



Trees for livestock nutrition



Trees can offer nutritional benefits to supplement livestock diets. Limited guidance exists on the nutritional properties of different trees as this varies with season, age and region & farm management.

Aim for variety

No single tree species provides everything an animal needs, so variety is key. Multi-species planting allows livestock to access multiple nutritional benefits. Nutrition and anti-nutrition levels vary in different species and locations, and in individual trees depending on the season, age of tree and whether leaves are fresh or dried. The same is true with minerals, vitamins, and tannins.

Each tree offers something different

- Willow and poplar are fast growing so useful for regular browsing. Willow is popular due to its high salicin and zinc levels
- Conifers such as Scots pine (yew is not recommended) can provide anti- insect benefits but are less resilient to browsing
- Holly is a winter supplement because it is evergreen
- Mulberry has a high protein content and can tolerate most soils

Avoid harmful effects on livestock

For example, wilted leaves from stone fruit trees can have high cyanide levels. Management is important; hungry animals are more likely to eat plants in greater quantities than may be good for them.

Choose trees which will grow

Choose trees which grow best on your farm given your climate and soil type. Look at what is growing naturally around the farm.

Fit your trees to your management system

How trees are fed to livestock is an heavily impacts their nutritional value. If used for livestock browsing, ensure the quantity is sufficient for all livestock and consider tree recovery time. Fully thought-out planting schemes ensure equal access to all livestock. *Visit our website to see the trial designs used for the Devon field lab for pros and cons of different planting schemes.*

If planning to preserve tree fodder, carefully consider your harvesting and storage methods.

Don't overgraze

Over-browsing can kill trees completely. A good rule of thumb is to make sure that no more than 50% of the tree's leaves are browsed, leaving enough for plant recovery. Resilience depends on many variables including species, rest period between browsing, and protection methods used.



Case study: Devon Silvopasture Network

A mix of species were chosen for this field lab. Some represented the dominant species for the area given the climate and heavy clay soils (pedunculate oak, downy birch, aspen, alder, hazel, holly, and willow).

Others were chosen for specific browsing properties (willow for selenium and wych elm to be cut for forage) and Scots pine (medicinal).

This article was produced with assistance from Dr Lindsay Whistance who has extensive knowledge of trees in livestock systems. Find the full article on the Innovative Farmers website.

@ info@innovativefarmers.org

0117 987 4572

www.innovativefarmers.org

@IFarmers