# Fall & Winter Feeding Tips

*Drs. Foster & Smith Educational Staff*

How you feed your fish in the fall and winter can have a large impact on their health through the winter to the spring. Spring is a time when fish are less hearty from winter and the fluctuating temperatures add to their stress level, making them vulnerable to disease.

A proper and balanced diet can help give your fish the protection they need. For instance, the diet of a koi in the wild would include fish, mollusks, crabs, and basically everything else that moves. A koi will enjoy eating anything that lives in water, be it fresh or salt, but it's best to cook these first to make sure parasites or disease will not be transmitted to your prize fish. Feeding your fish insects such as spiders, grubs, and worms on a regular basis can add great health benefits. Just make sure the creature won't bite the fish. You can even feed commercially available dried insects.

Goldfish do not eat as much food as koi, but often eat insects in and on the water, and would benefit from a variety in their diet also. Fancy goldfish, though, can have problems sucking in too much air when taking food from the surface, causing swim bladder problems. For this reason it is wise to feed them food that slowly sinks.

Floating food such as flakes or dried insects should be soaked first before feeding. For all types of fish this can be a great way to add vitamins to their diet. Vitamins B and C, and spirulina are great supplements as well as a small amount of wheat germ oil. Fish oils can be a great source of energy for your fish.

As the cooler temperatures arrive, you'll want to start getting your fish ready for the winter ahead. The only way you can possibly feed your fish correctly as the weather cools is to know the temperature of the water. If you do not have a thermometer, this is the time to get one.

Once the water temperature lowers to 60°F, your fishes' staple food should be mixed with a wheat germ base that is lower in protein. When the water temperatures reach 50°F the staple food should be switched to wheat germ based foods exclusively. Proteins are much harder to digest than other nutrients. The wheat germ diet can continue to be fed all winter if the water temperature doesn't get below 50°F.

Important: Do not feed if there is any chance of the temperatures dropping below 50°F within a few days. Fish are not capable of proper digestion in cold water and the food can decay in their system, sending bacteria into the bloodstream and killing the fish.

**At 55°F the fish's metabolism starts to slow, reducing its intake requirements.**
***Once the water temperatures go below 40°F, it's time to stop feeding until spring.***



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Anytime you are feeding when it's below 60°F, keep in mind the bacteria in your filter are also slowing their activity. They no longer reproduce, and they will die off or go dormant when extreme water temperatures are experienced. It's a good idea to test the water regularly to make sure ammonia and nitrite aren't showing up. A great diet to end the year and start in spring would include a mild antibiotic soaked in the food. Do not add antibiotics to the water as they can damage the natural balance in your pond.

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