

Getting the best out of trees



Eucalyptus seedlings ready for market at nursery bed along NFA on Jinja Road. FILE PHOTO.

James B. Kisakye is a perfect example of a successful agroforestry farmer. He has planted thousands of trees on commercial land for several years. Today he tells his success story and advises prospective and active tree farmers on best practices

In April of 2015, I embarked upon a tree planting project to bring in some extra cash in the long run.

Tree planting is not for the weak at heart. If you are not dealing with disgruntled squatters then you have the rains or the unscrupulous workers to worry about. In Uganda, the trees commonly planted for commercial reasons are eucalyptus and pine. The former is more popular because of its shorter yield period of 10 - 12 years so I will examine it further.

If you are planning to grow eucalyptus trees, the seedlings cost between Shs100 and Shs200 per seedling for regular eucalyptus.

If you consider clonal eucalyptus, which grows much faster and has a shorter yield period of about seven to 10 years, that will cost you an extra Shs350 per piece.

You basically cut down the yield period by about 30 per cent but spend about three times more upfront.

COMMON PESTS

Trees in a forest or landscape are under constant attack by insects and pathogenic diseases. A tree in good health can withstand most of these pests for a while but can be overwhelmed as site conditions and pests relentlessly rob the tree of its vigour. The best way to prevent tree mortality is to improve conditions that support tree health. Take time to observe your trees for signs of stress - dying limbs, bleeding cankers, visible fungi and yellowing and drying of foliage. Remember that the best way to protect a tree from pests including disease and insects is to have a healthy tree. A healthy tree starts with its first year of life. Majority of forest and landscape diseases attack trees in the form of bacterial pathogens and fungal infections. Many will not kill a tree but can have a cumulative effect on a tree's vigour and health over time.

Shs200

COST OF EACH EUCALYPTUS SEEDLING

Planning

To fully appreciate the gains that can be gotten from tree planting, one must be ready to acquire a relatively huge piece of land.

It could be on a long-term lease if you cannot buy it outright. The National Forestry Authority (NFA) as recently as August advertised over 100,000 hectares available for leasing. If you can secure some land in the village, a hectare is a good place to start. The three by three metres spacing required for the eucalyptus means you can only plant about 1,111 trees per hectare.

Doing the calculations

Before you acquire the land, you need to know that one hectare equals 2.5 acres. One hectare takes 1,111 trees. Convert your acres into hectares by dividing them by 2.5 and then multiplying each by 1,111 trees. You should ensure that you have a trustworthy manager as I lost over Shs20 million during the first year because my manager was cheating me. I fired him and brought someone else that saved me untold sums. Always ensure that the planting of seedlings is

done during the rainy season.

Planting in rainy season

Plant too late and most of your seedlings will dry up. Plant too close to the rainy season and most of your seedlings will dry up.

Once your trees mature to about eight years, you can collect between Shs80,000 and Shs100,000 on each if you observed proper planting methods. This would mean you did the necessary pruning, weeding and thinning at the right times.

If you look after your trees well, they should be straight, not branched, and not thin. For the right size, you will have to thin the plantation from 1,111 trees per hectare to around 700 trees per hectare. Do not throw away the 411 trees you can sell them for anywhere between Shs1,000 and Shs4,000 each. So, assuming your lease is on 70 acres and you planted regular eucalyptus, take note of the figures below.

Initial costs

- 70 acres = 28 hectares x 1,111 = 31,108 seedlings.

- Eucalyptus seedlings cost: Shs31,108 x Shs200 = Shs6.2m (\$1,777).

Assume you include labour and other costs in addition to the seedling costs above to give you a total cost of Shs30m (do not forget this includes leasing/purchasing the land, replacing lost seedlings and replacing bad managers).

Returns in eight years

- Each tree, at six to eight years old, would sell for between Shs80,000 (\$22) and Shs100,000 (\$28).

- Therefore, 31,108 trees x Shs80,000 = Shs2,488,640,000 (\$71,040).

- Returns in eight years (if you thin out plantation, for better size trees, to 700 trees per hectare: 19,600 trees x Shs100,000 = Shs1.9b (\$560,000).

Note

Do not forget tree planting is an intensive process that involves a lot of patience, supervision, constant planting and replanting.

trending now> EXPERTS ASK FARMERS TO START USING PLASTICS FOR MULCHING

Farmers in drought stricken areas or with little rainfall are advised to adopt plastic mulching technology which is the practice of covering soil with polythene to create more favourable conditions for plant growth, development and efficient crop production. Small-holder farmers can cut costs of irrigation and mechanisation by adopting plastic mulching technology.

Ministry of Agriculture Extension officer Samuel Mburu says just like traditional organic mulch, which controls weeds and retains moisture content in soils, this method boosts harvests while reducing labour required

With depletion of vegetation, agro-companies have developed synthetic mulching materials from plastics for small and large-scale farmers with open fields or greenhouses.

Although polythene mulch complements drip irrigation especially on large-scale, Mburu says, it is equally appropriate for small-scale farmers like those with kitchen gardens.

"We have no more grass, weeds and other organic materials to cover soil to prevent water loss. Farmers want to bring more land under irrigation, but losing the water to evaporation will lead to high production costs. An investor would like to use little to earn more

says. This practice is common with short season crops such as tomatoes, cabbage, kale, sunflowers, maize, and cucumbers, among others.

With climate change, the extension officer says, farmers in high rainfall areas are likely to suffer losses when it fails to fall due to altered patterns.

Types of plastic mulching technology:

1-Polythene mulch

- Made of polypropylene polymers or polyethylene polymers

- It is bio-gradable but breaks down slowly

- The polythene mulch can be removed manually at the end of the

2-Bio-gradable mulch

- It is made from plant starches and sugars or polyester fibers

- It breaks down fast hence reducing soil pollution

- It cannot be re-used

These types of mulching increases water use efficiency by reducing evaporation and improving moisture distribution. It also modifies soil temperature encouraging faster germination and growth of crops. Plastic mulching increases nitrogen efficiency and prevents weed growth by 100 per cent. It can increase yields