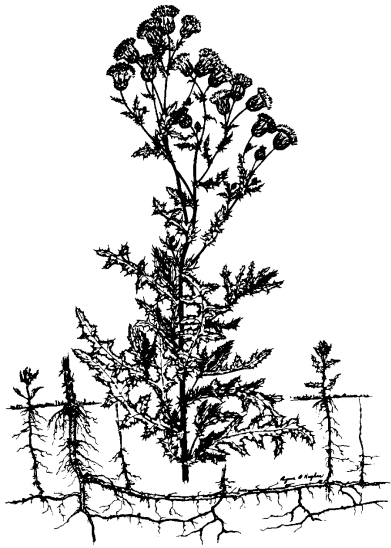


# PLANT & PEST ADVISORY

FIELD CROPS/LIVESTOCK EDITION \$1.50

AUGUST 20, 1998



## INSIDE

**After the Drought: Soil Testing and Weed Inventories ..... 1**

**Fall Seedings: Species Selection and Seeding Rates ..... 2**

**Field Crops Weekly Pest Summary ..... 3**

**Weekly Weather Summary ..... 3**

## After the Drought: Soil Testing and Weed Inventories

*Daniel Kluchinski, Mercer County Agricultural Agent*

**B**elieve or not, the last few months of the growing season are here. This is a good time of year to evaluate the past season's successes and failures, and plan strategies for fall planted crops and those to be planted in 1999. This evaluation is particularly useful following a drought or extended period of less than normal weather. In particular, give special consideration to determining soil nutrient levels and examining weed problems and infestations. The drought may have affected both of these important production factors.

However, before the combines start to roll, consider taking some time to update your production and field records. Without having up-to-date records of fertilizer applications applied this spring, evaluation cannot occur. Therefore, look through and organize production records and determine fertilization rates. Cross reference this information with any previous soil test reports to determine where you are in your soil fertility program. After crops are harvested, determine actual yield versus the yield goal you were fertilizing for. During the season, crop growth may have been moderately to severely reduced, thereby limiting nutrient uptake. This implies the potential for the carryover of unused nutrients for the following crop, either this fall or next spring. Remember the nutrient carryover may include macro- and micronutrients.

If you have not soil tested in a few years, pull soil samples after harvest and have them analyzed. This, in addition to long range planning, will help determine carryover nutrients. With this information, limestone and fertilizer recommendations can then be made that accurately reflect the soil conditions as affected by the drought. For late summer pasture or hay crop plantings, or small grains to be planted this fall, consider taking a soil test to determine soil nitrate nitrogen (N) concentrations. This will allow you to accurately determine at-planting nitrogen needs. Follow the same testing procedures for the Pre-Sidedress Nitrogen Test (See RCE Fact Sheet 569 *Presidedress Soil Nitrate Test (PSNT) Recommendations for Field Corn*). Nitrate-N levels of 30 ppm or higher would indicate that no at-planting N would be necessary for fall plantings of non-legume pasture or hay, or grain crops.

Prolonged dry conditions also reduced the level of weed control obtained in many fields. For many herbicides, moisture is necessary to

*SEE INVENTORIES ON PAGE 2*

allow for uptake by weed seeds or plants, while others require actively growing weeds to increase their efficacy. Therefore problems with weed control may have occurred, even though they were applied at proper rates and times. Evaluate your fields. What weeds were a particular problem this year? Did the reduced competition from a less vigorous crop allow perennial weeds to develop? If so, these weeds may be a problem in years ahead. Therefore, plan weed control strategies now by charting the location of these weeds, and planning herbicide applications to these areas this fall or next spring.

Through proper record keeping, planning and evaluation, you can better handle some of the effects of the drought. In addition, determining nutrient carryover will help you to utilize nutrients you have already paid for and prevent you from over-applying fertilizers. In a year where yields may be reduced, and grain prices are low, every penny saved can help. □

## Fall Seedings: Species Selection and Seeding Rates

*Jeremy W. Singer, Ph.D., Field and Forage Crops*

Fall is quickly approaching, and with the recent rainfall, the success of fall seedings has increased dramatically. Planting date is critical to the success of fall seedings. Timely planting allows for enough fall growth before entering dormancy for winter survival. If timely planting is not attainable, you are better off delaying your seeding until spring. With the current cost of alfalfa and grass seed, it is not economically favorable to risk late planting. Seeding perennial crops is a critical process because you expect these species to be productive for multiple years. In order to ensure the success of your fall seeding, let's review the basics of species selection, seeding rates, and the latest fall seeding dates for the more commonly grown forage species in New Jersey.

Table 1 lists seeding rates in lb. seed per acre, ideal drainage recommendations, and latest seeding dates for north and south Jersey. Late summer or "fall" seedings as they are commonly referred to are popular because they offer several advantages over spring seedings. First, summer seedings generally have less weed competition. Second, on average, rainfall is plentiful which facilitates germination and minimizes stress during the vulnerable seedling growth stage. And third, cool temperatures during the fall are ideal for cool-season perennial grass and alfalfa establishment.

Seeding perennial species involves many decisions. Only a few considerations are presented in this article. Of which, site selection remains the most critical. Matching your soil drainage type to the appropriate species will set the stage for a successful fall seeding. Additional factors to ponder that can influence your cost of establishing a fall seeding include type of seedbed (conventional or minimum), type of planter, satisfying pH and fertility recommendations, and variety selection to name a few. For additional information or assistance, contact your county agricultural agent. □

**Table . Recommended soil drainage, seeding rates, and latest seeding dates for commonly grown forage species in New Jersey.**

Species	Seeding Rate (lb. seed per acre)	Soil Drainage	Latest Seeding Date	
			North Jersey	South Jersey
Alfalfa	12-15	Well-drained	Sept. 1	Sept. 10
with grass	8-10			
Orchardgrass	10	Mod. to well	Sept. 20	Sept. 20
with legume	4-6			
Smooth Bromegrass	14	Moderately to well-drained	Sept. 20	Sept. 20
with legume	5-8			
Timothy	8-10	Mod. to well	Sept. 20	Sept. 20
with legume	4-6			
Reed Canarygrass	8-10	Variable drainage	Sept. 1	Sept. 10
with legume	6-8			

# Field Crops Weekly Pest Summary 8/20/98

Field Crops Working Group

## Alfalfa

Potato leafhoppers are finally declining in numbers across the state. Currently there are more nymphs in the fields than adults, which usually indicates that adults are leaving the alfalfa fields. However, there are still some fields reaching threshold. Farmers should continue looking at the alfalfa.

## Corn

Fall armyworm continues to be a problem in scattered fields across the state. One field required spraying in Gloucester County and several other fields, including 2 each in Hunterdon and Warren Counties, warranted close scrutiny. Most of the effected fields are

nearly to the tasseling stage and that should help reduce the populations, depriving the caterpillars of a hiding place in the whorl. Tom Morgart, USDA-RCD, reports that corn that had patches of Canada thistle was more adversely effected in the dry weather than thistle-free corn. Corn in these patches is about 3 feet shorter than surrounding corn.

## Soybean

Two-spotted spider mites continue to threaten fields especially in the Mercer County area south of Route 1. Matt Myers, USDA-RCD, reports that spider mites are abundant in Mercer County. According to Bill Bamka, Burlington County Ag Agent, spider mite problems have tapered off in Burlington County. Green cloverworms have caused significant feeding damage in fields in Cumberland County. Upper leaves had up to 30% defoliation. Caterpillars in all stages of development were abundant, however most were nearly mature and it was likely that the fields would not need spraying. □

## Weekly Weather Summary

Keith Arnesen, Agricultural Meteorologist

Temperatures averaged above normal. Extremes were 91 degrees at Pemberton on the 11th, and 57 degrees at Freehold and Charlotteburg on the 13th. Weekly rainfall averaged 1.29 inches north, 0.49 inches central, and 0.81 inches south. The heaviest 24 hour total was 1.65 inches at Charlotteburg on the 10th to the 11th. Estimated soil moisture, in percent of field capacity, this past week averaged 76 percent north, 53 percent central and 51 percent south. Four inch soil temperatures averaged 74 degrees north, 74 degrees central and 75 degrees south.

Weather Summary for the Week Ending 8 a.m. Monday 8/17/98										
WEATHER STATIONS	RAINFALL			TEMPERATURE				GDD BASE50		MON %FC
	WEEK	TOTAL	DEP	MX	MN	AVG	DEP	TOT	DEP	
BELVIDERE BRIDGE	1.35	27.64	5.42	87	64	74.	4	2171	243	69
CANOE BROOK	.65	27.34	4.00	90	62	77.	6	2484	550	64
CHARLOTTEBURG	2.28	30.53	6.97	87	57	72.	4	1918	395	87
LONG VALLEY	.88	26.62	2.34	82	64	73.	4	1949	233	63
FREEHOLD	.40	27.71	5.78	90	57	75.	2	2306	190	56
LONG BRANCH	1.09	31.82	9.76	87	63	74.	1	2186	149	67
NEW BRUNSWICK	.28	26.67	4.62	89	61	75.	2	2379	179	63
PEMBERTON	.54	22.09	-.23	91	61	76.	3	2537	378	36
TOMS RIVER	.18	33.88	11.25	88	63	75.	3	2425	401	30
TRENTON	.46	25.07	4.07	90	61	75.	1	2293	-9	42
CAPE MAY COURT HOUSE	.86	20.93	1.40	86	66	75.	0	2425	247	39
DOWNTOWN	1.02	21.73	1.08	90	60	75.	2	2522	213	53
HAMMONTON	.52	19.37	-2.28	90	59	75.	1	2485	197	29
POMONA	.61	23.84	4.01	88	61	75.	3	2460	326	38
SEABROOK	1.27	24.46	4.63	89	65	76.	2	2667	347	56
ATLANTIC CITY MARINA	.61	25.02	6.02	89	71	77.	4	2451	396	32
WOODSTOWN	.96	21.45	-0.09	90	63	77	NA	2692	NA	NA
WES KLINE — GDD BASE 40 PINEY HOLLOW										
Last Week		232	(Ending 8/10/98)							
This Week		247	(Ending 8/17/98)							

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