

PLANT & PEST ADVISORY

FIELD CROPS/LIVESTOCK EDITION \$1.50

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This is the last issue of field crops for the 1999 season. Thank you for subscribing!

Marketing Genetically Modified Crops

Daniel Kluchinski, Mercer County Agricultural Agent

Genetically modified organisms (GMOs) or crops, such as Roundup Ready® soybeans and Bt corn, have rapidly expanded in the marketplace over the past five years. The total planted acreage in the US of these genetically modified crops is estimated at 50% or more. Now the debate is increasing about this technology's environmental and human safety.

Some consumers want to require labeling of grain and food products that contain any biotechnology-altered ingredient. The European Union and Japan have discussed such efforts, often driven by consumer-activists. Such activists question the current and future methods of farming, post-harvest handling and processing, despite guarantees from scientific and government agencies that grain from genetically modified seed is equivalent to non-modified crop grain.

According to Purdue University's agricultural engineer, Dirk Maier, some buyers in the US Midwest require separation of modified and non-modified grain; other midwest buyers are considering it. In New Jersey, the debate over GMOs has yet to affect producers at the elevator. The concern is not as immediate as in other areas of the country, since most crops are sold to regional buyers that process grain into animal feed rather than export raw grain. How and when will these changes affect New Jersey growers? That is hard to determine. One grain elevator operator in central New Jersey stated he hasn't had any requests from his buyers to start separating crops into modified and non-modified. He hasn't any plans to in the future. However, developments in the major grain producing regions of the US may set the stage for future action in our region.

According to Maier, the need to separate grain streams is becoming a reality. The premiums offered for non-modified soybeans is 10 to 20 cents per bushel. For non-modified corn, there often isn't any premium. However, the sale may be saved, since some buyers are not purchasing modified corn. Maier advises farmers who want to get premiums for non-modified crops to do the following:

- Ask each local buyer to explain his or her GMO policy. Policies vary from buyer to buyer and are likely to change during the year.
- Store GMO and non-GMO corn and beans separately to get premiums for non-GMO crops. You'll be prepared if buyers change their

policies to require segregation.

- Take great care in what you say or sign regarding the GMO content of your grain. For example, do not guarantee there is no GMO germplasm in your crop. Pollen drift can add some GMO germplasm to an otherwise non-GMO crop. So can mechanical contamination in augers, wagons, combines and storage bins. Also, some seed companies now say that seed they sold as non-GMO contains low levels of GMO-genetic material.

Maier also instructs Mid-West producers who sell non-GMO crops to tell buyers:

- all the seed they planted was described as non-GMO by the seed company;
- they did not plant any seed represented as GMO seed;
- they avoided contamination during harvest and storage.

The debate does not appear to be over. According to Maier, "I doubt that the genetically modified [crop] issue will be resolved in time for next year's planting season. But by next year I expect we'll have quick-test kits at every point of sale [in the Midwest]. I also expect that next year, there will still be marketing opportunities and premiums for non-modified crops."

The immediate effect to New Jersey growers will be if other countries pass labeling requirements. Those countries may purchase products containing our locally grown grain. The result may be a need for grain-stream separation. Therefore, know your markets and talk with your buyers. Plan accordingly to grow crops to meet the current needs and to meet future needs. □

Reference: Raley, Amy H., ed., "Guidelines for GMO-conscious markets," in *AgAnswers*, West Lafayette, IN: Purdue University, 1999.

Determine Lime Needs Prior to Spring Planting

Joseph R. Heckman, Ph.D., Soil Fertility

Fall is an excellent time to soil test to determine the need for, and type of, lime to apply to neutralize soil acidity and maintain adequate supplies of calcium and magnesium. Careful attention to liming prior to planting is very important. Once the crop is established it is difficult to correct a soil acidity problem using surface applications of lime. Because lime is slow to react in soil, it should be applied at least six months in advance of planting to insure that the target soil pH has been achieved.

Lime can be applied at any time of the year if weather and soil conditions permit. Fall applications have the advantage of allowing the lime to react in the soil prior to the start of the next growing season. □

Weekly Weather Summary

Keith Arnesen, Ph.D., Agricultural Meteorologist

Temperatures averaged near normal. Extremes were 81 at Toms River and Woodstown on the 26th and 38 degrees at Charlotteburg on the 26th. Weekly rainfall averaged 0.45 inches north, 0.40 inches central, and 0.36 inches south. The heaviest 24 hour total was 0.50 inches at Pemberton on the 20th to the 21st. Estimated soil moisture, in percent of field capacity, this past week averaged 95 percent north, 87 percent central and 83 percent south. Four inch soil temperatures averaged 61 degrees north, 63 degrees central and 64 degrees south.

Weather Summary for the Week Ending 8 am Monday 9/27/99

WEATHER STATIONS	RAINFALL			TEMPERATURE				GDD BASE50		MON %FC
	WEEK	TOTAL	DEP	MX	MN	AVG	DEP	TOT	DEP	
BELVIDERE BRIDGE	.40	25.95	-2.10	77	44	59.	-1	2975	396	89
CHARLOTTEBURG	.48	28.11	-1.66	77	38	56.	-1	2496	442	92
FLEMINGTON	.46	25.38	-2.77	78	47	60.	0	3101	443	91
LONG BRANCH	.33	22.09	-5.56	80	45	62.	0	3065	292	74
NEW BRUNSWICK	.47	27.02	-.78	79	47	62.	0	3267	308	90
PEMBERTON	.53	26.99	-1.01	80	42	62.	0	3368	467	77
TOMS RIVER	.08	14.07	-14.21	81	45	62.	0	3082	304	62
TRENTON	.60	30.94	4.64	79	42	60.	-3	3021	-59	82
CAPE MAY COURT HOUSE	.11	16.99	-7.55	79	47	63.	-2	3309	487	65
DOWNTOWN	.41	26.11	.39	79	46	62.	-2	3298	200	78
HAMMONTON	.21	25.01	-2.03	80	47	62.	-1	3279	210	68
POMONA	.32	21.44	-2.96	80	46	63.	1	3254	404	71
SEABROOK	.76	29.58	4.78	78	48	63.	-1	3474	356	81
WOODSTOWN	.71	35.02	8.52	81	44	64	NA	3607	NA	NA

WES KLINE — GDD BASE 40 PINEY HOLLOW

Last Week 183 (Ending 9/20/99) This Week 157 (Ending 9/27/99)

Rutgers Cooperative Extension - NJAES
U.S. DEPARTMENT OF AGRICULTURE
Rutgers - The State University of New Jersey
Plant & Pest Advisory
18 College Farm Road
Cook College
New Brunswick, N.J. 08901-8551

PLANT & PEST ADVISORY FIELD CROPS/LIVESTOCK EDITION CONTRIBUTORS

Rutgers Cooperative Extension Specialists

George Hamilton, Ph.D., Pest Management
Joseph R. Heckman, Ph.D., Soil Fertility
Bradley A. Majek, Ph.D., Weed Science
Jeremy Singer, Ph.D., Field and Forage Crops
Michael L. Westendorf, Ph.D., Animal Science

RCE County Agricultural Agents and Program Associates

Burlington, William J. Bamka (609-265-5757)
Mercer, Daniel Kluchinski (609-989-6830)
Monmouth, Bill Sciarappa, Ph.D., (732-431-7260)
Salem, David L. Lee (609-769-0090)
Sussex, Robert C. Mickel (973-579-0985)
Warren, Everett A. Chamberlain (908-475-6503)

North Jersey Resource Conservation & Development Council

Brian Aldrich (908-852-2576, ext.113)

Newsletter Production

Jack Rabin, Assistant Director, NJAES
Cindy Rovins, Editor and Designer
Mary Ann Hughes, Assistant Editor

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