

AZOLLA CULTIVATION

- Azolla is an aquatic floating fern
- The fern appears as a green mat over water
- The Blue Green Algae cyanobacteria (*Anabaena azollae*) present as a symbiont with this fern in the lower cavities actually fixes atmospheric nitrogen
- It contains 1.96 - 5.30 % nitrogen; 0.016-1.59 % P₂O₅ and 1.31- 5.90 % K₂O in addition it also contains calcium, magnesium, sulphur and iron and 25-30 % protein.
- It also contains amino acids, minerals, vitamins and beta carotenes which are essential to livestock's
- Azolla can be a substitute for chemical nitrogenous fertilizers to a certain extent (20 kg/ha) and it increases the crop yield and quality.
- It is a good feed for livestock, fish and poultry

Feeding recommendation

- Cow: 1.0-1.5 kg
- Goats: 300-500 g
- Poultry birds: 20-30 g

Advantages

- Reduction in fodder requirement
- Increases the live weight of livestock
- Improves the egg quality and production
- Improves the quality of milk

Requirements

- Site selection for azolla multiplication in a shady area
- Construct 10' length 4.5' breadth and 1.5' depth dimensions cement concrete tanks
- Soil is distributed evenly across the bottom of the tank and the depth of soil layer should be about 10 cm.
- Cow dung is to be added at the rate of 1 to 1.5 kg per sq m of the tank area (2 to 3 kg of cow dung per tank).
- Single Super Phosphate (SSP) is to be added at the rate of 5 g per sq m of the tank area every week. (10 g SSP per tank).
- Fill the tank with water till the water collects to a height of 10 to 15 cm above the soil. Allow the soil particle to settle down. Prepare the fresh Azolla inoculum by adding 2 g of carbofuran to prevent pest infestation
- On the following day, spread around 200 g of fresh Azolla inoculum over the surface of the water.
- Water level is maintained by applying water everyday.
- It takes about 2 weeks for Azolla to form a mat over the water surface.
- Harvested azolla should be washed in fresh water before it is fed to the cattle. Washing is necessary to remove the smell of cow dung.

After every 60 days, soil is removed from the bed and another 15 kg of fresh fertile soil is added into the bed to avoid nitrogen build up and also provide nutrient to the azolla. Fresh inoculation of azolla after removing soil and water should be made at least once in six months repeating the whole process afresh.

