

# PRAWNSEEDCARE

## FUNCTIONAL PRAWN FEED SUPPLEMENT

**SURVIVE**  
*Functional Shrimp Feed Supplement*

Shrimp survival rate depends on many factors like genetics, hatchery management, larval diets used, proper acclimatization of seed to pond conditions, Pond bottom preparation, environmental criteria, epidemics, stocking densities etc.

**Contains**

- ✓ Stress busters like Ascorbic acid
- ✓ Immunomodulators like Beta glucons, Mannon oligo Sachharides
- ✓ Probiotics
- ✓ Anti-virals like Colloidal Silver, *Ocimum americanum*

**RECOMMENDED USAGE:**  
1 ml per 1000 seedlings while packing at the Hatchery

**RELIEVES FROM THE STRESS    IMPARTS IMMUNITY AND DISEASE RESISTANCE**  
**INSTILLS GUT MICROFLORA    INHIBITS THE PATHOGENS AND VIRUSES**  
**DECREASES MORTALITIES    ENHANCES SURVIVAL RATE**

### Survival of shrimp depends on various factors like

- Genetics
- Hatchery Management,
  - Larval Diets,
  - Transport of the seed
- Acclimatization of the seed to pond conditions
  - Seepage Tanks
- Higher temperature fluctuation
  - Presence of predators
  - Presence of Vectors
- Presence of Harmful Algae

At farmer level, he is having no control over Genetics, Hatchery Management, Larval Diets. He can address the other ones, if he can understand the problems and solutions.

As most farmers bargain the prices and opt for cheaper seed, Hatchery management may not be able to provide full justification to their job.

1. They may not cull the brooders when they are aged.
2. They may either underfeed the larvae or even starve the larvae.
3. They may not be able to identify weak, deformed, already sick or pathogen affected seed and destroy them.

### **Nutrition and feeding of Larvae**

The quantity, quality and management of feed can have an important impact on larval health and survival. Failure to provide sufficient feed of the right quality can lead to stress, poor growth, mortality, increased in cannibalistic behaviour, deformity and increased levels of epibiont fouling.

- When using formulated diets as a supplement to live feed, it is important to feed small amounts of high quality appropriately sized, nonpolluting diets frequently. As a guide, particle sizes should be 10-50 µm for zoea, 100-200 µm for mysis, and 200-300 µm for early postlarvae stages. A feeding frequency of every two to four hours is generally regarded as sufficient.

For the majority of the larvae feed requirements, reliance should still be placed on high quality live feeds, including algae and Artemia.

As such at Hatchery larval diets are artemia and algae and at farm level they will be fed with crumbled feed.

If the farmer can give artemia and spirulina on the first day and slowly replace it with crumbled feed over a period of 3-5 days, the shrimp may survive better.

Now while transporting normally sterilized water is not used.

It is known that for most shrimp seed stocked in ponds, up to 45% of all Post Larvae (PL) mortalities occur within the first 30-40 days of stocking. This high mortality rate is due to several factors:

1. The health or quality of the PL being supplied by the hatchery.
2. The stress placed upon the PL being stocked as a consequence of transportation from hatchery to farm.
3. The stress placed upon the PL being stocked as a consequence of pond-side acclimation procedures or lack thereof.
4. The amounts of stored energy a PL shrimp has built up prior to shipment from the hatchery to the farm.
5. The amount of remaining energy a PL has upon arrival at the farm.
6. The time it takes to build back or regain sufficient levels of lipids prior to full release into the pond.

### **PROTOCOLS TO BE OBSERVED BY THE FARMER WHILE BUYING THE SEED FROM A HATCHERY:**

Before any purchase of larvae is made the farmer or buyer should carefully examine the life history of the tanks he is purchasing. If nauplii counts are made then the percentage of nauplii, which metamorphose to zoea-1 stage larvae is a good indication of broodstock egg quality.

The buyer should be aware of any disease incidents in the larvae history and take note of survivals from zoea-3 to mysis-1 and mysis 3 to postlarvae-1. These are critical molts in the life cycle of penaeids and require a different food source and size. The survivals between each of these stages will be an indication of the management and energy reserves of the larvae.

Prior to packing shrimp larvae, the condition of the larvae should be assessed by competent technicians and check for the following parameters:

The animals should not be in molting stage and should have a tail muscle to intestine width ratio of at least 3:1 to insure vigor and complete development.

Gill should be checked under a microscope to insure complete development.

A simple stress test should be applied to help with larval quality determinations.

Place approximately 100 post larvae from the hatchery tank directly into a one liter beaker with zero salinity water for one hour to observe mortality. 90% of the animals should react to gentle touch to be considered alive and a good group

### PROCEDURE FOR TRANSPORTATION:

Transportation is normally done in double plastic bag of 20 L capacity containing 8-10 litres of water and filled with pure oxygen for the rest of the space.

The temperature of the parking and shipping water is adjusted from 18-25°C down to between 8-18°C.

These bags are again packed in an insulated box with enough ice to prevent temperature from rising during transport.

Density 500-800/L.

Salinity is maintained at 32-35 ppt.

pH according to pond water between 7-8 preferred.

Upon arrival at the farm level, the seed should again be disinfected employing SURVIVE.- If possible, the transport vehicle should first be disinfected before entering the farm site. After unpacking the seed, the packing material must be incinerated.

Hence a need arises to provide a product to use while transporting the seed to remove pathogens, to instill better microflora, to give immune modulators, to provide stress busters, to use anti viral compounds, to employ osmo regulators, to provide minimal nutrition etc.

Now,

### PRAWNSEEDCARE™ contains

1. Colloidal silver, an intelligent biocide which targets alkali pH loving pathogens including virus while promoting acidic pH loving beneficial microbes.
2. Gut microflora
3. Immune modulators like 1,3/1,6 beta glucons, Mannon oligo sachharides
4. Hepatoprotectors like Eclipta Alba, Swetia chirraitia, Bhumyamlaka
5. Stress busters like Ascorbic acid, Citric acid,
6. Electrolytes like Sodium Chloride, Potassium Chloride
7. Anti virals like Tulsi Extract
8. Osmo regulators like Betaine
9. Dextrose
10. Protein hydrolysates
11. Colloidal Minerals

### **POND-SIDE ACCLIMATION:**

Density of post larvae during acclimation should not exceed 250 larvae per liter. If cost, time of transport, and transportation equipment permits lower densities, that is always preferable. Oxygen should be maintained at 2.0-4.0 mg/L with airstones, aerators and/or with oxygen.

For salinity differences of 2-10 ppt between hatchery and farm it is generally thought that a change of 1.0 ppt per 30 minutes is acceptable. Below 15.0 ppt, the time has to be extended to approximately 1.0 ppt every 1.5 hours.

Acclimation times for temperature differences are generally around 10-15 minutes per degree of temperature difference.

Acclimation tanks of 1m<sup>3</sup> size are easy to use at pond side and can be set up to gravity flow to the pond being stocked once acclimation has been accomplished.

Feeding small amounts of Survive, Colloidal PUFA, Bioplan Pro and Nano Minerals but in frequent intervals is preferred during acclimation since the animals can be observed for consumption to insure that water quality is maintained within the tank. A one-liter beaker is a very good tool to use to determine if post larvae are feeding or not. Feeding larvae during acclimation should be done at two hour intervals using a satiation methodology, which means that the technician feeds as much as the animals will eat and no more.

As a general rule feeding approximately 10% of the body weight every two hours will maintain acclimating shrimp larvae in excellent condition. The diet should be the same as used for enrichment during the hatchery stage.

### **WEB REFERENCES:**

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