



Shore Conservor

Eastern Shore Soil & Water Conservation District • 22545 Center Parkway • Accomac VA 23301 • 757-787-0918

February 2010

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VACDE Service Award

Congratulations to Tamsey Ellis, The Education Director, who received her 5-year service pin. Thank you Tamsey for your hard work and years of dedicated service.

How Aquaculture Came to be on the Eastern Shore

Chesapeake comes from the Algonquin word "Chesepioc" meaning "great shellfish bay" and oysters were once so plentiful in the Chesapeake Bay, that they could filter it in about three days. Today that number has dwindled to less than 1% of its historic level. It now takes almost one year to filter that amount of water. The oyster population has been diminished by overharvesting, increased pollution, and the outbreak of two diseases, MSX and Demo. To the people of the Shore, aquaculture may mean the salvation of our oyster and clam populations. Aquaculture (the rearing of aquatic organisms such as oysters, clams and scallops through controlled conditions) is now the fastest growing form of food production in the world. Half of the fish and shellfish consumed by humans is produced through aquaculture also known as aqua-farming. Farming on the ES is a way of life and long tradition; thus, it would seem logical to continue that tradition past the water's edge.



Cherrystone, a local aquafarm on the Shore packs clams all year round.

Research by VIMS, in the late 1960s, allowed the hard clam (*Mercenaria mercenaria*) industry productivity to rocket. One of the first steps in this research was the creation of a substrate, or loose shell and gravel, to line the clam beds. This may sound simple, but this breakthrough allowed the seed clams (about 9-10mm) to reside in spaces that predators, such as blue crabs and cow nose rays, could not reach. New techniques to produce clams more efficiently and effectively in hatcheries were developed. Cherrystone Aqua Farm played a leading role in this research. They are able to produce an exorbitant amount of seed clams. This process starts indoors. Adult clams which are selected for their fast rate of growth, are placed in tanks of seawater. This water is gradually brought to the ideal temperature for spawning of 65 degrees. Each female will release between 16-24 million microscopic eggs per spawn. The fertilized eggs are removed and put in special containers of pasteurized seawater which is inoculated with algae (food for the clam). The resulting juvenile clams are raised in tanks of pasteurized seawater and algae until they reach a size large enough to move to outdoors to land-based tanks. These tanks are continually flushed

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NRCS Announces New Program in Aquaculture

Though the Natural Resources Conservation Service (NRCS) has been helping people help the land for nearly 75 years, the agency can also provide assistance to producers whose harvests come from the sea. Shellfish growers are well aware of the connection between water quality and the successful growth and harvesting of food. That quality is vulnerable to the effects of many coastal uses.

Shellfish are filter feeders, obtaining their food from the surrounding water and substrate, but are also capable of removing sediment and

nutrients as well. Chronic degradation of water quality and associated substrate threaten their health and survival. Maintaining adequate water flow through the growing area is critical.

In 2010, NRCS will offer funding through a special Chesapeake Bay project to help growers in the Bay improve the water quality that shellfish need to thrive. This project is made possible through a partnership with the Virginia Marine Resources Commission and the Virginia Sea Grant Marine Extension Program at the Virginia

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Sign Up NOW

VA Agricultural Cost-share 2009-10 No-till Program

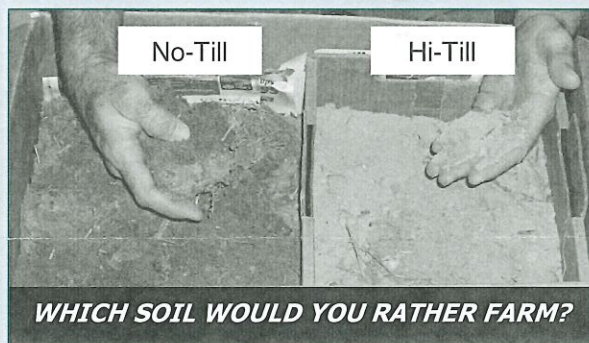
SL-15A/Continuous No-till System

The purpose is to increase biomass/ soil quality and recognize nutrient management indicators to manage the movement of nitrogen, phosphorus, sediments and runoff with the use of no-till planting. To encourage the conversion of minimum and conventional tillage fields to a continuous no-till system. All crops must be planted using no-till methods.

- Current Nutrient Management Plan is required.
- Required small grain crops may be harvested. Straw must remain on the field.
- A 60% residue cover must be maintained throughout the lifespan of the practice.
- Only double crop cash grain or no-till cotton rotations that include at least two crops of small grain in five years are eligible.
- All eligible fields must have a cropping history two out of the past five years. Permanent grass or hay land is not considered cropland.
- This is a 5-year commitment where the state cost-share rate is a one time incentive payment of \$100 per acre paid the first year.
- Strip-till corn is allowed as long as a 60% residue cover is retained for the lifespan of the practice.
- **All eligible fields must be converting from a minimum or conventional till system to a continuous no-till system (this means your land must have been conventionally tilled once in the last 3 years).**



No-till practices conserve moisture in a dry year and help improve water quality. As demonstrated on the right, no-till practices result in soil structure that is much more stable, and holds up better under wet conditions.



Continuous No-Till is Good for Your Soil Because It:

- Increases biomass and soil quality
 - Increases infiltration of rainwater by decreasing surface crusting thus reducing runoff, soil erosion and nutrient loss
 - Produces a darker, richer, spongier soil that holds together with more organic matter
 - Results in more earthworms to aerate the soil
 - Results in less compaction which allows roots to go deeper protecting them from drought and inclement weather.
- Continuous No-till produces more yield!!

Continuous No-till Lessons Learned in 2009...

Insect pressure: Early planted corn can be damaged by slugs or worms but row cleaners may be helpful in preventing insect damage. This year, county agents are seeing wheat mites in no-till versus conventionally-tilled wheat.

Weed prevention: Italian rye grass tends to invade subsequent crops and should be controlled. Weeds allowed to seed (mustard, etc.) can cause major problems in subsequent crop.

Soil temperature should be above 50 degrees for planting. That could mean having to delay planting for as much as a week compared with conventional planting.

**Sign-up for Federal Cost-share (EQIP, WHIP, WRP, FRPP)
is now being taken on a continuing basis.**

...Aquaculture on the Eastern Shore

with natural, non-pasteurized seawater. When the young clams reach the size of adult clams, they are moved into sand trays and kept in the shallow waters of the Bay. Many of these clams are sold to aqua farms and others are raised two to three years to market size (almost 1 inch). These larger clams are covered with special netting to protect them from predators (as pictured on the right).

Aquaculture is important to the Eastern Shore of Virginia economically and environmentally. Northampton County has the largest clam production in the U.S. with annual sales of \$40 million. The harvesting of clams has risen from approximately 2 million wild hard clams in the 1960s to today's estimated a little over 150 million produced in aquaculture. Because the clam aquaculture labor and supporting purchases (transportation, storage, marketing, distribution, etc) occur here on the Shore, the industry has helped our local economy. Over 600 jobs, directly or indirectly, have been created. This increase in jobs leads to additional spending in retail markets, household goods and

services. On the Eastern Shore, the clam is the most valuable aquaculture commodity.

Following the lead of the hard clam industry, aquaculture is now being developed for the oyster, (*Crassostrea vir-*



ginica). This native oyster is our State seashell and is also known as the Eastern, Atlantic or Virginia oyster. Research is being conducted to develop a native disease-resistant oyster and reefs constructed from special concrete blocks on which they could attach. On February 20, 2010 VIMS conducted a meeting at Gloucester Point, VA to share their data and gain input from Virginia growers.

Aquaculture has been good for the environment adding a restorative factor by filtering the water. Clean water is

essential for aquaculture to succeed. In 2009 Governor Kaine announced a new regulation that will ensure better wastewater disposal methods to provide cleaner waters for oysters and clams. This will effectively reduce bacterial contamination and increase the amount of shellfish fit to eat. Bacterial contamination, a major problem for shellfish growth, can come from a variety of sources such as septic tank leaks, pets and wild animals. It takes everyone to keep our Bay clean. You, as an average homeowner, can help clean up the waters of the Bay by simply including some best management practices in your landscape, cleaning up after your pets, and regular maintenance of your septic system. With the help of local citizens, the practice of aquaculture and the amazing filtering properties of oysters and clams, the Chesapeake Bay will again live up to its name, The Great Shellfish Bay. For more information, visit www.vims.edu/research/units/centerspartners/abc/industry/index.php or contact D. Pelata at (804)684-7711 or dpelata@vims.edu.

Spring Conservation Grants Available

The Billie Fitzgerald Memorial Conservation Grants are available for the 2010 year. School and community groups in Accomack and Northampton counties are eligible for funding for conservation or environmental education projects such as nature trails or fieldtrips for environmental study. The deadline for applications is March 1, 2010. To get an application, contact Tamsey Ellis, 757-787-0918, x129, tamsey.ellis@va.nacdnet.net or go to the District's website—www.esswcd.org.

Cash Prizes for Conservation Poster Contest

The ESSWCD Conservation Poster Contest is open to all local students, grades K-12. Cash prizes for 1st-4th place in each of the five categories. Posters must be completed with this year's theme: "Conservation Habits = Healthy Habitats" and submitted to the District by March 26, 2010.

Poster awards are given at the ES Science Fair held on April 24th at the ES Community College, and winning posters are displayed in the Accomack Public Library.

For complete rules and tips on how to make an effective poster, contact your art teacher or the District office.

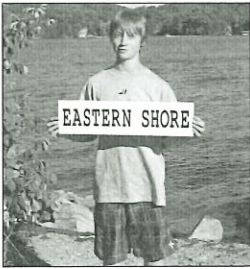
Scholarships Available

Undergraduate college students, who are residents of Virginia and pursuing a degree related to environmental studies are eligible to apply for the Eastern Shore Soil and Water Conservation District 2010 Scholarships. Instructions are included on the application which is due April 30, 2010.

The Virginia Association of Soil and Water Conservation Districts is offering a \$1,000 scholarship available to students in Virginia. This application must be submitted to the ESSWCD office by March 1, 2010.

Scholarship applications may be obtained from your school guidance counselor or from the District at (757)787-0918, www.esswcd.org/scholarship or tamsey.ellis@va.nacdnet.net.

Conservation Youth Camp



Daniel Lassiter attended the 2009 Youth Conservation Camp.

The Virginia Association of Soil and Water Conservation Districts (VASWCD) is sponsoring a week-long summer conservation camp, July 11-17, 2010 on the Virginia Tech campus for high school students. Most of the instruction consists of outdoors hands-on activities. Exciting field trips are planned including a hike to the Cascades Waterfall, canoeing, and a tour of a mussel aquaculture center.

Studies include cave geology, lake ecology, forestry, and agricultural plus many other fun-filled activities. Eastern Shore Soil and Water Conservation District and Ye Accawmacke Garden Club will be covering expenses for the campers. If you know a student with a keen interest in the environment, please encourage them to apply by April 30, 2010 to ESSWCD. For a more complete description of camp and this year's schedule, check out the VASWCD's Conservation website at www.vaswcd.org/youthcamp or contact the District.

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NRCS' New Aquaculture Program

Institute of Marine Science. Participation is voluntary and non-regulatory in nature.

The NRCS aquaculture program helps protect fish, shellfish, and invertebrate populations through careful monitoring of plants and wildlife, disease, and the environment. To be eligible, growers will need to develop a Shellfish Aquaculture Management Plan that includes such elements as waste gear removal and gear cycling to reduce bio-fouling on aquaculture equipment. Two public meetings were held to explain a new project for shellfish growers. The meetings were February 17, 2010, 6 PM, in Wachapreague, VA, at the Virginia Institute of Marine Science (VIMS), and February 18, 2010, 6 PM, in Gloucester Point, VA, at VIMS. For more information contact: Julie Hawkins, (434)392-4171 x 118, NRCS.■

New "Native Plants of Accomack and Northampton" Guide

A new native plant guide specifically recognizing native plants of the Eastern Shore is just what you've been looking

for to plan your landscaping. The plant guide features plants that have been part of the local ecology



prior to John Smith's land-

Look for the full-color Native Plant guide featuring natives specific to the Eastern Shore free at the Chamber of Commerce and other locations.

ing. The native plants featured are adapted to the Shore's local soils and climate conditions such as marsh, salt spray and brackish water and thus require less maintenance. They are good for the environment and essential for the survival of our native wildlife and migratory birds. Plants in this guide are beautiful in the home garden, fairly easy to maintain and many of them are available at local garden centers. So "Plant ES Natives, They're Shore Beautiful!" This free guide was produced by the Virginia Coastal Zone Management Program and a steering committee which includes many partner agencies on the Shore. To get your free copy of "Native Plants of Accomack and Northampton" guide, visit www.deq.virginia.gov/coastal/esnativeplantlist.html.

The Shore Conserver is published quarterly by the Eastern Shore SWCD to provide information to land users. The District customarily meets monthly on the second Wednesday of the month at 5:00pm at the USDA Service Center in Accomack, VA. The public is welcome to attend. To be added to the mailing list, please contact the District office at 757-787-0918 x119.

All programs and services of the Eastern Shore Soil and Water Conservation District and the Natural Resources Conservation Service are offered on a nondiscriminatory basis, without regard to race, color, national origin, religion, sex, age, marital status or handicap.

Change Service Requested

Eastern Shore Soil and Water
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