AgKnowledge

Meeting the needs of Idaho's greatest resource—Its people

Canola & Biodiesel

Canola: Opportunities for human, cow health, oil production, pest suppression

Even commuters oblivious to the passing landscape during daily drives can't miss the bright yellow fields of canola and mustard in bloom each year.

For plant breeder Jack Brown and other University of Idaho researches, those bright golden fields present a wealth of opportunities. Canola is Brown's primary focus, although mustard offers alternative benefits and plays a large role in his efforts.

Canola's recent recognition by the Food and Drug Administration as a heart-healthy food adds substantially to its reputation. Other benefits to canola include a nutritious meal left after seeds are crushed to extract oil. Idaho's growing dairy industry prizes the meal to boost milk quality and production. Canola and mustard meal also can serve as fertilizer or as a soil additive to control pests.

IdaGold and Pacific Gold, two condiment mustards bred at the university, are grown as rotational crops to break the pest cycle in wheat and other crops. IdaGold also has a following among potato growers who plow it under before it matures so its spicy chemicals will counteract soil pests.

But for Brown, it's mostly about the oil. He foresees a future where a multitude of canola and mustard varieties, each adapted for a specific environment, will produce oil with the same characteristics and tailored to produce high quality biodiesel.

Brown's work already has yielded many returns for Idaho and Northwest growers. New canola varieties developed by Brown are scheduled to reach the market soon. Developed with conventional plant breeding techniques, the new varieties tolerate an herbicide popular among growers of other crops but toxic to conventional canolas for as long as five years. That long toxicity limited growers' ability to use canola in crop rotations.

Idaho's global alternative fuel role grows

When a Gibraltar-based company began searching for ways to tap into the world's growing biodiesel market, its research into potential oil sources led them to University of Idaho plant breeder Jack Brown and his work with canola.

Widely known for his work with canola and mustard varieties, Brown's world-spanning collection of seeds convinced Eco-Energy Ltd. to invest more than $2 million in Idaho-based research.

Not that Brown and his College of Agricultural and Life Sciences staff will be staying home. He plans to begin research on existing and new canola and mustard varieties by establishing trial plantings in Europe, Asia, and South America during the coming year.

The goal of his work, Brown said, will be to develop specific varieties adapted to environmental conditions at specific sites around the globe.

Contact Brown at jbrown@uidaho.edu.

DID YOU KNOW?

50 National Parks now use biodiesel to cut pollution, 10 years after Yellowstone launched the effort with help of UI's Chuck Peterson.

*Source: University of Idaho Department of Biological and Agricultural Engineering, 2006

Idaho's first large-scale biodiesel plant opens

Blue Sky Biodiesel at New Plymouth is Idaho's first large-scale biodiesel plant. The company's venture into the alternative fuels market appears well timed, said Jon Van Gerpen, University of Idaho Department of Biological and Agricultural Engineering head. Van Gerpen leads the university's multi-million-dollar biodiesel education program targeting distributors and manufacturers nationwide.

Biodiesel will never completely replace petroleum-based diesel, but it can provide a profitable market niche that will serve specific needs, he said.

An example of such markets surrounds Yellowstone National Park, where Van Gerpen's predecessor, agricultural engineer Chuck Peterson, worked with the National Park Service to pioneer the use of biodiesel in 1996.

Yellowstone-area motorists now find biodiesel at the pumps and pay a premium for the fuel that reduces air pollutants and works well even in the harshest conditions.

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#210/2007