

TENNESSEE WILDLIFE RESOURCES AGENCY

EVENT 32801-11546 FISH FOOD SPECIFICATIONS

1. General Specifications:

The feed to be supplied under this contract shall be manufacturers' off the shelf closed-formula commercial fish feed that matches or exceeds the following specifications.

- a) Fish feed shall be milled no more than ninety (90) days prior to delivery and contain vitamin and trace mineral supplements in amounts equal to or greater than industry standards for closed-formula feeds. Feed shall be formulated to meet the minimum vitamin and mineral content for a period of not less than ninety (90) days from delivery.
- b) Fish meal may be increased or decreased depending upon protein content of the meal. However, feed formulation must contain the overall minimum protein percentage listed for each item. Quantity of added oil may be adjusted upward or downward so that the finished feed shall contain not less than the percentage of crude fat specified dependent on the fat content of the raw ingredients. Wheat flour, wheat middlings or equivalent filler can be used to compensate for differences in lipid and protein concentration to maintain target protein energy ratios.
- c) The digestible carbohydrate protein of the diet should not exceed 15% of the dietary energy for finished fish feeds. Feed formulations for other species may contain higher levels of carbohydrate provided carbohydrate and assimilation has been adequately studied to ensure excellent growth performance and good health.
- d) Fish oil shall be used primarily to top-dress feeds. All fish oil to the diet shall meet the following minimum requirement: 3% Free Fatty Acids, < 1% Nitrogen and < 1% Moisture. The fish oil shall be stabilized using 0.02% BHA-BHT (1:1), Ethoxyquine at 0.01% or equivalent antioxidant system.
- e) Ingredients shall be carefully, thoroughly grinded, mixed and pulverized. Starter # 1 Granules to pass 100% through a U.S. 20 Screen and pass over a U.S. 30 Screen. Starter # 2 Granules to pass 100% through a U.S. 16 Screen and pass over a U.S. 20 Screen.

2. Item ID Specifications

2.1 Item Numbers: 1000181903 and 1000181904 Fry Feed

Sizes: #1 Granules (0.5 – 0.8 mm), #2 Granules (0.8 – 1.0 mm)

Guaranteed Analysis -

Fish Meal shall contain:

- Ash, not more than 12%
 - Protein not less than 52%
 - Salt not more than 5%
 - Fat not less than 15%
 - Fiber not more than 2%
 - Moisture not more than 10%
- Diet shall be standard commercial fish diet in the manufacturer's product line that meets the above specifications, and diet shall not be modified to reduce cost or quality.
 - Diet shall contain adequate vitamin and mineral additives to assure health and growth of the fish.
 - Fish feed supplied shall be a proven diet for the species being cultured, meeting the complete nutritional requirements for that species without necessity of supplemental feedings or diets.

2.2 Item Numbers: 1000181905, 1000181906, 1000181907, and 1000181908

Extruded Pellet Feed – Slow Sinking

Sizes: Extruded Pellets 1.2 mm, 1.5 mm, 2.0 mm, 3.0 mm

Guaranteed Analysis -

Fish Meal shall contain:

- Ash, not more than 13%
 - Protein not less than 47%
 - Salt not more than 5%
 - Fat not less than 15%
 - Fiber not more than 2%
 - Moisture not more than 10%
- Diet shall be standard commercial fish diet in the manufacturer's product line that meets the above specifications, and diet shall not be modified to reduce cost or quality.
 - Diet shall contain adequate vitamin and mineral additives to assure health and growth of the fish.
 - Fish feed supplied shall be a proven diet for the species being cultured, meeting the complete nutritional requirements for that species without necessity of supplemental

feedings or diets.

2.3 Item Numbers: 1000181910, 1000181911 Extruded Pellet Feed Pigmented – Slow Sinking

Shall include the manufacturer standard formulation of carotenoid pigments to enhance fish coloration.

Sizes: 4.0 mm, 6.0 mm

Guaranteed Analysis –

Fish Meal shall contain:

- Ash, not more than 12%
 - Protein not less than 43%
 - Salt not more than 5%
 - Fat not less than 15%
 - Fiber not more than 2%
 - Moisture not more than 10%
-
- Diet shall be standard commercial fish diet in the manufacturer's product line that meets the above specifications, and diet shall not be modified to reduce cost or quality.
 - Diet shall contain adequate vitamin and mineral additives to assure health and growth of the fish.
 - Fish feed supplied shall be a proven diet for the species being cultured, meeting the complete nutritional requirements for that species without necessity of supplemental feedings or diets.

2.4 Item Number 1000181909

Extruded Pellet Feed –

Floating Size: 5.5 mm

Guaranteed Analysis -

Fish Meal shall contain:

- Ash, not more than 12%
- Protein not less than 41%
- Salt not more than 5%
- Fat not less than 22%
- Fiber not more than 3%

- Moisture not more than 9%

- Diet shall be standard commercial catfish diet in the manufacturer's product line that meets the above specifications, and diet shall not be modified to reduce cost or quality.

- Diet shall contain adequate vitamin and mineral additives to assure health and growth of the fish.

- Fish feed supplied shall be a proven diet for the species being cultured, meeting the complete nutritional requirements for that species without necessity of supplemental feedings or diets.

3. Acceptance

Any order or portion thereof which appears contaminated upon visual inspection of either the outside of bags or the contents of bags will be rejected. Food that becomes moldy within ninety (90) days of receipt at the hatchery, when stored to the contractor specifications, shall also be deemed rejected by the State. Finally, the State reserves the right to subject any shipment or portion to sampling and analysis to determine whether it complies with contract specifications. If analysis reveals that the shipment or portion thereof does not comply with the contract offering, the non-conforming feed shall be deemed rejected. The decision to undertake sampling and analysis will be made promptly after evidence of a problem in the quality of the shipment or portion thereof becomes apparent. Analysis is estimated to take three (3) weeks. Upon rejection of a shipment or portion thereof the contractor shall either pick up the rejected fish food at the contractor's expense or, at the election of the State, the rejected fish food shall be returned to the contractor at the contractor's expense. All rejected feed shall be replaced within ten (10) business days of notification from the State of the rejection at no additional cost to the State.

The contractor shall be required to pay the cost of all subsequent testing for the term of the contract if an initial test, paid for by Wildlife Resources and conducted by an independent laboratory, documents that fish feed being supplied by the contractor does not meet all listed specifications.

4. F.O.B. Delivery Sites

Agency will request shipment to one of the following locations with each order that is placed. All delivery charges shall be included in prices bid. Minimum order placed for any delivery location will be 1500 pounds.

Site # 1: Buffalo Springs Trout Hatchery (Cold Water Hatchery)

275 Hatchery Lane
Rutledge, Tennessee 37861
Duane Oyer, Manager
PH: 423/828-5263

Site # 2: Erwin Trout Hatchery (Cold Water Hatchery)

475 Banner Springs Road
Erwin, Tennessee 37650
Corey Jones, Manager PH:
423/743-4842

Site # 3: Tellico Hatchery (Cold Water Hatchery)

3193 River Road
Tellico Plains, Tennessee 37385
Jon Ellis, Manager
PH: 423/253-2661

Site # 4: Eagle Bend Fish Hatchery (Warm Water Hatchery)

1201 Charles Seviars Blvd
Clinton, Tennessee 37716
Mike Smith, Manager
PH: 865/457-5135

Site # 5: Morristown Fish Hatchery (Warm Water Hatchery)

4994 Fish Hatchery Road
Russelville, Tennessee 37860
PH: 423/586-7971
Bob Robertson, Manager

Site #6: Humboldt Hatchery (Warm Water Hatchery)

221 State Route 152
Humboldt, Tennessee 38342
Tom Pratt, Manager
PH: 731/784-3889

Site # 7: Springfield Hatchery (Warm Water Hatchery)

4300 Draughon Road
Springfield, Tennessee 37172
Roger Bitz, Manager
PH: 615/382-2428

Site # 8: Normandy Hatchery (Warm Water Hatchery)

380 Huffman Road
Normandy, Tennessee 37360
Nathan Singer, Manager
PH: 931/857-3417

Site # 9: Flintville Hatchery (Cold Water Hatchery)

65 Fish Hatchery Road
Flintville, Tennessee 37335
Steven Day, Manager
PH: 931/937-8381

5. Delivery Requirements:

1. Delivery shall be made during regular business hours. Monday-Friday, 8:00 AM – 4:00 PM, Local Time.
2. No deliveries on State holidays.
3. **Notification required 24 hours in advance of expected delivery.** A one-hour notification is also required for Tellico State Fish Hatchery in order to set up an escort by a state employee both in and out of the Cherokee National Forest on River Road. Any delivery without an escort is subject to citations from the Forest Service Law Enforcement Officers.
4. All hatcheries are capable of off-loading regular pallets up to 2,000 pounds in weight from the tailgate of enclosed trailers or the side of flatbed trailers. Tailgate delivery to be provided if feed is shipped in an enclosed trailer. TWRA staff will

assist with unloading.

5. Feed delivered must be the size of feed ordered.
6. Feed is to be packaged in moisture resistant containers (bags or buckets) weighing a minimum of forty (40) pounds and a maximum of fifty (50) pounds.
7. All hatcheries will make all efforts to coordinate ordering to reduce shipping cost.
8. Delivery must be made within thirty (30) days of purchase order receipt by the contractor.