



Transforming Lives through Quality Education

DIVISION OF RESEARCH & EXTENSION

Fodder Production using Hydroponic Technology

What is hydroponic fodder production technology?

This is growing of fodder without soil but in water for a maximum of 6 days. The water must be safe for human drinking. You can sprout seeds of barley, maize, oats, wheat or sorghum to obtain fodder for cattle, pigs or poultry.

What are the benefits of hydroponics technology?

1. Fodder is produced within a short a time and in a small area.
2. Fodder is completely edible to livestock –they eat the entire mat, roots and green growth. There is no wastage of feed.
3. Water requirement is less and can be recycled.
4. Minimal running costs; soil preparation, weed control and post-harvest loss.
5. Minimal incidences of pests and diseases.

Step by step to produce hydroponic fodder

1. Select seeds without overgrowths and free of chemicals
2. Disinfect seeds by soaking in diluted chlorine solution (similar to what is used to disinfect drinking water) for 2 hours to prevent mould/fungus growth
3. Drain chlorinated water and rinse grains then soak the grains in water for 24 hours to promote water uptake by the grains
4. For grain sowing, measure 2kg of grains for each tray that measures 80cm by 40cm
5. Spread the grains on the trays evenly (not over 3cm deep) to provide enough space for each seed to sprout
6. Ensure your tray has holes that are evenly spread at the bottom for proper drainage of water
7. Transfer the trays to the hydroponic unit. Germination of seeds begins at this point and is considered day 1.
8. Irrigate from day 1 to day 6 at intervals of 4 hours in every 24 hours (30 seconds for automated system and 1 minute for manual system).

Feeding hydroponic fodder to livestock

Cattle: Provide 8kg of the hydroponic barley to replace 2.5kg dairy meal in addition to hay and silage.

Pigs: At fattening stage provide 3kg of hydroponic fodder and 2kgs of dry feed.

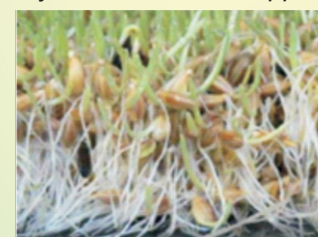
Poultry: For 100 layers provide 8kg of hydroponic fodder in addition to 4kg of layers mash per day.



Day 1 - Seeds swell



Day 2 - White nodes appear



Day 3 - Seeds sprout



Day 4 - Leaves take form



Day 5 - Leaves close

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