

# PLANT & PEST ADVISORY

FIELD AND FORAGE CROPS EDITION \$1.50

OCTOBER 18, 2001



## INSIDE

**Plant Wheat Yet? The Time is Now** ..... 1

**IPM Report** ..... 2

**Fall Soil Testing of Rented Land** ..... 3

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

### Plant Wheat Yet? The Time is Now

*Daniel Kluchinski, Mercer County Agricultural Agent*

Late soybean harvests in some parts of New Jersey have delayed winter wheat planting, causing concern that farmers may have difficulty in establishing a good crop. This is of particular concern if planting occurs too far beyond the Hessian fly-free date.

The Hessian fly-free date is used by growers to determine when to begin planting their wheat crop and avoids this insect's damage. The Hessian fly free data is September 23 in the far northern areas in New Jersey and as late as October 6 in the southernmost areas of the state. Rutgers Cooperative Extension recommends that wheat plantings occur between September 20 and October 10 in the north and October 1 and 20 in the south. According to Ohio State University plant pathologist Pat Lipps, long-term data shows that yield decline occurs when you plant more than 7 to 10 days after that fly-free date.

Since the optimum planting date has passed, farmers who have not yet planted wheat should do so now. In an interview for Purdue University's "Ag Answers" newsletter, Lipps gave some guidance for growers who have yet to plant their wheat. Growers who intend to plant wheat are advised to:

✓ **Treat the seed.** Soils right now are pretty dry. Root and seedling blight diseases are common in dry soil conditions, because it takes plants longer to germinate and get out of the ground.

✓ **Select fields and varieties that potentially produce high yields.** Choose your better fields and varieties that demonstrate high test weights and resist such diseases as **powdery mildew** and **head scab**. Information on wheat varieties tested by Rutgers Cooperative Extension is available on the RCE web site at: <http://www.rce.rutgers.edu/pubs/index.html> or through your county agricultural agent.

✓ **Fertilize.** Check soil pH and phosphorous since both are critical for winter survival. Wheat does not like acid soils, and without adequate phosphorous we normally do not see good root development in establishment of plants. Research conducted at Rutgers shows that N application at planting has little impact on yield, and should only be applied when low N soils are to be planted to wheat. Under such conditions, apply 20-30 pounds of nitrogen.

SEE WINTER WHEAT ON PAGE 2

# IPM Report

Donna Foulk, Warren County Program Associate, IPM

● Winter wheat should be seeded between September 20 and October 15 in areas of Pennsylvania and New Jersey. Check Agronomy Guide Maps for more specific seeding dates based on Hessian Fly-Free Dates. When seeding after the preferred dates, increase seeding rate by 30%.

● Check winter wheat plant populations. Satisfactory yield depends on having 40 heads per linear foot of row. To achieve this, you need a stand of 18 to 20 plants per foot of row. Wheat plants can compensate for lower plant populations by increasing tillering. However, if plants fall below 9 to 10 plants per foot of row, then considerations should be made for planting to another crop in the spring. Geese can wreak havoc on wheat plant populations, so particular attention should be given to wheat fields that are frequented by geese.

● According to local Extension agents, farmers, and crop consultants, crop yields this year are highly variable. While some corn and soybean fields are nearing record yields, other fields in close proximity barely justify harvest. The inconsistent yields reflect the highly variable rainfall conditions that existed during the growing season.

● Many area cornfields are experiencing lodged corn due to stalk rot and corn borer damage. Joe Gourniak, Crop Production Services, reports seeing stalk rot in many fields, and some corn borer damage in Bt corn as well as conventional corn. A simple stalk check can be used to determine the potential for a field to lodge. Randomly select at least 50 corn plants. At chest height, push the plants approximately 18-24 inches from vertical. If 15% of the stalks lodge, this field should be harvested as soon as possible.

To avoid stalk rot, plants must be healthy and produce enough carbohydrates to keep root and stalk cells alive and healthy. Stalk rots are typically associated with good growing conditions early in the season and stressful conditions later on. Several different bacteria and fungi cause stalk rot. These organisms usually invade the plant early in the season via the roots, but remain dormant until the plant is stressed. The following factors have been shown to contribute to stalk rot in corn and subsequent lodging:

1. Wet spring weather following by prolonged dry weather during grain-fill can contribute to stalk rot. Corn plants often do not develop an extensive root system in wet weather. Dry conditions and rootworm beetle larvae tend to further damage the roots, which begin to die prematurely. The damaged roots cannot properly take in water and nutrients,

further stressing the plant. As the roots begin to die, they become rotted with soil-borne fungi. These fungi can move up the stalk, causing stalk rot.

2. Higher plant populations may contribute to stalk rot. Shading reduces the plant's ability to produce carbohydrates, causing the plants to use energy to fill the ears at the expense of the roots and stalks.

3. Improper and unbalanced fertilization can contribute to stalk rot. Applying excess nitrogen, especially when potassium levels are low, can allow stalk rot diseases to flourish. A nitrogen deficiency after mid-season can also stress the plants during grain-fill, increasing susceptibility to disease.

4. Leaf diseases decrease a plant's ability to carry on photosynthesis, reducing its ability to produce carbohydrates. The plant must use energy reserves to fill the ears at the expense of maintaining healthy cells in the roots and stalks.

5. Stalk boring insects physically weaken the stalks and also allow an avenue for the entrance of fungi and bacteria. □

---

## WINTER WHEAT FROM PAGE 1

✓ **Planting Depth.** Seed should be planted an inch to an inch-and-a-half deep. Shallow planting can result in heaving problems, which affects yield.

✓ **Planting Rate.** Shoot for a seeding rate that would give you 1.3 million to 1.5 million plants per acre, assuming good quality seed (90 percent germination). You can increase the seeding rate slightly above the 1.5 million in order to get the proper number of plants.

The economic outlook for this season's wheat crop is not optimistic because of overabundance in the market and little change in price, according to Lipps. However, he urges growers to plant wheat as an alternative crop to alleviate other crop and soil problems. "Wheat can be used to help break the cycle of some soybean diseases associated with continuous soybean planting," he said. "A wheat crop also improves organic matter levels, helping the soil maintain fertility and improving soil tilth. These secondary effects that wheat creates can be very important to a grower."

So what are you waiting for? Get those drills moving!

*Adapted from Ag Answers. October 16, 2001. Steve Leer, editor/writer. Purdue University Agricultural Communication Service. □*

## Fall Soil Testing of Rented Land

Brian Aldrich, Earthteam Volunteer, USDA  
Natural Resources Conservation Service

Some operators tell me they are reluctant to sample rented land in the fall, because they don't know until spring if they will be able to farm it or not. On the other hand, a soil test is useful in deciding if you even *want* to farm a particular field. If the pH or fertility is low, the investment required to build the fertility up to levels that will support profitable yields may be significant.

You can also use the soil test to negotiate a lower rent on poor land, especially if the landlord is unwilling to sign a multi-year lease that would ensure you would realize a return on investing in lime and fertilizer.

Fall presents one of the best windows for soil sampling. Fieldwork is winding down, the weather is cool, and the soil is moist. Sampling in the fall allows you to use the soil test results over the winter to plan next year's fertilizer program, and pre-order if necessary. The cost of a soil test is insignificant compared to the cost of putting in a crop. Look upon soil testing not as an additional cost, but as an additional piece of management information that is essential to making profitable decisions. Don't hesitate to sample in the fall! ☐

## Weekly Weather Summary

Keith Arnesen, Ph.D., Agricultural Meteorologist

Temperatures averaged above normal. Extremes were 82 degrees at Pemberton on the 14th and 26 degrees at Long Valley on the 9th. Weekly rainfall averaged 0.33 inches north, 0.23 inches central, and 0.15 inches south. The heaviest 24 hour total reported was 0.53 inches at Canoe Brook on the 14th to 15th. Estimated soil moisture, in percent of field capacity, this past week averaged 76 percent north, 69 percent central and 58 percent south. Four inch soil temperatures averaged 50 degrees north, 56 degrees central and 56 degrees south.

Weather Summary for the Week Ending 8 am Monday 10/15/01

WEATHER STATIONS	RAINFALL			TEMPERATURE				GDD BASE50		MON %FC
	WEEK	TOTAL	DEP	MX	MN	AVG	DEP	TOT	DEP	
BELVIDERE BRIDGE	.26	27.16	-2.96	77	30	55.	2	2994	304	75
CANOE BROOK	.53	28.81	-2.90	79	28	57.	4	3193	485	82
CHARLOTTEBURG	.48	25.37	-6.85	79	27	54.	3	2635	512	76
FLEMINGTON	.35	36.22	6.01	80	27	56.	3	2909	132	77
LONG VALLEY	.00	23.91	-8.85	74	26	52.	1	2246	-108	80
NEWTON	.34	22.51	-6.92	77	27	55.	4	2732	356	76
FREEHOLD	.19	25.36	-4.02	80	29	58.	3	3395	407	73
LONG BRANCH	.27	29.32	-.44	76	33	57.	1	3129	197	64
NEW BRUNSWICK	.31	29.65	-.15	78	29	57.	1	3221	101	83
PEMBERTON	.34	24.40	-5.56	82	29	60.	4	3493	431	65
TOMS RIVER	.01	28.84	-1.71	78	28	57.	1	3232	305	66
TRENTON	.26	27.71	-.39	79	30	58.	1	3348	95	66
CAPE MAY COURT HOUSE	.00	23.27	-3.13	77	33	59.	0	3478	437	40
DOWNTOWN	.07	21.06	-6.51	80	27	56.	-1	3306	22	62
GLASSBORO	.28	23.21	-5.89	79	33	58.	2	3642	409	60
HAMMONTON	.00	19.77	-9.23	79	28	57.	1	3446	209	54
POMONA	.08	18.25	-7.91	77	29	56.	0	3332	325	62
SEABROOK	.29	26.31	-.42	78	32	59.	2	3601	295	62
ATLANTIC CITY MARINA	.33	17.61	-7.51	74	41	60.	3	3477	440	61
SOUTH HARRISON	.07	25.15	-3.30	78	33	59	NA	3499	NA	NA

\*Some values for Flemington were estimated for the period April-May  
WES KLINE — GDD BASE 40 PINEY HOLLOW  
Last Week 142 (Ending 10/08/01)  
This Week 116 (Ending 10/15/01)

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 AND FORAGE CROPS 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 Associate

Burlington, William J. Bamka (609-265-5757)  
Hunterdon, Robert C. Mickel (908-788-1338)  
Mercer, Daniel Kluchinski (609-989-6830)  
Monmouth, Bill Sciarappa, Ph.D., (732-431-7260)  
Salem, David L. Lee (856-769-0090)  
Sussex, Daniel Wunderlich (973-579-0985)  
Warren, Everett A. Chamberlain (908-475-6503)  
Donna Foulk, Program Associate, IPM

### University of Delaware Cooperative Extension

Mark Van Gessel, Ph.D., Weed Science

### Newsletter Production

Jack Rabin, Associate Director for Farm Services, NJAES  
Cindy Rovins, Crop Management Communications Editor

Rutgers Cooperative Extension (RCE) provides information and educational services to all people without regard to sex, race, color, national origin, disability, or age. RCE is an Equal Opportunity Employer.

**Pesticide User Responsibility:** Use pesticides safely and follow instructions on labels. The pesticide user is responsible for proper use, storage and disposal, residues on crops, and damage caused by drift. For specific labels, special local-needs label 24(c) registration, or section 18 exemption, contact RCE in your County.

**Use of Trade Names:** No discrimination or endorsement is intended in the use of trade names in this publication. In some instances a compound may be sold under different trade names and may vary as to label clearances.

**Reproduction of Articles:** RCE invites reproduction of individual articles, source cited with complete article name, author name, followed by Rutgers Cooperative Extension, Plant & Pest Advisory Newsletter.

For back issues, visit our web site at: <http://www.rce.rutgers.edu/pubs/plantandpestadvisory/index.html>.