

Farm and Weather Summary

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Farm Comments

Field Days and Tours. A total of 1,150 people attended 28 events at the research farm in 2005. These events included field days, tours, meetings, and the annual association meeting. Field days included information on weather predictions for 2005, soybean diseases, sprayer recommendations for fungicide applications, weed management strategies, phosphorus management/P index, corn breeding improvements, grain marketing strategies, soybean aphid and corn insect pest updates, and a soybean research progress update.

New Projects. Sentinel planting date plots for Asian rust arrival prediction and evaluation of soybean fungicides/application timings, X.B. Yang/A. Robertson; Nitrogen source/rate study, Chad Ingels; A new crop rotation × nitrogen rate study, J. Sawyer; Corn seed inoculants, P. Pedersen; and numerous aphid studies (suction trap, insecticide coverage, timings, scouting methods). Numerous variety and cultural practice (planting dates, planting depths, planting populations, row spacings, tillage practices, etc.) studies were conducted by the Northeast Farm staff.

Crop Season Comments

Oat/legume seeding occurred the last week of March. Spring manure injection and spring anhydrous nitrogen (N) applications were done the week of April 3. The corn planting began April 18 and was completed May 5. Harvest began October 6 and was completed October 26. Yields were above average due to plentiful rainfall, early planting, and corn grain moisture measuring about 4% less than in 2004. Corn yields on rotated acres ranged from 175 to 249 bushels/acre and averaged slightly over 200 bushels/acre. Continuous corn yields ranged

from 160 to 250 bushels/acre and averaged 185 bushels/acre.

The soybean planting started May 5 and finished on May 25. Harvest began September 20 and was completed October 4 with an above-average whole-farm yield of 64 bushels/acre due to plentiful rainfall. With an insecticide application for soybean aphids, many research studies averaged in the low 70s bushels/acre yield range. In 2005, soybean aphid populations reached economic thresholds, and the majority of soybean studies were sprayed with an insecticide. European corn borer populations also reached economic thresholds; therefore, it paid to plant transgenic European corn borer-resistant corn varieties.

Weather Comments

Winter 2004–2005. The first measurable snowfall occurred December 5, and the last snow for the season was on May 2, with a total of 23.75 in. recorded, 5.25 in. less than the previous winter. The 4-in. soil temperature remained below 50°F after October 31, 2004.

Spring 2005. The frost was out of the top 2 ft of soil after March 27. Soil temperatures were averaging about 50°F after May 4. Fertilization and tillage work began the first week of April, with most farmers waiting to plant corn until April 24 and most finishing by May 6. A trace of snow fell on May 1 and 2 during corn planting. The first week of May was dry and cold with good planting progress. The second and third week of May received 4.11 in. of rainfall, allowing only minimal planting to occur. Soybean plantings were challenges that were accomplished between rain events after May 6; however, rain events were not as excessive as those of 2004, when severe erosion and flooding occurred.

Summer 2005. Rainfall was 3 in. above the long-term average for June, which reduced the “window” for row cultivation, due to corn height. July and August rainfall combined was close to average, which resulted in no crop stress throughout the summer. Air temperatures and heat unit accumulation for each month starting in June were slightly above the long-term average, allowing ideal drydown in corn and an early harvest of soybeans. Our first plant-killing freeze occurred October 27, with a recording of 27°F (3 weeks after the average date).

Bean leaf beetle populations were below economic thresholds throughout the season; yet, soybean aphid populations rose above economic thresholds in the last week of July. Insecticide applications to soybeans for aphid control contributed to the above-average soybean yields. A total of 2,767 heat units were recorded from May through September, 231 heat units more than in 2004 and 179 heat units more than the past 12-year average.

Fall 2005. Rainfall was above normal for September, resulting in delayed soybean harvest

and severe compaction in poorly drained fields where harvesting continued. Above-normal July and September temperatures increased heat unit accumulation, resulting in a corn harvest in the 16–20% moisture range with below-normal propane gas usage to dry corn. Soybeans were harvested in the 10–14% moisture range from late September to early October. Farmers who had not sold and delivered their 2004 corn had trouble finding ample 2005 grain storage. A combination of suppressed prices, reduced river barge traffic to the gulf due to Hurricane Katrina, and surprisingly high 2005 corn and soybean yields all played a factor. Local cooperatives were storing up to three times more 2005 corn on the ground because 2004 corn was taking up storage space.

Acknowledgments

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Table 1. Monthly rainfall and average temperatures during the 2005 growing season.

Month	Rainfall (in.)			Temperature (°F)*			
	NERF	Departure from normal	No. days of rain	NERF	Departure from normal	Growing degree days	Days 90°F+
April	2.34	-1.04	9	52.72	+5.56	245	0
May	4.34	-0.08	15	56.15	-3.19	290	0
June	7.94	+3.06	12	72.63	+4.27	658	6
July	3.86	-0.91	6	73.62	+1.61	702	7
August	5.97	+1.10	6	69.88	+0.20	607	3
September	6.62	+3.65	8	66.33	+4.55	510	3
October	0.27	-2.25	6	52.75	+3.65	253	1
November	1.21	-0.72	9	37.59	+3.55		0
Total	32.55	+2.81	71				
					1 st Freeze – October 27, 2005		20

*174 frost-free days