Woodland management: ***coppice*** for ***small farms***

Oregon Sustainable Agriculture Land Trust (OSALT) fact sheet
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Coppicing is an ancient European woodland management strategy that can be used effectively today on North American small farms. At its basic level, coppicing involves cutting trees near ground level and allowing regrowth. The trees are harvested in 7-20 year cycles, and can be sustainably cut with this method for 100 years or more.

The advantages of coppice for small farmers…

-***Abundant harvests*** of straight poles for fencing, firewood, furniture, charcoal, poles for hop growing, and other uses.

-***Rapid regrowth*** from established (and mature) root systems, with repeat harvests along regular cycles. No labor is needed for replanting.

-Mixed age management and varying levels of light on forest floors enhance woodland ***biodiversity***. A key permaculture design principle is amplifying the use of "edges" – and cyclical coppice cuttings within a maturing forest do this well.

-***Simple farm tools*** can be used. Cutting large trees for lumber requires special tools to fell, transport and process logs, but a chainsaw and a pickup truck will work for coppicing.

The disadvantages…

-The technique can be ***labor-intensive*** if deployed on a broad scale.

-The trees harvested may not meet ***market requirements*** (for example if larger logs are needed).

A black locust tree, one year after coppicing. Natural Harvest Farm, Canby, Oregon, USA

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Step-by-step: coppice

1. ***Select trees*** to be coppiced. Appropriate trees include oak, willow, ash, chestnut, hazel, sycamore, hornbeam and black locust. Conifers do not coppice well, with the exception of coastal redwood (*Sequoia sempervirens*) and monkey puzzle (*Araucaria araucana*).

2. ***Clean out surrounding vegetation***, including blackberry and any other invasive plants.

3. While the tree is dormant during winter months, ***cut the tree*** at a 15-20 degree angle slightly ***above the basal area*** (i.e. above the swollen area at the bottom of the trunk). The angled cut allows rainwater to run off, helping to prevent stump rot.

4. ***Allow re-growth***. Cutting the wood encourages the emergence of axillary buds within the remaining trunk (see black locust photo). Replanting is not needed.

5. After 7-20 years, ***re-harvest*** the trees. The trees should continue to be cut at an angle, sloping away from the central trunk area. The outside stems are cut first, followed by the inside stems. Over time, a broad stump (stool) will develop.

Whole forest management usually involves cutting 5-10% of the trees in any given winter and allowing the full (mature) growth of select interspersed trees (called standards). Oaks are common standards in Britain.

Stool of a newly coppiced Alder tree (photo credit: Naturenet)

Our experience *At Natural Harvest Farm in Canby, Oregon, we have black locust trees planted approximately 18 years ago. We coppiced part of these at the end of 2008 for fencing and firewood. A year later, the coppiced trees all show healthy growth, with approximately four new shoots per tree. Some of the shoots are not as straight as expected, partly because we allowed blackberry to grow over the trunks. Most however are showing strong straight growth, reaching a height of up to 4 meters (12 feet) in one year.*

Sources used:

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Holmgren D 2004, *Permaculture: principles and pathways beyond sustainability*, Holmgren design services, Hepburn, Australia, pp 221-237.

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