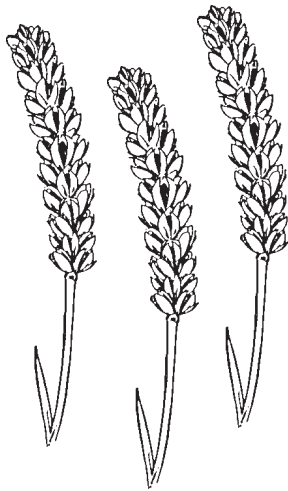


# PLANT & PEST ADVISORY

FIELD CROPS/LIVESTOCK EDITION \$1.50

JULY 24, 1997



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## Scout Pastures For Poisonous Plants

*William J. Bamka, Burlington County Agricultural Agent*

July and August are particularly important months to scout pastures for plants that may be poisonous to livestock. During the hot, dry months of July and August, many pastures have been overgrazed and are in poor condition. This is particularly true this season with the extremely hot, dry weather that has been prevalent in New Jersey.

When good quality forage is available in ample quantity, poisonous plants are usually avoided by livestock. The avoidance of these plants as feed may be due to objectionable odor or taste of the plants. Currently, the presence of large quantities of lush, green forage is virtually non-existent throughout most pastures in the state. In the absence of good forage, livestock may, and do eat poisonous plants as a last resort. Particularly in times of drought livestock may start sampling undesirable plants they discover growing in the pasture.

Unfortunately, livestock will not listen to your words of warning to avoid poisonous plants. It is your responsibility to prevent pasture poisonings. Some animals are more susceptible to poisoning than others. Poisoning may occur through contact or ingestion, resulting in mild irritation or sickness, and possibly death.

Which plants are poisonous to livestock? The list includes white snake root, poison hemlock, choke cherries, brackenfern, nightshades, lily, jimsonweed, cocklebur and yew. This list does not represent all plant species that may be toxic to livestock. Many plants are poisonous to specific types of livestock.

Cornell University and Purdue University both have very useful web sites regarding poisonous plants. The address for Cornell University's Poisonous Plant Page is:

<http://www.ansci.cornell.edu/plants.html>

Purdue Cooperative Extension's Indiana Plants Poisonous to Livestock and Pets can be accessed at:

<http://vet.purdue.edu/depts/addl/toxic/cover1.htm>

Contact your County Agricultural Agent if you have questions or need assistance regarding poisonous plants. □

# Corn, Drought Stress and Yield Reduction

Daniel Kluchinski, Mercer County Agricultural Agent

Over the past eight weeks, hot dry weather has continued to affect a majority of the state. Even with soaking rains on July 24, the effect of the drought is evident in corn. Short plants, with rolled leaves resembling a "pineapple plant" can be seen. In some areas of low or no rain and droughty soils, plants are tasseling with no silks, or have completely died.

Stress on corn plants during the early, middle and late growth stages all have different effects on plant growth and yield. During the stem elongation to tasseling stage, the effect of stress on yield becomes more significant than during early vegetative growth. During the 3 to 4 weeks up to silking, hot weather and drought will reduce vegetative growth. Overall, a final grain yield reduction of 2-3% per day of stress will result.

Tasseling, silking and pollination are the most critical stages in corn development and the most susceptible stages for stress. Combined moisture-temperature stress during this period can substantially reduce grain yield. Most temperature related stress occurs when the average daily temperature is 77°F and the daily maximum temperature is above 95°F, regardless of soil moisture. The overall grain potential loss during this period is difficult to determine, however, some estimates are up 5% per day with high seasonal temperatures and low moisture, 10% per day with more severe temperature and moisture stress, and up to 13% loss per day if moisture stress is combined with nutrient, pest or disease problems.

The greatest potential yield reduction probably occurs from moisture stress during the silking process. This stress delays the silk formation, thereby requiring a longer period of time required for pollination. The pollen may be shed prior to the silk formation, leading to severely reduced or no pollination, grain fill and yield. After pollination and during grain filling, corn is much less sensitive to stress. During early grain fill, severe stress can reduce final yield by 3-5% each day. About 6 weeks after pollination, its effects decline rapidly.

No one can control rainfall and temperatures, but this season may help to illustrate the principle that potential for losses can be minimized if hybrids of different maturities are planted over several planting dates. This spreads the risk by expanding the tasseling, silking, pollination and maturity dates within the given growing season.

*Adapted from Weather Stress in the Corn Crop. R. H. Shaw, Iowa State University and J. E. Newman, Purdue University. 1984. National Corn Handbook, NCH-18. □*

# Weekly Field Crops Pest Summary - 7/24/97

Joe Mahar, Field Crops IPM Agent; Dave Lee, Salem County Agricultural Agent; Sue Jones, Field Crops IPM Program Associate; Miles Huffaker, Salem County Program Associate

## ◆ Alfalfa

Potato leafhopper still maintains exceptional population levels with nearly all scouted fields at or above threshold across the state.

Drought conditions in most of the state have kept alfalfa growth at a minimum.

## ◆ Corn

Some corn is now tasseling but stalk height is shorter than normal in fields in the southern part of the state. Bill Bamka, Burlington County Ag Agent, reports that corn development is especially erratic in his area.

Bill also reports seeing localized heavy infestations of European corn borer in Burlington County.

Ernie Rutledge, Agway, reports heavy western corn rootworm populations in extreme northern New Jersey and surrounding Pennsylvania and New York areas. Rootworm beetles appear to be light in the southern part of the state.

Some areas of Warren County have good looking corn due to localized rainfall during the past few weeks.

One field observed by Tom Morgart, Resource Development and Conservation, had about 10% of the stand snapped off at nodes, due to strong winds.

## ◆ Soybeans

Soybean fields in the south are apparently not doing as well as in the north. Flower abortion and loss of lower leaves have resulted from last week's high temperatures and lack of rain.

In north Jersey, on the whole soybeans are doing well except for fields with shaley soils.

Some weed control problems with standard postemergent materials are occurring in north Jersey fields.

So far, there has been no evidence of spider mites in soybeans anywhere in scouted fields. Potato leafhopper, also, has not materialized as a problem in soybeans. □

*To see the Weekly Field Crops Pest Summary every week, call RCE's FaxInfoLine at (732 or 908) 932-6767 and request document 2017. The summary will be faxed to you immediately. The summaries are updated every Thursday.*

# Weekly Weather Summary

Keith Arnesen, Agricultural Meteorologist

Temperatures averaged much above normal. Extremes were 101 degrees at Pemberton and Woodstown on the 16th and 47 degrees at Charlotteburg on the 20th. Weekly rainfall averaged 0.28 inches North, 0.09 inches Central, and 0.53 inches South. The heaviest 24 hour total was 0.84 inches at Seabrook on the 18th to 19th. Estimated soil moisture, in percent of field capacity, this past week averaged 67 percent North, 43 percent Central and 41 percent South. Four inch soil temperatures averaged 75 degrees North, 78 degrees Central and 79 degrees South.

Weather Summary for the Week Ending 8 a.m. Monday 7/21/97										
WEATHER STATIONS	RAINFALL			TEMPERATURE				GDD BASE50		MON %FC
	WEEK	TOTAL	DEP	MX	MN	AVG	DEP	TOT	DEP	
BELVIDERE BRIDGE	.42	14.05	-4.13	94	51	75.	2	1223	-83	65
CANOE BROOK	.65	13.36	-5.91	101	56	81.	7	1490	180	65
CHARLOTTEBURG	.12	16.16	-3.29	95	47	74.	3	1144	80	57
FLEMINGTON	.09	13.78	-4.82	98	48	76.	2	1267	-85	59
LONG VALLEY	missing									
NEWTON	.11	13.93	-3.82	94	48	74.	2	1032	-136	66
FREEHOLD	missing									
LONG BRANCH	.00	14.12	-3.89	98	54	78.	3	1391	11	22
NEW BRUNSWICK	.28	17.70	-.24	97	50	78.	2	1428	-111	70
PEMBERTON	.01	14.41	-3.54	101	52	80.	5	1630	135	20
TOMS RIVER	.00	13.82	-4.58	99	54	79.	5	1432	44	25
TRENTON	.14	17.29	.22	97	49	77.	1	1420	-181	44
CAPE MAY COURT HOUSE	.00	14.41	-1.57	96	59	81.	5	1488	7	19
DOWNSTOWN	.41	13.64	-3.08	98	55	81.	5	1512	-102	41
GLASSBORO	.37	15.81	-1.94	99	57	81.	5	1640	47	38
HAMMONTON	.20	14.18	-3.49	99	54	81.	5	1499	-89	29
POMONA	1.33	16.03	.10	98	55	81.	6	1506	31	66
SEABROOK	.84	15.26	-.90	98	58	82.	6	1624	3	59
ATLANTIC CITY MARINA	.56	11.39	-3.87	95	60	80.	5	1484	92	43
WOODSTOWN	.38	14.16	-3.76	101	56	83	NA	1652	NA	NA
WES KLINE — GDD BASE 40 PINEY HOLLOW										
Last Week 248 (Ending 07/14/97)										
This Week 286 (Ending 07/21/97)										

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