

“Mr. JAIKUMAR AND HIS HYDROPONICS” – a new revolution in Animal Husbandry.

Mr. Jaikumar, basically a diplomat in Mechanical Engineering is contemporarily an innovative farmer at Silamarathupatti, Theni District. He is interested in Agriculture and Animal Husbandry. He is in link with Aavin industry and trained himself to the level of Village level worker in veterinary and skilled in Artificial Incemination (AI). And he is crossing many breeds and various cross breeds of Jersey & Holstein friesian are available with him. He has undertaken Hydroponic cultivation to feed the cattle. He is also a forerunner in sericulture.

HYDROPONIC CULTIVATION:

It is a very recent technology to Tamil Nadu which involves cultivation of crops with no media. He uses this technology to produce feed for his cattle.

- A shed of 56 x 17 ft is built with shade net covered over. River sand is used as the flooring material to absorb excess moisture. Eucalyptus wood is used for constructing the system that looks like racks over which 1.5 x 1 ft plastic trays with 4-5 holes at the bottom are placed. The holes will let out excess water sprayed.
- Well soaked germinated maize seeds (400g / tray) are spread over the tray without any media. Water is sprinkled regularly with the fogger that covers an area of 5 ft diameter. 80% humidity is maintained inside the shed.



- 7 days old maize crop (1-1.5 ft height) along with the roots are removed from the tray and fed to the cattle. Here the roots appear like spongy tissues. It is an excellent green

fodder that meet out the nutritional requirement of the cattle. The feed is highly proteinaceous.

- On average, 3.5kg of fodder is produced from a tray per harvest.

NUTRITION VALUES OF HYDROPONIC FODDER (MAIZE): PER KG

Protein (புரதம்)	-13.56%
Fibre (நார் சத்து)	-12.76%
Calcium	- 0.35%
Fat (கொழுப்பு)	- 2.25%



ADVANTAGES:

- Less space needed - Conventional method of cultivation needs 3 acres of land to produce this amount of green fodder produced by this method.
- Less man power needed.
- Less time consuming.
- Rich in nutrients.



ANIMAL HUSBANDRY:

The farmer rears 50 cows, 20 goats & sheep under preparation to rear country hens. He maintains good sanitation in the rearing shed by recycling the cattle wastes. Head to head system of rearing is followed. Automated water bowl for feeding water to the cattle which works on the Ball Float mechanism are placed. The cattle are periodically groomed and deworming is done once in 3 months using Ivermectin.



BALL FLOAT MECHANISM



He makes his own composition of feed for the cattle for which he owns a rice mill.

33 % - flour (Rice, Maize, Sorghum)

33 % - fiber (Paddy straw, Black gram dust)

33 % - oil cake (Groundnut, cotton) with 1kg salt for 100 kg feed.

Balanced diet is maintained with Subabul, Agathi, Hegde Lucerne, Cumbu Napier grass.



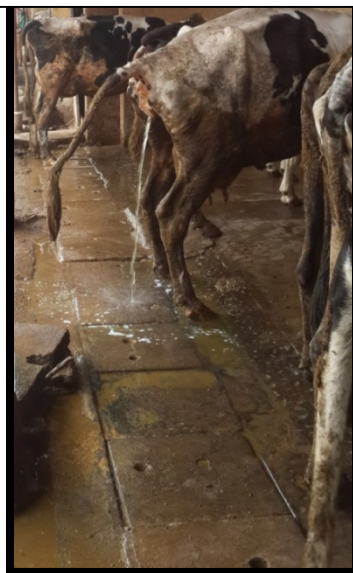
Milking machines are used for milking the cows. The time taken to milk each cow is 10 - 15 minutes. The milk that is got at the last 2-3 minutes is rich in fat. A single labor can manage more number of cows with the machine. This needs no technical knowledge. The average milk yield is about 20-30 liters per cow per day.

DECIDING FACTORS OF A PROFITABLE FARM:

- A cow should give birth to one calf/yr.
- Disease infection in the farm should be meager.
- Amount of milk yield/per cow/yr should be above average.

RESOURCE RECYCLING:

Cattle wastes from the shed are washed into the underground channel running side to the shed. The waste that contains cow urine, dung are directed to Dinabandhu model biogas plant that is placed underground, from which biogas (fuel) produced is used for the domestic purpose. Effective Microorganisms (EM) are used for decomposing the waste. The remaining slurry wastes are taken to the field through PVC pipeline. A separate outlet for this is placed near the irrigation water outlet in the field. He is also involved in Organic farming for the past 27 years.

PASSAGE FOR SHED WASTE



SLURRY IN THE FIELD

ADVANTAGES:

- ✚ Biogas for domestic purpose.
- ✚ Recycle of the waste without polluting the environment.
- ✚ Slurry acts as organic manure for the field.

MARKETING:

The main product of his business that is cows milk is sold at the Retail price of Rs.30/litre and wholesale price of Rs.22/litre. The farm is also in tie up with Aavin industry for marketing.

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