

Corn Talk News RESEARCH UPDATE

CORN TALK NEWS
PENNSYLVANIA MASTER CORN GROWERS ASSOC., INC.

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Option 2: In fields without a history of thiocarbamate herbicide use (EPTC or butylate), apply 5 to 7 pint per acre Eradicane preplant incorporated. Incorporate immediately after

application. Eradicane will also control other annual grasses, nutsedge, and give suppression of pigweed. The cost of this program is \$15 to \$25 per acre.

Pluses
Broad spectrum

Minuses
Cost (higher rates)
Tillage required

Giant Foxtail
Option 1: Apply Dual or Lasso plus atrazine or Bladex. Use 1.5 to 2.5 pint Dual or 2 to 3 quart Lasso plus 1.25 to 1.6 quart atrazine or 1.5 to 3 quart

Pluses
Broad spectrum
Single trip

Minuses
Cost (higher rates)
atrazine restrictions

Option 2: Include 1.8 to 2.4 pint Prowl 3.3E applied late preemergence with Lasso or Dual. This will add an additional \$6 to \$8 per acre. To avoid injury problems with Prowl, do

Pluses
Broad spectrum
Single trip
Residual control

Minuses
Injury risk

Editor's Note: The author and Penn State University do not imply endorsement of any

not apply at planting. Delay application until corn reaches the spike stage. Also, be sure the seed furrow is completely closed before applying. See the Prowl statement above for additional comments.

product mentioned in this paper.

Bioproducts Fuel Corn Revolution

DENVER, Colo. — A revolution is taking place, and it is coming out of the corn field in the form of a new generation of natural and environmentally friendly products.

That was the message received by about 2,000 corn growers and industry leaders attending the National Corn Growers Association's 1994 Corn Classic.

Ethanol represented the corn industry's first major shot in the battle to replace petroleum-based products, but the competition is escalating as corn moves into the emerging field of bioplastics and biochemicals.

Although these new products are just beginning to emerge, it is already obvious the result will be explosive growth in corn utilization, said Mark Whitacre, president of Archer Daniels Midland's (ADM) bioproduct division, at the Corn Classic breakout session "Improving Profits By Increasing Corn Use."

"The chemical business is a \$60 billion industry. Petroleum and natural gas are the current feedstock for these products, but biochemicals made from corn are expanding rapidly. ADM has already invested \$1 billion in its bioproduct division and it is expected to represent one-third of the company's business by 1996-97," said Whitacre.

ADM is focusing on corn-based food and feed additives such as vitamins, flavoring agents, and natural insecticides. The bioproduct arena offers dramatic expansion and corn utilization opportunities, said Whitacre. "While many of the existing markets for corn, like fructose and dextrose, are growing at 3 to 4 percent each year, bioproducts like lysine and citric acid are growing at 30 to 40 percent annually," he said.

Whitacre observed that livestock feed additives will be a big market. So will such items as vitamins. There are about 13 vitamins which are widely used and ADM has plans to make them all from corn in the near future. The company hopes to expand to 50 new bioproducts by the year 2000.

Also at the breakout session, Cargill, Inc., Manager of Business Development Bob Buehler, noted that his company is positioning itself to meet society's needs for products that are natural and reduce environmental impact. Cargill is introducing a new generation of biodegradable plastic products.

"EcoPLA can be converted into bags, food service ware such as knives and forks, diapers, filters and even medical garments. EcoPLA performs like conventional plastic, but it degrades at the same rate as paper," Buehler said.

Early generation degradable plastics made from cornstarch had some functional problems, but the Cargill technology allows the plastic to be strong, versatile and completely degradable in 45 to 60 days, he said.

Cargill is currently taking the technology from the pilot plant stage to the market development stage. Plans call for construction of a large plant in Blair, Neb., in 1996 or early 1997, which will produce 250 million pounds of EcoPLA annually and use 35,000 to 40,000 bushels of corn each day. EcoPLA has lots of potential because it is cost competitive, meets manufacturer and consumer demands, and lends itself well to composting, recycling and other methods of waste handling, Buehler said.



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