the proliferation of high-yield production forestry.

High-yield production forestry is based on single-aged forest stands managed to produce high volumes of wood fiber on short rotations. High-yield production stands are typically established by planting or artificial seeding, but in some regions stands of natural origin may also be managed on a high-yield production basis (e.g., Northeastern Spruce-Fir). A defining characteristic of high-yield production stands is that the structure, composition and processes found in natural forests are largely absent or significantly altered due to the use of short rotations, herbicide control of competing species, tree spacing control and fertilization.

Broadly applied high-yield production practices have the potential to satisfy an appreciable portion of the world's present appetite for timber. By concentrating high yields on fewer acres, high-yield stands can potentially reduce pressures on natural forests.

However, high-yield production forestry is not without concerns and costs. Impacts of high-yield management can include simplification, fragmentation and conversion of natural forests, loss of biological diversity, depletion of soil productivity, and degradation of water quality due to combinations of practices such as large-scale clearcutting, application of chemicals, and draining of wetlands. Furthermore, high yield production forestry should not be regarded as the only tool available to address issues of demand. Foresters must explore approaches to moderate per capita consumption and address population growth rates in an effort to reduce escalating pressures on our natural resources.

The Forest Guild advocates the maintenance and enhancement of natural forest ecosystems through silvicultural practices that are compatible with the long-term ecological integrity of the forest. The Guild believes that natural forest management should be the predominant mode of forestry within an eco-region or landscape.

When circumstances dictate the use of high-yield production forestry, the following factors should be considered in the establishment and maintenance of such stands:

- High-yield production forestry should complement the management of, reduce pressures on, and promote the restoration, management, and protection of natural forests;

- Former agricultural sites and degraded forest sites are preferred to sites with well-developed natural forests for establishment of high-yield stands;
- There should be no significant impact to wetlands and other water resources;
- The use of exotic species should be limited to those that will not invade natural forest areas;
- High-yield production should be located so as to minimize fragmentation of natural forest and loss of habitat connectivity; and
- Stands with natural forest characteristics, including composition, structure, diversity, and ecological processes should predominate at the landscape level.

The Guild recommends the following as examples of practices that may be employed within high-yield production stands to enhance biological diversity, forest structure, and processes:

- Retain remnants of the natural forest community, such as intact soil organic matter, coarse woody debris and large old or dead and dying trees to aid in post-harvest recovery and maintain a component of forest complexity;
- Plant regionally-indigenous species;
- Diversify the number and genetic composition of species within stands;
- Minimize the use of chemical pesticides, such as herbicides, insecticides, and fungicides and/or include no-herbicide strips or blocks, and
- Diversify the size, distribution and age classes of high-yield stands at the landscape scale.

Ultimately, stabilizing global population and consumption of forest products will be necessary to conserve the productivity and biological diversity of the world's natural forests. Prudent use of high-yield production forestry can help meet short-term demand for timber while facilitating the wider use of natural forest management methods.