

TREE PROTECTION

Objective: help farmers to protect their tree plantation and maximize the chances of trees' survival

Trees need to be protected in order to prevent it for damages that occur during its young stage

- Tree protection can be made from simple and locally available that we can find it within our villages (bamboos, Dry Napier grass, bricks, sticks, thorns...)
- Trees can be protected by either mark for visibility, animal dung or to fence
- The critical time for tree protection is between 1 to 2 years
 - If you use strong materials (like bamboos and bricks) that cannot be damaged in a short period, it can stay for 1-2 years. This means you can only protect once.
 - Marking is just one way to make the planting station visible but we need to protect each tree.

Way of Protecting	Reason for protecting	How to protect	Material used
Marking	To allow everyone who pass behind the tree to see the tree	Put a stick or any object that can be seen to identify that there is a planting station/tree	Sticks, stones
Staking	<ul style="list-style-type: none"> To let it stand To visually see the tree planting station 	Dip the stick in the soil behind the tree planted and tie the tree planted to the stick (<i>This works better in species like faidhebia and alcacia polycantha, trees that crows</i>)	Sticks Strings/sisal/linya...
Clearing and fire breaks	<ul style="list-style-type: none"> To avoid fire To avoid competition between weeds and trees 	<ul style="list-style-type: none"> Remove all the weed around the tree If it's a woodlot clear around the woodlot 	Hoe or slash
Animal dung application	<ul style="list-style-type: none"> Avoid animals to come close/eat its own dung (As animals don't like the smell of its dung) 	<ul style="list-style-type: none"> Apply animal dung to nearby the tree or on the leaves of the tree Avoid to apply in fruit trees as it burns the leaves 	Water and animal dung
Simple fence/spot fence	A fence cannot allow animals to access to the tree but allow sunlight	Construct a fence around the tree or spot 3 to 4 sticks around the tree	Sticks, string/linya/sisal

All the protection methods can be combined

Below are the two main ways to develop a good tree protection:

Dry fence/simple fence

Dry fence can be made with simple materials, locally found in the villages

Materials needed

- ✓ Dry sisal(twines)/linya or anything used to tie things
- ✓ 6 woody Sticks
- ✓ Maize stalks/Dry chingombilo/Dry Napier grass
- ✓ Bamboo stems

Procedure

First Dig 6 holes (50cm deep) 50cm far from the planted tree

Second, plant a woody stick in each hole

Third, fix bamboo hoops with the woody sticks by tying them with tying material

Then, add Maize stalks/Dry chingombilo/ Dry Napier grass between the woody sticks and put them on the ground.



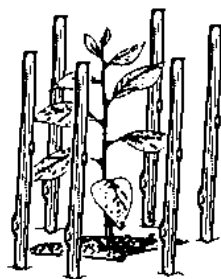
Or

If you want to avoid adding Maize stalks/Dry chingombilo/ Dry Napier grass fix the bamboo hoops with the woody sticks close to each other

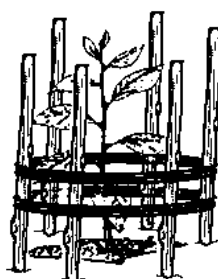
Note: this process is for one tree.



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Animal Dung

By nature, goats do not eat in places where they defecate. Spreading goat dung on trees repels them and prevents them from eating leaves and scratching against the trunk.

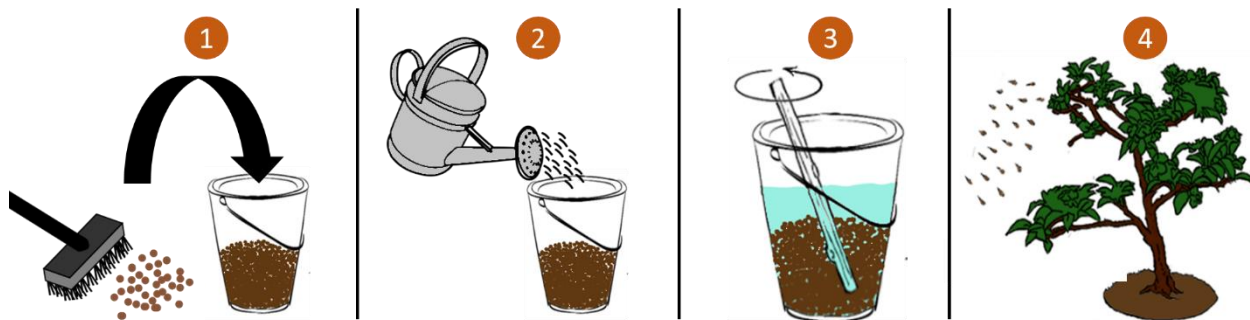
It is necessary to apply goat dung **over the whole period during which goats are free**. The application should be repeated **every two to three weeks**. If goats start to eat leaves again, dung should be applied more often, every week for example. Continue to apply goat dung until tree leaves are out of the goats' reach (usually after **one to two years**).

Materials needed:

- ✓ Water
- ✓ Animal dung
- ✓ Wooden stick: for steering
- ✓ Pail

Procedure:

- ✓ Add $\frac{2}{3}$ dung and $\frac{1}{3}$ water in a bucket
- ✓ Steer the mixture until a sticky mud
- ✓ Apply the mixture on tree trunks and leaves and 20 litres full bucket can be applied to 10 trees



Note:

Do not apply animal dung on fruit trees because this manure is too strong and could burn the tree



PROTECTIVE MEASURES

DRY FENCE : THE STRONGEST PROTECTION

A fence does not allow animals to access to the tree but allows sunlight

Procedure :

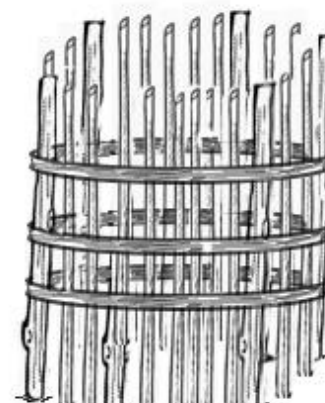


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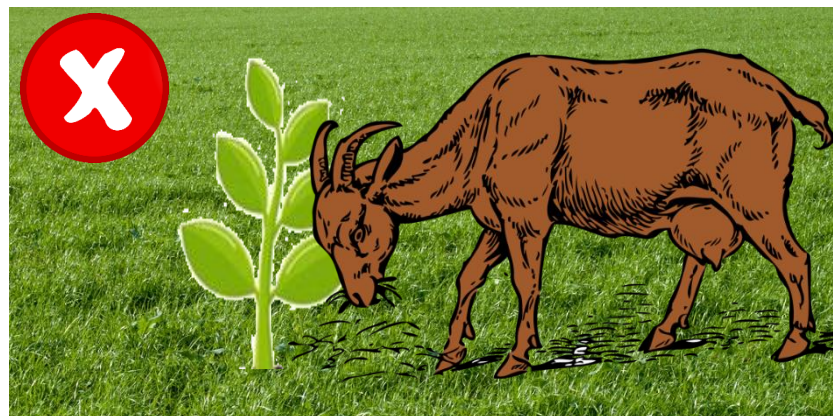
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CLEAR AND FIRE BREAKS

To clear around is important in order to :

- 1) To don't attract goats near the tree and prevent them from eating the leaves
- 2) To avoid fire
- 3) To avoid competition between weeds and the tree



IN THE FIELD : CLEAR TO MAKE IT VISIBLE

⚠ A TREE NOT VISIBLE IS A TREE THAT WILL BE DESTROYED ! ⚠



Ganyu people can walk on it during work if it's not visible

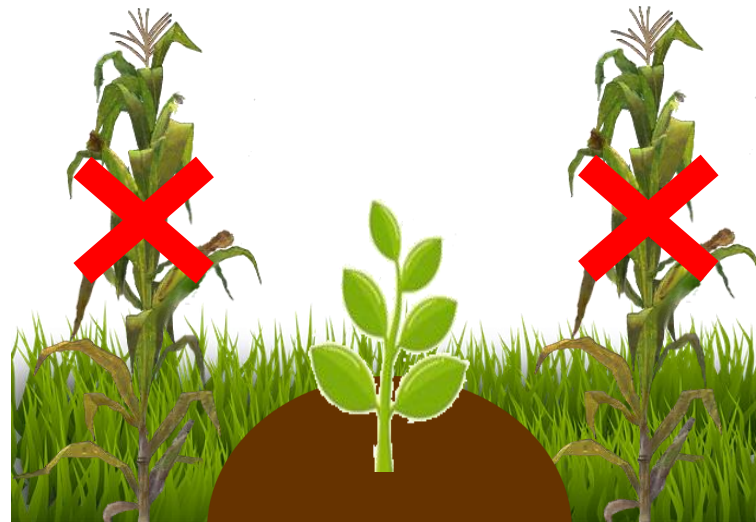
1

Remove all the weeds around the seedling



2

Harvest in first the maize around the seedling to **make it visible**



3

Put sticks to identify that there is a tree



PROTECTIVE MEASURE TO BE TAKEN

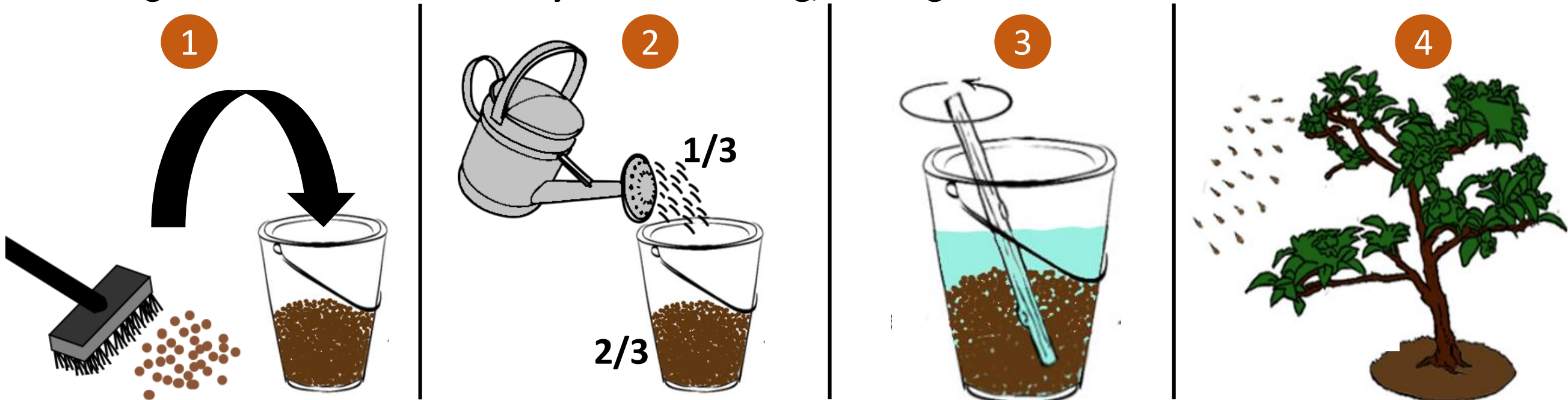
GOAT DUNG

Goats do not eat in places where they defecate !

Spreading goat dung on trees repels them and prevents them from eating leaves and scratching against the trunk.

Apply the mixture every 2 weeks ! If goat continue to eat leaves, apply every weeks.

Goat dung should be collected early in the morning, when goats are released outside of the house.



20 Litres of preparation



10 trees protected