Shrimp Crop Insurance Farm Record Book

Published by

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Shrimp Crop Insurance Farm Record Book

Name of the Farmer : _____

Insurance Company : _____

Insurance Policy No. : _____

Pond Name/No. : _____

Address : _____

_____

_____

_____

Crop period (Date)

From _____ **to** _____

A brief on Better Management Practices (BMPs) in shrimp farming

1. Pond design

1.1. Pond lining, maintaining adequate depth, central drain and wastewater treatment facility help in suitable intensification which enhances the pond efficiency.

1.2. Provision of water reservoir helps in supply of quality water to the ponds following sedimentation and treatment.

1.3. Implement biosecurity measures by providing physical barriers, disinfection, antiseptics and ageing of pond water post chlorination to prevent the entry of disease-causing pathogens.

1.4. Maintain farm hygiene by following sanitary and phytosanitary measures.

2. Pond preparation

2.1. Follow appropriate pond preparation considering the previous crop history and risk perception.

2.2. Adopt adequate pond drying, bottom scraping, ploughing, liming, and strengthening of bunds and dykes to keep the pond ready for stocking.

2.3. Ensure the optimum primary productivity (algal bloom) level in the pond before stocking.

3. Seed selection and stocking

3.1. Choose quality (SPF *P. vannamei*) seed from the Coastal Aquaculture Authority (CAA) registered hatcheries.

3.2. Select quality seed by following physical, chemical and molecular screening protocols.

3.3. Follow proper acclimatization steps while stocking of seeds.

3.4. On farm nursery rearing ensures quality seed and optimal survival rates in grow-out ponds.

3.5. Maintain optimum stocking density as recommended by Coastal Aquaculture Authority (CAA).

4. Feed Management

4.1 Use fresh feed, maintain clean environment for feed storage and follow the recommended guidelines for feeding practices.

4.2 Closely monitor the check trays, shrimp behaviour, biomass and environmental factors (weather) to optimize the feeding.

4.3 Avoid over or under feeding and usage of chemicals to maintain the water quality.

4.4 Monitor shrimp growth and Feed Conversion Ratio (FCR). If the growth rate is disproportionate to the feed given, adopt corrective measures.

5. Soil and water quality management

5.1. Sandy clay, sandy clay loam or clay loam soil types are suitable for shrimp aquaculture.

5.2. Maintain optimum soil (pH, fertility, organic carbon content) and water (pH, DO, TAN, minerals composition etc.) quality parameters.

5.3. Check the water quality at regular intervals and adopt corrective measures based on the test results.

5.4. Ensure adequate aeration, plankton bloom, essential mineral nutrients and maintain the pond bottom clean by removal of accumulated sludges.

6. Top of Form Disease Management

6.1. Report diseases promptly in National Surveillance Programme on Aquatic Animal Diseases (NSPAAD) “Report Fish Disease App” and implement appropriate management measures.

6.2. Isolate infected ponds and undertake corrective steps in consultation with the technical experts.

6.3. Prevent disease through adoption of biosecurity measures, proper feed, pond management and judicious use of appropriate treatments.

6.4. Report to your insurance company in case of any disease occurrence.

6.5. Consider emergency harvest when there is an increase in mortality or the occurrence of moribund shrimps.

7. Harvest and Post-Harvest

7.1. Partial harvesting helps to maintain the pond carrying capacity and minimize risks.

7.2. Follow Hazard Analysis Critical Control Point (HACCP) guidelines for food safety including usage of good quality ice and quick chilling of shrimp after harvesting.

7.3. Maintain the documents of all farm operations for supporting insurance claim.

Note: The information mentioned above is a brief list of Better Management Practices (BMPs).

For detailed BMPs with standard values and ameliorative procedure, please refer the following websites.

- CIBA (http://tinyurl.com/4mj2ut7a)
- CIBA Shrimp App(http://tinyurl.com/yejs6ajy)
- CAA (http://tinyurl.com/bruc422u)
- MPEDA (http://tinyurl.com/2yc5vz8m)

NOTES

Basic farm record
(For insurance purpose)

Name of the Farmer/ Farmers' group	
CAA /DoF/ MPEDA Registration No.	
Farm address and contact	
Land ownership (Owned/Leased)	

Pond details

Pond No. / Identification	
Pond type (Earthen/Lined)	
Average pond depth (m)	
Average size of the pond in ha	
Water source (Creek/ River/Seawater/ Others)	
Species cultured (Vannamei, Monodon, Indicus)	
Seed source (Hatchery name & address)	
PL size	
Date of stocking	
Stocking density/m^2	

Expenditure details

1. Pre-stocking preparatory activities (Pond preparation)					
S. No	**Date**	**Activity**	**Quantity (Kg)**	**Amount (LS)**	**Remarks**
1.		Ploughing			
2		Liming			
3		Fertilization			
4		Probiotics			
Total					

2. Seed selection		
Screening		
Physical	**Chemical**	**Molecular (PCR)**
Yes / No If yes, Observation:	Yes / No If yes, Observation:	Yes / No If yes, Date: ..... Labs: .... Report No : ..... Expenditures (Rs.): ....

Date / Description	Quantity	Unit price(Rs.)	Amount (Rs.)	Remarks
3. Seed details				
4. Feed details (Grade- wise)				
I.				
II.				
III.				
IV.				
V.				
VI.				
VII.				
Total				
5. Pond management				
Feed / Water probiotics				
Others				
Total				
6. Labour cost (manpower, salary etc.,)				

7. Electricity charges/ha/crop or energy expenditures

Date	Receipt No.	Units consumed	Amount (Rs.)
Generator/ fuel cost			
Total			

8. Miscellaneous expenditures: (Repair & maintenance/ Others)				
S. No	**Date**	**Name of the item**	**Quantity**	**Amount (Rs.)**
Total				

9. Harvest details		
	Partial harvest*	**Full harvest**
Date of harvest		
DOC at harvest		
Production(tons/ha)		
Counts (No/Kg)		
Expenditures (Rs.) (Labour, Net)		

*If partial harvest is performed, then give the details of both partial and full harvest.

Note: For all the expenses, keep the receipts/ bills as proof which should be submitted to your insurance company in case of insurance claiming purpose.

DATA LOG :

DOC	Feed Management							Water Quality Parameters				
	Quantity of feed (Kg)							DAILY BASIS				
	1	2	3	4	5	Total	FCR	DO (mg/L)	pH		Salinity (ppt)	Temp (^{0}C)
									AM	PM		
1												
2												
3												
4												
5												
6												
7												
8												
9												
10												
11												
12												
13												
14												
15												

Water Parameters						Shrimp health(✓)		Sampling Details				Remarks
WEEKLY BASIS												
Alkalinity (mg/L as $CaCO_3$)	Ca^{2+} (mg/L)	Mg^{2+} (mg/L)	K^{+} (mg/L)	TAN (mg/L)	NO_2^- (mg/L)	Normal	Needs monitoring	ABW (g)	Weight gain (g)	Est. SR (%)	Est. Biomass (Kg)	

DOC	Feed Management							Water Parameters				
	Quantity of feed (Kg)							DAILY BASIS				
	1	2	3	4	5	Total	FCR	DO (mg/L)	pH		Salinity (ppt)	Temp (^{0}C)
									AM	PM		
16												
17												
18												
19												
20												
21												
22												
23												
24												
25												
26												
27												
28												
29												
30												

Water Parameters						Shrimp health(✓)		Sampling Details				Remarks
WEEKLY BASIS												
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	1	2	3	4	5	Total	FCR	DO (mg/L)	pH		Salinity (ppt)	Temp (^oC)
									AM	PM		
31												
32												
33												
34												
35												
36												
37												
38												
39												
40												
41												
42												
43												
44												
45												

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	1	2	3	4	5	Total	FCR	DO (mg/L)	pH		Salinity (ppt)	Temp (^{0}C)
									AM	PM		
46												
47												
48												
49												
50												
51												
52												
53												
54												
55												
56												
57												
58												
59												
60												

Water Parameters						Shrimp health(✓)		Sampling Details				Remarks
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									AM	PM		
61												
62												
63												
64												
65												
66												
67												
68												
69												
70												
71												
72												
73												
74												
75												

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									AM	PM		
76												
77												
78												
79												
80												
81												
82												
83												
84												
85												
86												
87												
88												
89												
90												

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									AM	PM		
91												
92												
93												
94												
95												
96												
97												
98												
99												
100												
101												
102												
103												
104												
105												

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									AM	PM		
106												
107												
108												
109												
110												
111												
112												
113												
114												
115												
116												
117												
118												
119												
120												

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									AM	PM		
121												
122												
123												
124												
125												
126												
127												
128												
129												
130												
131												
132												
133												
134												
135												

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									AM	PM		
136												
137												
138												
139												
140												
141												
142												
143												
144												
145												
146												
147												
148												
149												
150												

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Telephone directory of important offices

S. No	Offices	Address	Contact number & email id
1.	DoF, GoI (Marine Fisheries)	No 479, Krishi Bhavan New Delhi -110 001	011-23097014 Sanjay.rpandey@gov.in
2.	DoF, GoI (Inland Fisheries)	36, Chander Lok Building, Janpath New Delhi - 110 001	011-23310351 rakesh.kr38@gov.in
3.	CAA (Coastal Aquaculture Authority)	5th Floor, Fanepet, Nandanam, Chennai - 600 035	044-2435 3502 caaheadoffice@caa.gov.in
4.	ICAR – CIBA (Central Institute of Brackishwater Aquaculture)	#75, Santhome High Road, MRC Nagar, RA Puram, Chennai, Tamil Nadu-600 028	+91-044-24618817 / 24616948 / 24610565 director.ciba@icar.gov.in
5.	NFDB (National Fisheries Development Board)	Fish Building Pillar No:235, SVPNPA Post, Hyderabad- 500 052	+ 91 - 040 - 24000201/177 nfdbqueries@gmail.com
6.	Commissioner of Fisheries and Fishermen Welfare (TN)	3rd Floor, Integrated Animal Husbandry and Fisheries Building, Nandanam - 600 035.	044 - 29510390 Fax No: 044-29510396
7.	Commissioner of Fisheries (AP)	Bandar Road, Poranki, Vijayawada - 521 137	comfishap@gmail.com
8.	Commissioner of Fisheries(Gujarat)	Block no-10, Jivraj Mehta Bhavan, Gandhinagar -382 010	079- 232-53729 Fax No: 079-232-53730

Insurance related queries

M/s Oriental Insurance Company Limited through M/s Alliance Insurance Brokers	M/s Agricultural Insurance Company
Mrs. Anjali Gaurkhede Regional Manager Oriental Insurance Company Limited, Mumbai Mobile: 9869509876 anjalig@orientalinsurance.co.in	Mr. B.G. Syam Kumar Chief Regional Manager Mobile: 7994646436 syamkbg@aicofindia.com **Regional offices** Gujarat Mobile: 7926472600 ro.ahmedabad@aicofindia.com Andhra Pradesh Mobile: 8632233565 ro.guntur@aicofindia.com Tamil Nadu & Pondicherry Mobile: 9940326750, 9790233325 Phone: 1800-103-6565 ro.chennai@aicofindia.com
Alliance Insurance Brokers Pvt. Ltd. Mr. C.A. Srinivasan Vice President Mobile: 8291027991 srinivasan@allianceinsurance.in Mr. K.V. Parthasarathy Chief Manager Mobile: 9152037594 parthasarathy@allianceinsurance.in	

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Aquaculture- Important concepts & parameters

Water Quality Parameters	Optimal Range
Dissolved Oxygen	> 4 mg/L
Temperature	28-32^{0}C
pH	7.5-8.5
Salinity	28-32 ppt
Total Alkalinity	> 120-200 mg/L as $CaCO_3$
Total Ammonia Nitrogen (TAN)	< 1mg/L (NH_3:<0.1 mg/L)
H_2S	< 0.03mg/L
Nitrite (NO_2^--N)	< 0.25mg/L
Minerals	**Recommended level in water and feed**
Calcium [Ca^{2+} (mg/L)]	Above 150-200 mg/L in water; 1.25 to 2% (max) in feed
Magnesium [Mg^{2+} (mg/L)]	300-400 mg/L in water and 0.2% in feed
Potassium [K^+ (mg/L)]	150-200 mg/L in water and 0.5 to 1% in feed

Growth parameters & its calculation

Parameter	Description	Calculation	Unit
Feed conversion ratio (FCR)	The rate or ratio measuring the total feed used and the total weight of the shrimp harvested per unit area.	$\frac{\text{Feed intake (Dry Weight)}}{\text{Body Weight Gain (Wet Weight)}}$	Nil
Weight gain	An increase in body weight	Final weight-Initial weight	g
Average Body Weight (ABW)	The average weight of individual shrimp within a population.	$\frac{\text{Total weight of the sample}}{\text{Total no: of shrimps in the sample}}$	g
Average daily growth (ADG)	The average increase in the size or weight of shrimp over a single day.	$\frac{\text{Total weight gained by the shrimps}}{\text{Total days of culture}}$	g/day
Biomass	Measure of the overall stock of shrimp within a given space.	Number of shrimps Average weight of shrimps	Kg
Survival	The percentage of shrimp alive at the end of cultivation.	$\frac{\text{Total No:of shrimps harvested}}{\text{Total No:of shrimps stocked}} \times 100$	%

Units

- **1 ppm (Parts per million) = 1mg/L**
- **1 ppt (Parts per thousand) = 1g/L**

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