

*Activities from now*

1. Examination of fish growth with various feeding rate of maze bran in Kasinthura
2. Examination of fish growth with various stocking density in Kasinthura
3. Examination of fish growth with mono sex culture in Kasinthura

**PDM 2.1.6** Improvement of techniques to prevent predation

*Activities and results until now*

1. Construction of fence around ponds to avoid predation by crocodiles in Kasinthura

No crocodiles have been found in A ponds since fence was constructed.

2. Installation of tubular streamers as scarecrow in Kasinthura

From the time tubular streamers were installed around C ponds in September 29<sup>th</sup>, 2001, no bird has been shown in C pond until now.

3. Trial to chase birds away from ponds by catapult in Kasinthura

Survival rate of the stocked fish improved from 40.4% during 2000 season to 60.0%, even predations by birds are still observed.

*Activities from now*

1. Estimation of efficiency to avoid bird predation by tubular streamers
2. Trial to chase birds away from ponds by the device, which makes noise in Kasinthura

**PDM 2.1.7** Examination on harvesting techniques including method, time and frequency

*Activities and results until now*

1. Trial of partial harvesting with a big mesh net for table size

Tank No.	C-1		C-2		C-3		D-4		D-5		D-6		F-1		F-2		F-3		F-4		F-5		F-6	
	G. shanous		G. shanous		G. shanous		G. shanous	Wheat bran	G. shanous	Wheat bran	G. shanous	Wheat bran	G. shanous	Wheat bran	G. shanous	Wheat bran	G. shanous	Wheat bran	G. shanous	Wheat bran	G. shanous	Wheat bran	G. shanous	Wheat bran
Fish no.	4	8	12	4	8	12	4	8	12	4	8	12	4	8	12	4	8	12	4	8	12	4	8	12
Total Body weight (g)	170.7	399.1	568.4	177.6	394.5	539.9	158.2	428.5	586.6	187.0	462.3	595.3	228.7	537.6	705.3	308.2	638.7	798.3	308.2	638.7	798.3	308.2	638.7	798.3
Average B.W. (g/fish)	42.7	49.9	47.4	44.4	49.3	45.0	39.6	53.6	48.9	46.8	57.8	49.6	57.2	67.2	58.8	77.1	79.8	65.5	77.1	79.8	65.5	77.1	79.8	65.5
Stocking density(g/m <sup>2</sup> )	43	100	142	44	99	135	40	107	147	47	116	149	57	134	176	77	160	200	77	160	200	77	160	200
Food Supply (g/fish)																								
Weight Gain(g/fish)	14.9	8.7	2.8	40.6	44.6	44.5	40.6	44.6	44.6	44.6	44.5	44.5	44.6	44.6	44.5	44.5	44.5	44.5	44.5	44.5	44.5	44.5	44.5	44.5
Food Conversion Rate				3.30	5.25	3.56	3.30	5.25	3.56	3.30	5.25	3.56	3.30	5.25	3.56	3.30	5.25	3.56	3.30	5.25	3.56	3.30	5.25	3.56
Daily Feeding Rate (%)				1.91	1.98	2.07	1.91	1.98	2.07	1.91	1.98	2.07	1.91	1.98	2.07	1.91	1.98	2.07	1.91	1.98	2.07	1.91	1.98	2.07
Daily Growth Rate (%)	0.71	0.38	0.14	0.58	0.38	0.58	0.71	0.38	0.58	0.38	0.58	0.58	0.71	0.38	0.58	0.38	0.58	0.58	0.71	0.38	0.58	0.38	0.58	0.58
Weight gain (%)	135	117	106	128	117	128	145	125	145	125	145	145	145	125	145	125	145	145	125	145	125	145	125	145
Survival rate (%)	100	88	100	100	100	92	100	100	100	100	92	100	100	100	100	100	100	100	100	100	100	100	100	100

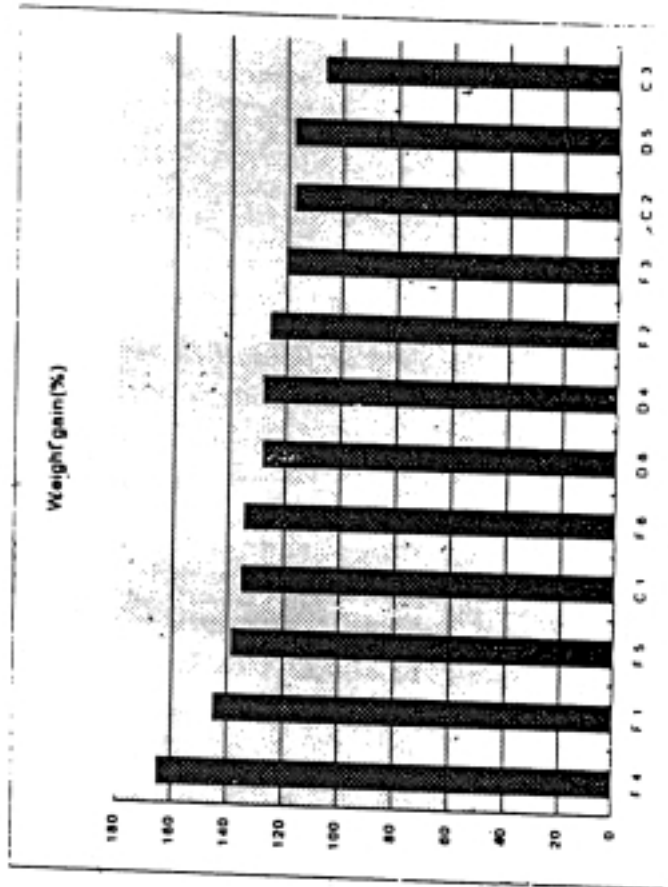


Figure 3: Fish Weight Gain in Each Experimental Tank

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2. Evaluation of Inputs for Fattening Tilapia (*Oreochromis shiranus*) at Different Stocking Density

The results are shown in Table-3 and Figure-3.

Regarding the efficiency of inputs between manuring and feeding, fertilizing chicken manure proved more profitable than feeding wheat bran at less than 134 g/m<sup>2</sup> of fish stocking density. Application of both inputs promoted better fish growth than single input of manure or feed.

Fish stocked at one/m<sup>2</sup> could grow fairly without any inputs ( Pond C-1) in case of fish stocking density of 58 g/m<sup>2</sup>.

3. Stocking more than 30,000 fingerlings of *Oreochromis mossambicus* in 8 of 1ha pond and 1 pond of 6ha pond in Kasinthura

Harvest from one of those 8ponds has finished. Result is shown in Table-4.

Table 4: Results of fish harvest from pond.A11 in Kasinthura fish farm

FISH SPECIES	<i>Oreochromis mossambicus</i>	
FISH FEEDS	Maze Bran	
DATE STOCKED	13-17th Nov.2000	
DATE HARVESTED	4th Aug to 14th Sep.2001	
CULTURE PERIOD	10months	
INITIAL		
FISH NO.	37,688	
TOTAL BODY WEIGHT (kg)	384.9	
AVERAGE B.W. (g/fish)	10.2	
STOCKING DENSITY (fish/m <sup>2</sup> )	3.8	
FINAL	Table Size	Fry
FISH NO.	22,622	96,064
TOTAL BODY WEIGHT (kg)	987.0	608.0
AVERAGE B.W. (g/fish)	43.6	6.3
STOCKING DENSITY (fish/m <sup>2</sup> )	2.3	
TOTAL FOOD SUPPLY (kg)	10,963	
	Table Size Only	Table Size + Fry
TOTAL WEIGHT GAIN (kg)	602.1	1,210.1
FOOD CONVERSION RATE	18.20	9.05
WEIGHT GAIN (%)	256	
SURVIVAL RATE (%)	60.0	

Table 2. Model of Fattening Tilapia in Polyculture

Expected Fish Crop and Required Madeya in 0.1 Ha Pond (Tilapia Catfish 4:1) at Productivity of 0.1 kg/per m<sup>2</sup>

	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec
Monthly Foods Amount (kg)	16	28	33	42	67	72	73	56	387			
Estimated Tilapia Number	1,250	1,188	1,125	1,125	1,125	1,063	1,063	1,063	1,000			
Estimated Tilapia Size (g)	20	25	32	40	49	58	66	73	80			
Tilapia Survival Rate (%)	0.95	0.9	0.9	0.9	0.85	0.85	0.85	0.8	0.8			
Total Tilapia body weight (kg)	25	30	36	45	55	62	70	78	80			
Estimated Catfish Number	36	34	32.4	32.4	32.4	30.6	30.6	30.6	28.8			
Estimated Catfish Size (g)	40	68	105	175	235	330	450	580	687.419147			
Catfish Survival Rate (%)	0.95	0.9	0.9	0.9	0.85	0.85	0.85	0.8	0.8			
Total catfish body weight (kg)	1.4	2.3	3.4	5.7	7.6	10.1	13.8	17.7	19.8			
Estimated Total Fish Weight (kg)	26.4	30.4	37.0	45.3	53.7	64.3	78.7	93.4	99.9			
Feeding Rate (%)	2.0	3.0	3.0	3.0	4.0	4.0	3.0	2.0				
Water Temp. (°C)	20-28	21-29	23-31	23-32	25-32	25-31	24-31	21-31				

Average Food Conversion Rate	3.0	3.5	4.0	5.0	5.0	5.0	5.0	5.0	5.3
Monthly Weight gain (kg)	5.3	8.1	8.3	8.4	13.3	14.4	14.6	11.2	83.7
Monthly Lost weight (kg)	1.3	1.5	0.0	0.0	2.7	0.0	0.0	4.7	10.2
Monthly Increased Body weight (kg)	4.0	6.6	8.3	8.4	10.6	14.4	14.6	6.5	73.5

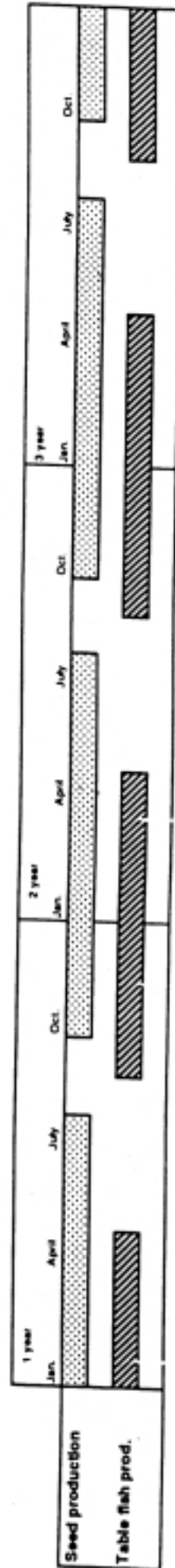


Figure 2: Standard Production Cycle of Seed & Table Fish Production