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The NRCS Plant Materials Program newsletter for the conservation community

Switchgrass Isn't Just for Growing Anymore

During the State of the Union Address last January, President Bush made a passing reference to a little known grass that has the potential to produce enormous energy. That now famous grass' popular name is switchgrass.

The president's reference has put switchgrass at the center of much of the bio-fuel debate gripping the nation. But unbeknownst to many, switchgrass has been grown, and its energy potential has been known, throughout America for generations. To understand the use of switchgrass for generating energy all one needs to do is stand near the plant during a *burn* to feel the intense heat it produces (a *burn* is when farmers and ranchers burn fields to spur on new growth).

Switchgrass

"Compared with the heat emitted from other grasses during a burn, switchgrass is the most intense," says National Plant Materials Center Manager John Englert, who overseas burns at the center's Beltsville, Maryland facility. "But it's important to remember that switchgrass is king in many conservation uses from grazing, wildlife, erosion control and even bio sequestration."

And switchgrass may one day be *king* in bio-fuel energy production as well. It may seem far-fetched, but consider the growing attention being paid to bioenergy. With oil reaching record prices, almost everyday we are hearing about the new attention powerful industries are paying to bio fuels and their potential to wean us from our oil dependency.

Fortunately for us switchgrass is a perennial grass that can be grown on millions of acres of land. And because of high gas prices at the pump it now has the potential of becoming a profitable agricultural crop for energy generation. In fact, many Plant Materials Centers (PMCs) test grow switchgrass, and it is in some regions, especially at the Manhattan, Kansas PMC, one of the easiest crops to establish.

"Not everyone shares the view that switchgrass is easy to grow," said John Row, a plant materials scientist at the Kansas PMC. "However, in recent years, with all the talk about biofuels, concerns have been raised regarding producers being able to establish a stand of switchgrass."

But John Englert says that despite the few complaints about switchgrass it is relatively easy to grow as long as a few guidelines are followed.
Research has shown that a number of factors need to be considered when planting switchgrass. Seeding depth, soil type, soil temperature, soil pH, seed size and seed dormancy are factors one must consider.

There are also varietal differences and environmental factors when it comes to seed size and seed dormancy. Soil temperatures ranging between 25°C to 35°C and soil pH between 5.0 and 8.0 are thought to be ideal for germination success in switchgrass. The lighter textured soils are also an advantage to emerging seedlings.

But whether or not it easy or hard to grow switchgrass there's little doubt among energy experts that, with dwindling oil supplies and rising consumption from China and India, oil will continue to get more expensive and farmers may just find themselves sitting on grass gold.

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National Plant Materials Center Selects Chesapeake Bay for Recognition During National Wetlands Month

With watersheds from six states pouring into it everyday, the Chesapeake Bay is our nation's largest estuary, and an endangered wetland.

The states that affect the health of the Bay are Virginia, West Virginia, Maryland, Delaware, Pennsylvania and New York. In each of these states the largest land use is by far agriculture. Because of this, much of the water runoff that comes from these farms could contain large amounts of fertilizers and pesticides which ultimately find their way into the Bay.

Canadian geese rest on Chesapeake Bay wetlands on Maryland's Eastern Shore

The accumulated effects of this water runoff results in high nitrogen levels which, when heated by the sun during the summer months, creates algae blooms which can be miles across and can suffocate wildlife in the waters of the Bay.

To ameliorate this process the NRCS works with farmers in the watershed of the Chesapeake Bay to encourage them to install conservation practices, such as riparian buffers and other cost saving conservation practices that encourage infiltration of much of the water runoff.

Although much hard work still needs to be done to clean the Bay, over the years agriculture has been doing its part to lessen pollution. And, since May is National Wetlands Month, the staff at the National Plant Materials Center would like to acknowledge the hard work of those in the agricultural community who are voluntarily making a positive impact on keeping the Bay clean and healthy for all to enjoy.

Through the NRCS' many voluntary Farm Bill programs the farmers of the Chesapeake Bay have demonstrated a stewardship that has allowed the NRCS to continue *Helping People Help the Land.*

Form more information on Farm Bill programs go to:
http://www.nrcs.usda.gov/programs/farmbill/2002/index.html

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Our Mission Statement: *Deliver plant-science technology to meet the nation's natural resources conservation needs.*