Due to outbreaks of Viral Hemorrhagic Septicemia (VHS), United States Department of Agriculture Animal and Plant Health Inspection Service (USDA-APHIS) has determined that it is necessary to prohibit the importation of certain species of live fish from two Canadian Provinces (Ontario & Quebec) into the United States and the interstate movement of the same species of live fish from the eight states bordering the Great Lakes. These eight states are designated as prohibited: Illinois, Indiana, Michigan, Minnesota, New York, Ohio, Pennsylvania, and Wisconsin.

The following species are included in the APHIS order: Brown trout, Rainbow trout, Channel catfish, Brown bullhead, Atlantic cod, Black crappie, Bluegill, Bluntnose minnow, Burbot, Chinook salmon, Coho salmon, Chum salmon, Emerald shiner, Freshwater drum, Gizzard shad, Grayling, Haddock, Herring, Japanese flounder, Largemouth bass, Muskelunge, Pacific cod, Pike, Pink salmon, Pumpkinseed, Redhorse sucker, Rock bass, Rockling, Round goby, Smallmouth bass, Sprat, Turbot, Walleye, White bass, White perch, Whitefish, Yellow perch.

Common carp are not included as a restricted species. However, I would encourage you to avoid getting stock from this area until this issue is resolved. Carp are not known to carry this virus. But the virus may be transferred by the fish and in water. If a problem would every arise because of the transport of common carp or any other live fish, severe restrictions could result in the transport of carp or any other live fish in or out of North Carolina.
Disease Highlight: Viral Hemorrhagic Septicemia (VHS)

Viral hemorrhagic septicemia (VHS) virus is an extremely serious pathogen of both freshwater and saltwater fish. The disease transmits easily between fish of all ages. Mortality is highest at water temperatures between 37 and 54 °F. Some fish will show no external signs. Some others will show signs like bulging eyes, bloated abdomens, inactive or overactive behavior, and hemorrhaging in the eyes, skin, gills, and at base of fins. Testing is necessary to determine whether the fish is infected.

In the past, VHS was thought to be a concern for trout and a few other freshwater fish raised for commercial aquaculture in Europe. However the recent outbreak in the Great Lakes Region appears to be a new strain of the virus. The new strain is responsible for die-offs of many freshwater species.

Due to its high mortality and severe economic consequences, VHS is considered a reportable disease by the World Organization for Animal Health.

Testing is necessary to determine whether the fish is infected.

Stay alert for more information about the disease, especially the names of species newly found to be susceptible.


Disease Highlight: Spring Viremia of Carp (SVC)

Spring Viremia of Carp (SVC) is a viral disease of fish mainly common carp. Common carp is the main species but there are other fish that are susceptible to this disease under natural conditions. These species include: grass carp, silver carp, bighead carp, goldfish, tench, and sheatfish. Other species have been affected under experimental conditions like: roach, pike, guppy, pumpkinseed, goldfish, zebra danios, and golden shiners.

First signs of the disease include behavioral changes. The fish congregate in slow-flowing water, near pond banks, or lie on the bottom. As the disease progresses, the fish become sluggish and may swim and lie on their sides. Externally, the fish may exhibit signs typically of disease like: darkening of the skin, swollen abdomen, pop-eye, anemia and pale gills, protruding vent, hemorrhages in the skin, gills, and anterior eye chamber.

Optimal temperature for the development of the disease is between 16-17 °C. Mortality was reduced when temperatures ranged from 17-26 °C.

Fish that are infected with the virus can shed the virus in feces and possibly in urine and gill mucus. The disease can also be spread from infected fish to uninfected fish.

To prevent the disease, purchase fish from an SVC-free area. Also, disinfect equipment and properly dispose of dead fish.

This disease has had substantial impact on the production of carp in Europe. In recent years, it has been found on an aquaculture farm in North Carolina.

SVC has been detected in wild carp in Cedar Lake, Wisconsin, Sag Channel in Illinois, and in the Great Lakes on the Canadian side.

The bottom line is to be cautious about accepting fish from the Great Lakes area. Try to locate fish from other areas if possible. If SVC is identified in your pond, it would mean quarantine of your pond, depopulation of fish, and disinfection of pond. So let’s try to avoid SVC.

More and more, Americans are eating seafood. Good news because seafood is healthy. In 2005, we hit an all-time high eating 16.5 lbs of seafood per capita. Seafood contains high quality protein and other essential nutrients...can be low in saturated fat...and may contain omega-3 fatty acids. In fact, a well-balanced diet that includes a variety of fish and shellfish can contribute to heart health and children's growth and development.

Unfortunately, there has also been some confusion with the risks associated with eating seafood. On October 17, Seafood Choices: Balancing Benefits and Risks was released from the Institute of Medicine. The report summarizes recommendations for seafood consumption by government and non-government groups in the US and abroad.

1. Women who are or may become pregnant or who are breastfeeding may benefit from eating seafood, especially those kinds which have relatively higher concentrations of EPA and DHA. A reasonable amount would be two 3 oz servings per week, but they can safely consume up to 12 oz per week. They can consume up to 6 oz of white tuna (albacore) weekly and should avoid eating large predatory fish like shark, swordfish, tilefish, and king mackerel.
2. Children ages 12 and under are given the same guidance as pregnant women, except that serving size should be age appropriate.
3. Adolescent and adult males and women who will not become pregnant may reduce their risk for cardiovascular disease by eating seafood regularly, for example, two 3-oz servings per week. Those who consume more than two servings per week should choose a variety of seafood to reduce risk for exposure to contaminants from a single source.
4. Adult men and females who are at risk of coronary heart disease may reduce that risk by consuming seafood regularly, for example, two 3-oz servings per week. There may be additional benefits from including seafood selections high in EPA and DHA.

It is also necessary to check for local advisories of sport caught fish. This can be found in the NC Wildlife Commission fishing regulations handbook.

To sum it all up, continue to eat seafood...it has many health benefits. But if you are in one of the high risk groups, follow the guidelines as specified.


Upcoming Events

December 1, 2006, Recirculating Aquaculture Tour, NC A&T State University, Greensboro

December 9, 2006, 8:30am-3:00pm, Putting Small Acreage to Work, Gaston County Cooperative Extension, Dallas (www.gaston.ces.ncsu.edu)

February 9-10, 2007, 19th Annual North Carolina Aquaculture Development Conference, Sheraton Atlantic Beach (www.ncaquaculture.org)
The North Carolina Cooperative Extension Service is an educational agency funded by the United States Department of Agriculture, North Carolina State University, and local governments. The North Carolina Cooperative Extension Service’s mission is to help individuals, families, and communities put research based knowledge to work to improve their lives.

Four major program areas:
- Agriculture and Natural Resources
- Community & Rural Development
- Family & Consumer Education
- 4-H & Youth Development

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