Good Management Practices (GMP) of fresh water fish farming.

Water Spread area of pond : - 1 Ha(10000 M^3).

Dr. Tun Tun Singh

Before stocking of fish seed

Step I.

i. Eradication of unwanted weeds :- By Repeated netting or application of Recommended Chemical or Manual method.

ii. Eradication of unwanted fish: - By Repeated netting or application of 2500 kg Mahua oil cake/ha or Dewatering of water.

iii. Eradication of unwanted Insects: - By soap – oil emulsion or Application of 250 ml/ha Butox/Cleanar/ Biomethrin/10 % Cypermethrin or Bio-pesticides.

Step II.

i. Liming (Caco3) :- @125kg/ha.

ii. Manuring with Cattle dung:-@ 5000 kg/ha.

iii. De-oiled cake :- @ 250 -500 kg/ha.

iv. Single Super Phosphate (SSP) :- @ 250 kg/ha.

v. Urea :-@ 125 kg/ha (Only in new ponds).

vi. Potash :- @ 50 kg/ha.

vii. Mineral Mixture :- 2.5 kg/ha.

Step III :- Leave pond water for a week.

Step IV:- Racking of pond bottom before 24 hours of Seed stocking.

Step V:- Disinfect pond Water with 0.1 ppm KMNO4 before 24 hours of stocking.

Stocking of fish seed

i. Species selection: - Catla, Rohu, Mrigal, Grass carp, Common carp and Silver carp.

ii. Species ratio :

A. Catla-40%, Rohu-20%,Mrigal 20% and Common carp 20%.

B. Silver-40%, Rohu-20%,Mrigal 30% and Grass carp 10%.

, C. Catla-60%, Rohu-20%,Mrigal 10% and Common carp 10%.

D. Catla-20%,Silver carp – 20% ,Rohu-30%, Grass carp 10% and Common carp 20%

E. Silver carp 40 %, Grass carp- 20% and Common carp 40%.(As a winter crop planning).

iii. Species Size:

Length: -150 to 200 mm.

Weight: - 50 gm.

iv. Stocking Density: - @ 10000/ha (Biomass of seed – 500 kg)

v. Stocking time: Morning at 8 to 10 Am.

vi. Stocking month: February and July.(Two crop of 5 month period).

- Selection of seed should be based on availability of seed.

After stocking of fish seed.

Step I. Monthly manuring at 15 days interval.

Organic manure followed by inorganic manure.

Apply lime 2 days before application of organic manure.

A. 1st date of month : Cattle dung @ 1000 kg/ha.

B. 15th date of month : SSP@25 kg/ha.
Apply Plankton enhancer @ 2.5 kg/ha for better plankton bloom at monthly interval.

X Precaution :- Manuring should be arrested in adverse ecological situation viz. cloudy, foggy, rainy and extreme cold weather and if water colour appears dark green.

Step II : Feeding

Feeding schedules of carp.
(Stocking density of yearlings @10000/ha)
(Initial total wt.=500kg, av.wt.=50 gm)
(Based on FCR : 2 : 1)

Sl.no	Months	Feeding % of Biomass	Amount of feed/day (in kg)	Total amount of feed (in Kg)	Total wt. Gain(in Kg)
i	1	5 %	25	750	875
ii	2	4 %	35	1050	1400
iii	3	4 %	56	1680	2240
iv	4	4 %	90	2700	3590
v	5	3 %	108	3240	5210
vi	**Total**			**9420 Say=9000**	**5000.00**

- **Apply Mineral mixture @ 10 gm/kg of feed along with 30 ml feed binder/kg of feed to lowers FCR.**
- **Apply Feed probiotics @ 5 to10 gm/kg of feed along with 30 ml feed binder/kg of feed to lowers FCR.**

- **X Precaution :- Feeding should be arrested in adverse ecological situation viz. cloudy, foggy, rainy and extreme cold weather , if water colour appears dark green and one day before harvesting.**

Step III :- Monthly racking of pond bottom in summer and fortnightly (15 days) interval in winter season.

Step IV: Application of Probiotics /Disinfectants.

i. **Apply Water probiotics :- @ 400 gm/acre or 1 kg/ha. at monthly interval.**
ii. **Apply Soil probiotics :- @ 400 gm/acre or 1 kg/ha. at monthly interval.**
iii. **Apply Caco3 @ 10 to 15 kg/ha depending up on PH value at 15 days interval.**
iv. **Apply KMNO4 @ 400 gm/acre or 1 kg/ha at 45 days interval.**

Step V:- Application of growth promoter.
i.Vitamin, Amino-acids and Mineral Mixture :-@ 5 to 10 gm/kg of feed.
ii. Zeolite :- @ 20 kg/ha. / month.
iii.Mineral mixture:- @ 10gm/kg of feed (or) 2.5 kg/ha mixed with 30 liter water and apply in pond.

Cost benefit analysis of traditional fish farming and fish farming with Good management practices (GMP)

		Without Feed And Probiotics	Feed with probiotics
Sl.no.	**Items**	**Cost(Rs)**	**Cost(Rs)**
I	Fish Seed	50,000.00	50.000.00
ii	Medicine	10,000.00	10,000.00
iii	Fertilizer	10,000.00	10,000.00
iv	Lobour	20,000.00	20,000.00
v	Probiotics	Nil	10,000.00
vi	Fish Feed (9 tons @ Rs.22/kg)	Nil	1,98,000.00
vii	Harvesting charge (10% of Crop value)	Nil	62,500.00
viii	Total Fish production(in kg)	1500 kg	5000 kg
ix	Total Expenditure(Rs)	90,000.00	3,60,500.00
x	Sale price(Rs)	125/kg	125/kg
xi	Gross Income(Rs)	1,87,500.00	6,25,000.00
xii	Net Income(Rs)	97500 say 1 lakhs	2,64,500.00
xiii	Crop duration	10 Months	5 Months(Two crop)