

2007  
March



UW — EXTENSION — LANGLADE COUNTY

# Langlade Ag-Letter

## Potato Industry Board Seeks Nominations

*Nominations are now open for three Wisconsin Potato Industry Board seats.*

MADISON - Wisconsin potato growers who want to help direct how the annual grower-funded promotion and research is invested can seek a position on the Wisconsin Potato Industry Board.

The Wisconsin Department of Agriculture, Trade and Consumer Protection announced today that nominations for three director positions on the board will be accepted until March 10, 2007. DATCP will conduct the board election from April 16 - April 28, 2007.

Farmers who grow potatoes on five or more acres in PIB districts 2, 3 and 4 are eligible to nominate or to be nominated for possible election to the board. Each nomination form must have the signatures of five affected producers from the same district in which the nominee resides. Those districts include:

District 2 - Brown, Door, Kewaunee, Langlade, Menominee, and Oconto counties.

District 3 - Marathon, Outagamie, Portage, Shawano, and Waupaca counties.

District 4 - Adams, Buffalo, Crawford, Green Lake, Jackson, Juneau, La Crosse, Marquette, Monroe, Richland, Sauk, Trempealeau, Vernon, Waushara, and Wood counties.

The terms of James Spychalla of Antigo in District 2, Clifford Gagas of Custer in District 3 and Jim Bacon of Hancock in District 4 are expiring. All three of the

*Continued page 4*

### Inside this issue:

Cellulosic Ethanol	2
Potato Industry Board continued	4

### Dates to Remember:

#### March 2—

Heart of the Farm—Farm Womens Conf. Oshkosh, WI, LaSure's Hall  
1-day conference, training programs, networking, hands-on workshops, programming on business planning, farm management, human resources and more.  
Contact: Kevin Jarek, Outagamie County, 920.832.5121

#### March 7—

Organic Basics Workshop, Antigo  
An educational workshop sponsored by UW Extension and MOSES (Midwest Organic and Sustainable Education Service) will feature Harriet Behar, MOSES educator and area organic farmers. See enclosed brochure

#### March 13—

Organic Herd Health Meeting  
Dr. Guy (Nielsville, WI), organic farmer Kevin Kiehnau, and agriculture agent, Alex Crockford will be presenting information on organic herd health. See brochure, no cost. Call UW Extension

#### March 14—

Central Wisconsin Vegetable Grower Conference. Hancock, WI  
Contact person: Ken Williams, Waushara UW Extension 920-787-0416

#### March 15 & 23—

Nutrient Management Training  
Course required for soil sampling MALWEG incentive funds to write Nutrient Management Plans. Sign up with Marie Graupner, 627-6291.  
SNAP Plus training will be offered again at NTC.

#### March 20—

Pesticide Applicator Training, Antigo

#### March 24—

Fruit Tree Pruning Workshop 1-3:30p.m. Grandview Orchard, register with UW Extension. 627-6236

# What is cellulosic ethanol production?

source: <http://en.wikipedia.org/>

Cellulosic ethanol is a type of ethanol that is produced from a great diversity of biomass including waste from urban, agricultural, and forestry sources. Unlike normal ethanol, whose original raw material are sugars and starches, cellulosic ethanol's starting raw material is cellulose. There are at least two methods of production of cellulosic ethanol — hydrolysis followed by fermentation of the generated free sugars, and synthesis gas fermentation or catalysis (e.g., Fischer Tropsch). Neither process generates toxic emissions when it produces ethanol. Cellulosic ethanol production currently exists at "pilot" and "commercial demonstration" scale, including a plant in China engineered by SunOpta Inc. and owned and

operated by China Resources Alcohol Corporation that is currently producing cellulosic ethanol from corn stover (stalks and leaves) on a continuous, 24-hour per day basis. According to US Department of Energy studies conducted by the Argonne Laboratories of the University of Chicago, one of the benefits of cellulosic ethanol is that it reduces greenhouse gas emissions (GHG) by 85% over reformulated gasoline. By contrast, starch ethanol (e.g., from corn), which uses most of the time natural gas to provide energy for the process, reduces GHG emissions by 18% to 29% over gasoline. Sugar ethanol, on the other hand, from sugarcane, reduces greenhouse gas emissions by as much as cellulosic ethanol because it uses sugarcane bagasse to provide

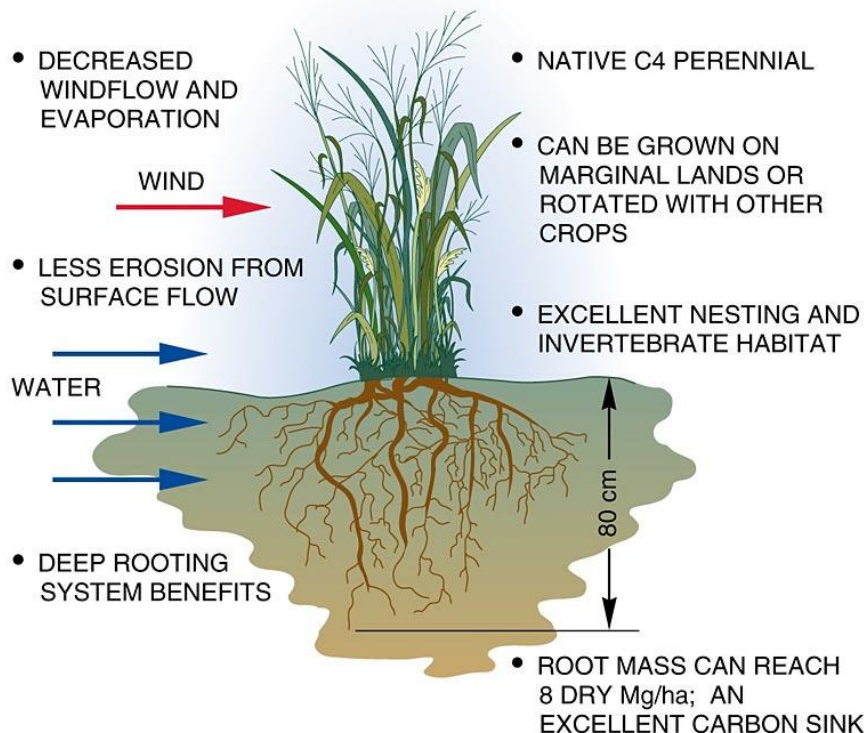
the energy for the process and the excess to make electricity for the grid.

In April 2004, Iogen Corporation, a Canadian biotechnology firm, became the first business to commercially sell cellulosic ethanol, though in very small quantities. The primary consumer thus far has been the Canadian government, which, along with the United States government (particularly the Department of Energy's National Renewable Energy Laboratory), has invested millions of dollars into assisting the commercialization of cellulosic ethanol.

Another company which appears to be nearing commercialization of cellulosic ethanol is Spain's Abengoa Bioenergy. Abengoa has and continues to invest heavily in the necessary technology for bringing cellulosic ethanol to market. Utilizing process and pre-treatment technology from SunOpta Inc., Abengoa is building a 5 million gallon cellulosic ethanol facility in Spain and have recently entered into a strategic research and development agreement with Dyadic International, Inc. (AMEX: DIL), to create new and better enzyme mixtures which may be used to improve both the efficiencies and cost structure of producing cellulosic ethanol. On December 21, 2006, SunOpta Inc. announced a Joint Venture with GreenField Ethanol, Canada's largest ethanol producer. The joint venture will build a series of large-scale plants that will make ethanol from wood chips, with SunOpta and GreenField each taking 50% ownership. The first of these plants will be 10 million gallons per year, which appears to be the first true "commercial scale" cellulosic ethanol plant in the world. Under 1 million

ORNL-DWG 93M-8892

## SWITCHGRASS



## Ethanol continued...

gallons per year (MMgy) is considered "Pilot Scale", greater than 1 MMgy but less than 10 MMgy is defined as "commercial demonstration", while a plant that produces 10 MMgy per year or greater is true "commercial scale". Despite the multiple commercial demonstration cellulosic ethanol plants SunOpta has been involved with, media reports continue to state that cellulosic ethanol is an unproven, "experimental"

technology. The 10 MMgy SunOpta/GreenField cellulosic ethanol plant is intended to demonstrate that large-scale cellulosic ethanol is commercially viable immediately. President Bush, in his State of the Union address delivered January 31, 2006, proposed to expand the use of cellulosic ethanol. In his State of the Union Address on January 23, 2007, President Bush announced a proposed mandate for

35 billion gallons of ethanol by 2017. It is widely recognized that the maximum production of ethanol from corn starch is 15 billion gallons per year, implying a mandated production of some 20 billion gallons per year of cellulosic ethanol by 2017. Bush's plan includes \$2 billion dollars funding for cellulosic ethanol plants, with an additional \$1.6 billion announced by the USDA on January 27, 2007.

## Why should we care about cellulosic ethanol?

source: <http://en.wikipedia.org/>

The quest for alternative energies has provided many ways to produce electricity, such as wind farms, hydropower, or solar cells. However, about 40% of total energy consumption is dedicated to transportation (ie cars, planes, lorries/trucks etc) and currently requires energy-dense liquid fuels such as gasoline, diesel fuel, or kerosene. These fuels are all obtained by refining petroleum.

This dependency on oil has two major drawbacks: burning fossil fuels such as oil contributes to global warming; and importing oil creates a dependency on oil producing countries. Ethanol fuel is a practical alternative to oil.

Ethanol, today, is produced mostly from sugars or starches, obtained from fruits and grains. In contrast, cellulosic ethanol is obtained from cellulose, the main component of wood, straw and much of the plants. Since cellulose cannot be digested by humans, the production of cellulose does not compete with the production of food. The price per ton of the raw material is thus much cheaper than grains or fruits.

Moreover, since cellulose is the



Switchgrass can produce biomass

main components of plants, the whole plant can be harvested. This results in much better yields per acre—up to 10 tons, instead of 4 or 5 tons for the best crops of grain. The raw material is plentiful. Cellulose is present in every plant: straw, grass, wood. Most of these "bio-mass" products are currently discarded.

Transforming them into ethanol using efficient and cost effective hemi(cellulase) enzymes or other

processes might provide as much as 30% of the current fuel consumption in the US—and probably similar figures in other oil-importing regions like China or Europe. Moreover, even land marginal for agriculture could be planted with cellulose producing crops like switchgrass, resulting in enough production to substitute for all the current oil imports.

In June 2006, a U.S. Senate hearing was told that the current cost of producing cellulosic ethanol is US \$2.25 per US gallon (US \$0.59/litre). This is primarily due to the current poor conversion efficiency. At that price it would cost about \$120 to substitute a barrel of oil (42 gallons), taking into account the lower energy content of ethanol. However, the Department of Energy is optimistic and has requested a doubling of research funding. The same Senate hearing was told that the research target was to reduce the cost of production to US \$1.07 per US gallon (US \$0.28/litre) by 2012.

# Potato Industry Board Continued...



## Langlade County

Phone: (715)627-6236

Fax: (715) 627-6260

Email: [alex.crockford@ces.uwex.edu](mailto:alex.crockford@ces.uwex.edu)

<http://langlade.uwex.edu>

Through the **University of Wisconsin-Extension**, all Wisconsin people can access university resources and engage in lifelong learning, wherever they live and work.

"An EEO/Affirmative Action employer, University of Wisconsin-Extension provides equal opportunities in employment and programming, including Title IX and ADA. Please make requests for reasonable accommodations to ensure equal access to educational programs as early as possible preceding the scheduled program, service or activity. This document can be provided in an alternative format by calling UW-Extension at 715/748-3327 or 711 for Wisconsin

current directors are eligible to serve on the Board again.

Potato growers will be mailed a nomination form from the state agriculture department during the last week of February. The form contains the nomination information. Any producer interested in running for a position in Districts 2, 3 or 4 should follow the instructions on the nomination form and have the Affidavit of

Eligibility notarized. Send the completed nomination form to: DATCP Marketing Order Program, P.O. Box 8911, Madison, WI 53708-8911. The forms must be postmarked on or before March 10, 2007.

Directors are elected to a three-year term of office which will begin July 1, 2007.

The Wisconsin Potato Industry Board consists of ten potato growers. In managing the more than \$850,000 in grower-funded promotion and research money annually, the board is responsible for budget approval and developing and evaluating research proposals.

NONPROFIT ORGANIZATION  
U.S. POSTAGE PAID  
PERMIT NO. 33  
ANTIGO, WI 54409

