



# LARCH PLANTATIONS IN SOUTHERN NEW ENGLAND

## CURIOSITY OR OPPORTUNITY?



Left, inset, these larches were planted on South Central Connecticut Regional Water Resources Authority lands in 1970, as a nurse crop for white pine to forestall weevil damage. The larches clearly outgrew the pines, growing almost 2 feet per year over 46 years.

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Left, Larch flooring in Connwood, Inc. office in Middlefield. The lumber came from exotic larches thinned from a stand that provided a screen of the South Central Connecticut Regional Water Authority's Hammonasset Reservoir in Madison and Killingworth.

TIM HAWLEY

BY LLOYD C. IRLAND AND DAVID I. MAASS

At the recent New England Society of American Foresters meeting in Sturbridge, Massachusetts, two posters showcased the results of growing exotic larches in Maine and Vermont. In chatting casually with researchers, we found that these species have been planted in several places in southern New England. At one time, landowners and researchers planted larches, Norway spruce, Scots pine, and other exotics. Some of these trials are as old as 100 years. We will concentrate on Connecticut in this article, although we also learned of examples in Rhode Island and Massachusetts. We and other foresters, including some of the pioneers planting and studying larches in this region, have formed what we call the Larch Virtual Experiment Station. Here we introduce our subject in the hope that others with larch plantings will let us know about them and their experiences.

### Exotic Larches, Not Native

We are not talking about the native larch, or tamarack, often known as hackmatack or hack (*Larix laricina*). We are only



GREAT MOUNTAIN FOREST

Jody Bronson and Wes Gomez stand with Japanese larches in Great Mountain Forest. The stand has been thinned only once since it was planted in 1952.

addressing exotic European (*L. decidua*), Japanese (*L. kaempferi* or *leptolepis*) and Dahurian larches (*L. gmelinii*) and their hybrids. If there is any Siberian larch (*L. sibirica*) out there, we haven't bumped into it yet. Another well-known hybrid we have not found is the Japanese/European variety called the Dunkeld (*Larix x marschlinsii* Coaz).

### How Do Exotic Larches Grow?

*Very fast.*

In well-designed trials in Maine, exotic larches grew in height and diameter much faster than native species. The hybrids grew even faster. Our Web site [larchresearch.com](http://larchresearch.com) contains published research that documents examples of fast growth in the United States and Europe. Unfortunately, even in research forests, many larch plantings have not been re-measured recently, so whether the fast growth continues for the life of the trees isn't certain.

In northern New England, our collection so far includes seven stands between 30 and



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75 years old whose mean diameter growth has averaged 0.25 inch per year. These trees' heights measure between 73 feet and 105 feet (growing 1.4 to 2.1 feet per year). We studied seven other stands of exotic larches between 22 and 24 years old; these grew in diameter at an average of 0.43 inch per year and reached heights between 45 and 67 feet (1.9 to 2.8 feet per year).

Examples of larches at varying ages are growing on the University of Connecticut University Forest lands, at Great Mountain Forest in Norfolk, on open-space land in Middletown, and at the lands of the South Central Connecticut Regional Water Authority. A few individuals can be found at the Yale Myers Forest. We need a series of current measurements on existing stands in southern New England and assessments of their condition, to see how their performance compares those of stands in northerly areas. We hope this article might stimulate curiosity about this and provide more examples.

### What Are Some Silvicultural Uses for Larches?

With the rapid growth rates, if well managed, larches can produce small sawlogs of good quality in 20 to 25 years. There has been little research on thinning, but we believe larch stands will benefit from it.

In southern Sweden, foresters experiment with larch as a nurse crop for oak. Anybody out there have too much oak regeneration?

In Connecticut, larch has been interplanted with white pine in an effort to fend off weevil damage. We know of no published work on this subject, but if successful, these plantations could offer a promising mixture, with the larches ready for harvest ahead of the pines.

Water supply managers have planted exotic larches along reservoirs as waterfront screens.

Finally, a rapidly growing conifer like the larch could store carbon.

### What Are People Doing With Larch?

*Many things.*

All of them are small-mill, short-production-run products. It could hardly be otherwise as the supply is so small. Our group has been looking at this for two years or more, and we keep bumping into new uses. Here is a list:

#### *Larch products needing drying:*

- ▶ Flooring: Connwood Foresters recently installed larch flooring at its Middlefield headquarters
- ▶ Wall paneling: One of the Department of Energy and Environmental Protection offices in Marlborough is finished with larch paneling cut from a state forest
- ▶ Millwork items

#### *Larch products that do not need drying, or need air-drying only:*

- ▶ Decking
- ▶ Bridge timbers
- ▶ Poles for hopyards (microbreweries are growing fast)
- ▶ Sills for sheds or small buildings
- ▶ Canoe parts
- ▶ Shipbuilding—in the early 19th century, the Royal Navy was convinced that ships could be built of larch and advocated planting it for future Navy needs. Some pulp mills will buy larch, but because that market is far from southern New England, it's probably unlikely that larches were used for ships here.

Processing larch requires knowledge of the proper drying schedules. A sawmill in New York has worked this out. A mill in Maine recently sawed about 50,000 board feet of Japanese larch logs, aged 51 years. The mill owners loved the quality but had problems with resin clogging saws. We need to learn how the people in Japan cope with this problem. In New York, planted larches on state lands have sold for the same prices as white pine. In Maine, we are not seeing prices as high as this.

### Should We Plant Exotics?

We must ask this question. We would not recommend planting these trees in vast areas, and we don't expect that tree farm owners would do that. Larch will be used in small patches, old fields, or mixtures. If they had not already been here for a century or more, we would advise extreme care before introducing them. We are aware of no scientific studies, but managers familiar with these trees have reported no reasons to fear that they will take over the forest. So owners will want to avoid using exotics on principle, but we see no reason at present to write them off as a curiosity just yet.

Larches have been observed to reproduce naturally in areas where enough sunlight is present and may be considered naturalized in some localities. European larch is a widely used ornamental tree around the Northeast. There may be more larch trees standing in suburban yards than there are in timber-growing situations in rural areas. Should we be looking carefully at potential adverse effects? Certainly.

### Continue Studying the Experiment

Considering white pine's challenges with blister rust and weevils, the movement of pine beetles and hemlock woolly adelgid into the region, and past disappointments with planting red pine, southern New England's portfolio of softwoods seems to be on the wane. Most of the planting opportunities are now history. But there remain many small patches on farms and woodland properties where owners would like to actively grow something. Shouldn't larch be considered as an opportunity instead of a mere curiosity? We need to learn much more from established plantings concerning invasiveness, environmental aspects, response to management, and any issues with insects, diseases, or weather damage. A great, unplanned natural experiment is already out there. Why not take a close look to see what it can tell us?

If you are curious about this subject, look at the website [larchresearch.com](http://larchresearch.com).

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