

LEAF MEAL AS A REPLACER OF DORB IN CARP FEED

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Technical details:

The intensification of aquaculture invariably requires rapid growth and development in aquafeed production. As a practice, major feed ingredients used by Indian farmers for carp production include de-oiled rice bran (DORB), groundnut or mustered oil cakes, etc. depending on the availability and price. De-oil rice bran is the by-product of the rice milling factory, which contains 14-17% crude protein. The utilization of bran has been increased manifold, which resulted in increased price (Rs.14-19/kg) in the market. Furthermore, increasing fish production to match the requirement of ever increasing human population requires an additional amount of DORB, which will be insufficient in future considering the current production scenario. An alternative non-conventional ingredient that can replace DORB is leafmeal, which is the most unexplored resources, less expensive and readily available.

Salient Feature:

- The leaves which are having higher protein content (20-28% CP) are used for the preparation of leafmeal. These include sweet potato, Subabul, Sesbania, Mung, green pea, soybean leaves etc.
- The digestibility and nutrient content of the leafmeal are enhanced by solid-state fermentation (SSF). For sweet potato leafmeal SSF is carried out with fungus, *Chaetomium globosum* for 120hrs. Other microbes like *Saccharomyces cerevisiae* (commonly known as baker's yeast), and *Lactobacillus subtilis* can also be used depending on the type of leaf.
- For SSF of leafmeal, a mixer cum fermenter was fabricated, which can effectively process 20kg of leafmeal at one time.
- The fermented leafmeal are used to prepare carp feed with enhanced nutrients content and replace DORB completely without compromising the growth and health of fish.
- Carp feed prepared with leafmeal by replacing DORB are comparatively cheaper.

Cost benefit ratio:

As there is no direct cost involved in leaf meal preparation, but labour cost involved by the farmer is the recurring expenditure beside the Fermenter cum Mixer, which can be fabricated locally with very minimum cost. This needs to be popularalised without much cost involvement.

Precautions:

- The processed leaf meal should be stored in cool and dry places.

Microbes should be handled with care.

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