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Using Shellfish Diet® and other Instant Algae® 1800 Feeds

Applications

- **Effective at all life stages** – larvae, setting, spat, fattening and maturation
- Effective when used with open tanks, silos, bottle upwellers, header tanks (with circulation), cultch tanks and depuration tanks
- **Works best when there is moderate circulation to keep the algae suspended**
- **Freshwater applications** - Shellfish Diet is an effective feed for freshwater as well as marine organisms. Shellfish Diet and other Instant Algae products are widely used in freshwater mussel research.
- Other uses of Shellfish Diet - Shellfish Diet is an effective feed for a wide range of filter feeders including bivalves, crustaceans, corals, and sea cucumber larvae

Feeding with Shellfish Diet

- When feeding into open tanks or header tanks pre-dilute the algae 10:1 with seawater
 - We suggest pouring the slurry through a 20 to 50 micron mesh bag to ensure algae are dispersed.
- When water is circulated with a centrifugal pump, such as with an upweller or downweller, Shellfish Diet can be added in front of the pump intake and the pump will disperse the algae cells
- **Do not use a blender to mix the algae!**

Automated feeding for convenience and regulation of food density

Dispensing feed at frequent intervals makes it easier to maintain a steady food concentration in the culture tank, avoiding both overfeeding and underfeeding. A peristaltic pump, controlled by a timer, may be used to automatically dispense Shellfish Diet into the culture tank. Shellfish Diet should be pumped from a reservoir housed in a refrigerator or ice-water bath. Experience has shown that the residence time of the feed in the tubing that delivers the feed to the culture tank is so short that this brief exposure to higher temperatures has no adverse effects on the quality of the feed.

*see website for additional techniques for automatic feeding

A wealth of information on bivalve culture is available in the FAO's manual "Hatchery culture of bivalves", a free download at <http://www.fao.org/docrep/007/y5720e/y5720e00.htm> (be sure to download via the "ZIP" option, or you will not get the complete manual). **The following feeding rates are based on the FAO recommendations.**



Feed rates

Feeding Larvae

Daily feed rates *Crassostrea gigas* – from FAO Protocol

Day	Mean shell length	Billion cells of <i>Isochrysis</i> per million larvae	Liters of live <i>Isochrysis</i> at four million cells per ml	ml of Shellfish Diet 1800 or <i>Isochrysis</i> 1800
2	75	1.7	0.4	0.4
3	95	2.2	0.6	0.6
4	100	2.8	0.7	0.7
5	115	8.5	2.1	2.2
6	130	14.5	3.6	3.8
7	145	20.5	5.1	5.4
8	160	26.2	6.6	6.9
9	190	37.9	9.5	9.9
10	220	49.7	12.4	13.0
11	240	57.5	14.4	15.1
12	260	65.3	16.3	17.1
13	270	69.2	17.3	18.2
14	280	73.1	18.3	19.2

Feeding Spat

Feed By Live Weight:

- 0.7ml Shellfish Diet per gram live weight of spat per day
- Works for all sizes of spat

Or

Feed by Seed Count: (*Feeding 1 million Oyster Spat*; based on FAO manual, p. 137, Table 14)

Length (mm)	Shellfish Diet feed per day
0.3	7 ml
0.5	50 ml
1.0	214 ml
2.0	1.6 Liters
3.0	4.9 Liters

Feeding Broodstock (Conditioning) and Fattening Shellfish for Market

- **Typical feed rates:**

- 0.03-0.06 ml Shellfish Diet per gram wet meat weight per day

or

- 0.3 – 1.2 ml Shellfish Diet per adult animal per day

- ❖ The required food ration for conditioning is based on the meat weight of the adults. It is usually between 2 and 4% of the mean dry meat in dry weight of algae fed per day. This is approximately equivalent to 0.03 – 0.06ml Shellfish Diet per gram of wet meat weight.