Wisconsin Crop Manager

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Pest Management Field Day, June 27

Bryan Jensen, UWEX IPM Program

Please save this date for the 2013 Pest Management Field Day. The program will be held at the Arlington Agricultural Research Station. Tours will leave the Public Events Building early in the morning and we should conclude by early afternoon. Lunch will be provided. Please watch future issue of the Wisconsin Crop Manager for speakers and topics.

Vegetable Crop Update 5/11/2013

The 4th issue of the Vegetable Crop Update is now available. This issue contains information on early season vegetable damping off and hot downy mildew. Click here to view this update.

Alternate Forage Crops

Dr. Dan Undersander, Forage Agronomist, Paul Mitchell, Extension Agricultural Economist

The alfalfa winterkill losses are very high. This problem is especially severe since the drought last summer meant less forage production and no reserves and many shortages.

We are generally out of alfalfa seed and short on oats and pea seed.

Generally, the options at this point are:

1. Keep alfalfa and overseed Italian ryegrass immediately to increase first cutting yield, then kill stand and plant corn for silage.

   If the alfalfa and/or rye grass is harvested, you will not be able to insure the corn silage (or corn grain) planted afterwards. You can still insure your other corn acres, it's just the acres planted after harvesting forage that cannot be insured.

2. Immediately plant corn for silage.

   The corn is insurable as corn for grain or corn for silage in the (winter killed) alfalfa stand, as long as the stand is not harvested this year. You have until May 31st to plant corn as grain and June 5th to plant corn as silage to receive full coverage.

3. Plant oats with peas for early season yield (mid July) followed by oats replanted in August.

   If you have insured the oats, you have to plant them by May 15 in southern counties, May 25th in northern counties (ask your agent) to receive full coverage.

Sorghum-sudangrass and sudangrass is only recommended for north of southern Wisconsin if the farmer thinks summer temperatures will be above average. BMR should be planted if seed can be obtained.

Other crops not recommended to enhance forage production; see yield and quality in attached sheet.

To view the full PDF article scroll down to the end of this newsletter.

Considerations for Switching Soybean Maturity Groups for Delayed Plantings

Shawn P. Conley, State Soybean and Wheat Extension Specialist John Gaska, Outreach Specialist, University of Wisconsin, Madison

Delayed corn planting coupled with frequent rainfall events and poor planting conditions have postponed soybean planting across many parts of WI. Since we are rapidly approaching the hybrid maturity switch date for corn in southern WI (May 20th, given 2013 costs and process) three common questions have arisen regarding soybean plantings. These are:

1. **When during the planting season should a producer switch to an earlier maturing soybean variety?**

   In southern Wisconsin, full season soybean varieties (>1.8RM) out yielded earlier maturing varieties (<1.8RM) by 15 bu per acre at early May planting dates compared to only 2 to 5 bu per acre at late May planting dates. In northern Wisconsin, late maturing varieties (1.7 to 1.9RM) also out yielded early maturing varieties (<1.7RM), however the difference was not as great. Switching to an earlier maturing variety when planting after the first week of June will reduce the chance of damage from an early fall frost (Fig. 1.). Unfortunately growers will realize a yield penalty if they choose to move to an earlier maturity groups and lowered seeding rates (Table 1.). It is also important to note that if you do choose to switch to an earlier maturity group soybean, do not use a variety that is more than 0.5 RM earlier than you normally would plant.

2. **When is the latest soybeans can be planted in Wisconsin and still expect a grain yield?**

   Research from the 1990's in southern Wisconsin indicates that in two out of three years, grain can be harvested from soybeans planted as late as June 26, although the yields are usually minimal and not generally economically feasible. The frequency of harvesting grain from soybeans planted this late can be increased by using early maturing varieties (<1.8RM) in southern Wisconsin, and <1.0RM in northern production areas. A planting date of June20 in southern Wisconsin and June 15 in northern Wisconsin, using early maturing varieties, was considered to be the latest practical date. However today's grain prices coupled with opportunities for late-season discounted treated soybean seed may entice growers to push the planting date window in 2013.

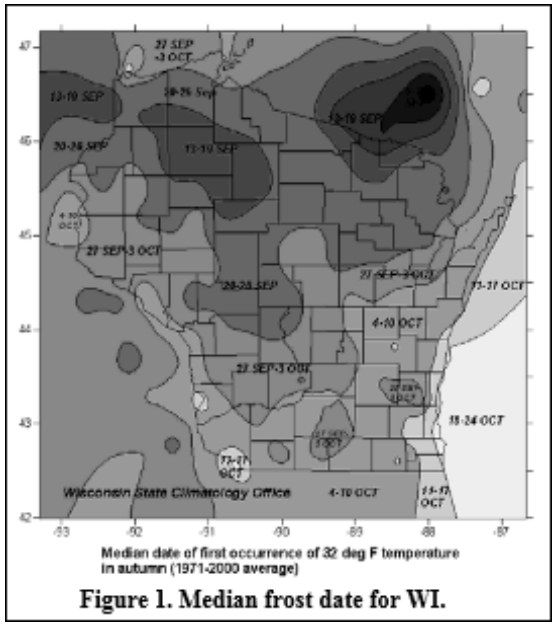


Figure 1. Median frost date for WI.

3. **What should my target plant population be in my late planted soybeans?**

   To maximize yield potential in late planted soybean, growers should target a stand of 180,000 plants per acre in row spacing's ≤20inches. Wider row spacing and reduced plant stands will lead to reduced yield potential due to decreased canopy development. Planting too few seeds can also lead to a lower physical pod set and harvest issues. To achieve 180,000 plants per acre a grower may have to plant up to 200,000 seeds per acre (assuming 90% germ).

Table 1. Expected relative soybean yield at four replanting dates compared to predicted yields for a range of plant populations resulting from an optimum planting date of May 1-20 for full season maturity or short season maturity varieties.

Early plant population	Initial planting (May 1-20)		Replanting date: June 1		June 10		June 20		July 1	
ppa x 1,000	----------% of maximum yield----------									
200	100	***86***	89	***90***	75	***75***	68	***67***	61	***60***
180	98	***85***	88	***87***	75	***72***	66	***64***	63	***60***
160	97	***84***	87	***84***	73	***70***	64	***61***	63	***58***
140	95	***83***	85	***81***	72	***67***	62	***57***	62	***56***
120	93	***81***	82	***78***	70	***65***	59	***53***	60	***52***
100	91	***80***	80	***76***	67	***63***	57	***49***	56	***47***
80	88	***79***	77	***73***	64	***61***	54	***44***	51	***40***
60	86	***78***	73	***70***	61	***60***	51	***39***	44	***33***
40	83	***77***	69	***67***	57	***59***	47	***34***	35	***25***

* Figures in bold italics are for shorter season maturities.

Identifying the Hollow Stem and Jointing Growth Stages in Wheat Video

Shawn Conley, Soybean and Wheat Extension Specialist

Dr. Shawn Conley, the Wisconsin soybean and small grains Extension specialist, visits a wheat field to demonstrate the process.

To view this video, click on the image below.

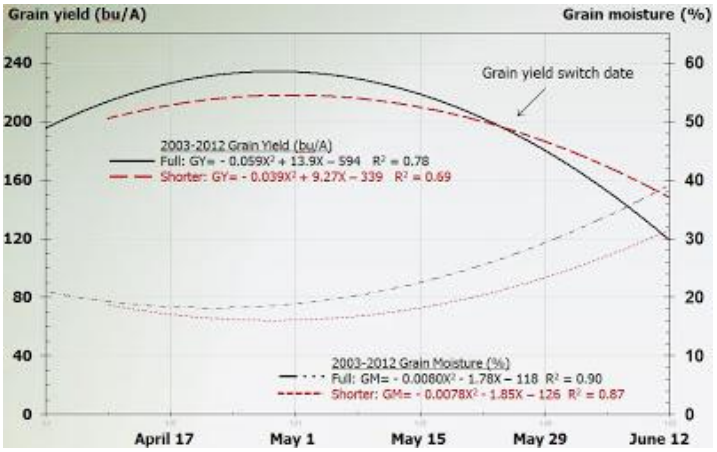
Hitting the Bull's Eye when Switching Corn Hybrid Maturity

Joe Lauer, University of Wisconsin-Madison

The 2013 corn growing season is off to its slowest start in a long time. On May 12 USDA-NASS reported 14% of the corn planted. The slowest start ever recorded was in 1984 when by week 19, only 14% of the corn was planted. Other slow starting years (by Week 19) were 1979 (15%), 1981 (20%) and 1993 (21%). Due to the slow start, especially for farmers in northern Wisconsin, many are considering whether they need to switch corn hybrid maturities. In the north, we really only have one opportunity to switch maturity and still have the potential for grain yield. In southern Wisconsin, we may have two opportunities to switch hybrid maturity.

In Wisconsin each Relative Maturity (RM) unit increases grain yield 1.9 bu/A. So farmers often try to select hybrids that are full-season because they offer the best yield potential. The trade-off is that full-season hybrids are often wetter during fall harvest increasing production costs due to higher grain moisture and greater drying/energy cost (Figure 1). On optimal planting dates grain yield of full-season hybrids is usually greater than shorter-season hybrids. However, the rate of yield decline is faster for full-season hybrids, so that by about May 24 the grain yield of shorter season hybrids is then greater than full-season hybrids for planting in late May and early June. What further complicates this management decision is that grain moisture of shorter-season hybrids is nearly always drier than full-season hybrids. Dryer grain produced by shorter-season hybrids has implications for production costs of two different maturities.

Figure 1. Corn grain yield response of full-season hybrids (104-108 RM) and shorter-season (94-98 d RM) hybrids to planting date during 2003 to 2012 at Arlington, WI (N= 388 plots).



Quite a bit of year-to-year variability can exist on a farm. Table 1 describes maximum yield dates and rate of yield loss for full-season hybrids described previously and includes data for shorter-season hybrids. On average maximum grain yield was about 16 bu/A greater for full-season hybrids. In some years the date when maximum yield occurs is earlier for shorter-season hybrids, but on average is similar between full- (April 28) and shorter-season (April 30) hybrids. Full-season hybrids lose on average about 1.6 bu/A per day in late May compared to only 1.0 bu/A per day for shorter-season hybrids. So when considering grain yield only, the time to switch corn hybrid maturity between full- and shorter-season hybrids ranges between May 1 and June 2 with the average at May 24. In 2009, a very cool year, the shorter season hybrid always had greater yield than the full-season hybrid.

Table 1. Corn grain yield response of full-season hybrids (104-108 RM) and shorter-season (94-98 d RM) hybrids to planting date during 2003 to 2012 at Arlington, WI (N= 388 plots). In 2012, no shorter-season hybrids were grown.

	Full-season (104-108 d RM)			Shorter-season (94-98 d RM)			
Year	Maximum yield (bu/A)	Date of Max yield	Rate of yield loss May 20	Maximum yield (bu/A)	Date of Max yield	Rate of yield loss May 20	Grain yield switch date
2012	232	May 1	1.3	---	---	---	---
2011	232	April 30	0.9	223	May 4	0.5	May 25
2010	267	April 29	2.3	240	May 5	1.0	May 21
2009	242	April 26	1.5	283	April 25	1.7	---
2008	231	May 2	1.6	225	May 14	0.4	May 21
2007	225	May 3	2.1	205	April 20	0.8	May 24
2006	238	April 29	2.3	237	May 2	2.1	May 1
2005	223	April 10	0.5	206	May 8	0.9	May 10
2004	230	April 25	2.5	192	April 29	1.7	June 2
2003	223	April 29	1.2	191	April 17	0.4	May 31
Average	234	April 28	1.6	218	April 30	1.0	May 24

But grain yield isn't the only factor in this management decision (Table 2). Both grain price and drying costs must also be factored into the economics as described previously. Currently energy costs are about $1.60 to $2.00 per gallon for liquid propane. So if we figure a corn price of $5.00 to $6.00 per bushel, then our hybrid maturity switch date using the above data would be May 17 to May 19. As corn price increase maturity switch dates become later. Conversely, as drying cost increase maturity switch dates become earlier.

Table 2. Switch dates between full- and shorter-season corn hybrids for various Energy:Corn price ratios. Data includes full-season hybrids (104-108 RM) and shorter-season (94-98 d RM) hybrids planted on different dates during 2003 to 2012 at Arlington, WI (N= 388 plots).

Price of Energy (LP Gas)		Price of corn ($/bu)						
$/gal	$/point bu	$2.00	$3.00	$4.00	$5.00	$6.00	$7.00	$8.00
$0.00	$0.000	May 25	May 25	May 25	May 25	May 25	May 25	May 25
$0.40	$0.008	May 21	May 22	May 23	May 23	May 23	May 24	May 24
$0.80	$0.016	May 17	May 19	May 21	May 22	May 22	May 22	May 23
$1.20	$0.024	May 13	May 17	May 19	May 20	May 21	May 21	May 22
$1.60	$0.032	May 9	May 14	May 17	May 18	May 19	May 20	May 21
$2.00	$0.040	May 5	May 11	May 15	May 17	May 18	May 19	May 20
$2.40	$0.048	May 2	May 9	May 13	May 15	May 17	May 18	May 19
$2.80	$0.056	April 29	May 6	May 11	May 13	May 15	May 17	May 18
$3.20	$0.064	April 26	May 4	May 9	May 12	May 14	May 15	May 17

UWEX recommends the following general guidelines when considering switching corn hybrid maturity. For the next few days, if the weather is good and your fields are fit, proceed with planting the hybrids you have in hand. When using these guidelines, please remember that growing season, site and management influence a particular hybrid's actual days to maturity.

Table 3. Relative maturity of adapted corn hybrids for different planting dates and relative maturity zones. Derived from UWEX A3353 - Corn Replant/Late-Plant Decisions in Wisconsin.

full-season relative maturity zone[a]	——relative maturities[b] for late planting——			
	May 20	June 1	June 10	June 20
85 and earlier	75-80	75-80 (silage)	—	—
85-90	80-85	75-80 (silage)	—	—
90-95	85-90	75-80	75-80 (silage)	—
95-100	90-95	80-85	75-80 (silage)	—
100-105	95-100	85-90	75-80	75-80 (silage)
105-110	100-105	90-95	80-85	75-80 (silage)
110-115	105-110	95-100	85-90	75-80 (silage)

Although the penalty for late planting is important, growers also need to be careful to avoid tillage when soil is too wet. Yields may be reduced somewhat this year, but effects of soil compaction can reduce yields for several years to come. Your decision to switch hybrid maturity depends upon:

1. **Desire to accept risk**: Longer season hybrids offer the highest yield potentials, but may also increase drying costs and/or delay harvest.
2. **Potential use**: For dry grain, relative maturities should be shorter-season within the maturity range for the latest acceptable planting date. For ear corn, high moisture corn, and silage, relative maturities should be longer-season within the maturity range for the latest acceptable planting date.
3. **Field conditions**: Shorter-season hybrids within the maturity range for the latest acceptable planting date should be selected when field conditions include heavy crop residue, reduced tillage, and heavy soil textures.
4. **Hybrid dry down and grain quality characteristics**: Longer-season hybrids within the latest acceptable planting dates should have fast grain dry-down and high test weight characteristics.
5. **Ease of trading** original hybrids for superior shorter-season alternatives.

Literature Cited

Lauer, J. 1997. Corn Replant/Late-Plant Decisions in Wisconsin. UWEX 3353.

Consultant alfalfa winter injury survey

Dr. Dan Undersander, Extension and Forage Agronomist

Wisconsin Forage Team and The University of Minnesota are working to better understand the scope, severity and causes of this year's alfalfa winter injury that has been reported throughout Minnesota and Wisconsin.

We are asking all Minnesota and Wisconsin crop consultants to complete a brief 12 question survey before Friday, June 13, 2013. Please answer all questions, then select "Done" and your answers will be recorded. The survey can be found at https://www.surveymonkey.com/s/2013alfalfainjuryconsultant. One survey per farm or group of farms is sufficient.

We will share the summarized survey results at future Minnesota and Wisconsin forage programs.

August 2013 Nitrogen Use Efficiency Conference in Kansas City

Carrie Laboski, Extension Soil Fertility/Nutrient Management Specialist

I'm passing along some information about a N use efficiency conference that may interest you. Managers and advisers on cropland N management will be meeting with other stakeholders to explore the most effective and efficient N sources, implementation of 4R nutrient management, and adoption of technology tools to meet economic, environmental and social goals. *Practicing agronomists, crop advisers and extension workers are especially invited to the conference.*

To view the press release scroll down to the bottom of this newsletter.

Update on Soil Profile Nitrate Concentrations

Carrie Laboski, Extension Soil Fertility/Nutrient Management Specialist

The soil nitrate monitoring network website was just updated with soil profile nitrate concentrations for 26 sites throughout Wisconsin. The results are not unlike two weeks ago. Some sites had large losses of nitrate over the winter while others had moderate or typical losses. Nitrate in the soil profile remains high in some locations. Follow guidelines in articles on May 2 and April 25. You can see all of the data at: http://uwlab.soils.wisc.edu/soilnitratemonitoring/. The website will be updated again next week.

Wisconsin Pest Bulletin 5/16/13

A new issue of the Wisconsin Pest Bulletin from the Wisconsin Department of Agriculture, Trade and Consumer Protection is now available. The Wisconsin Pest Bulletin provides up-to-date pest population estimates, pest distribution and development data, pest survey and inspection results, alerts to new pest finds in the state, and forecasts for Wisconsin's most damaging plant pests.

Issue No. 3 of the Wisconsin Pest Bulletin is now available at:

http://datcpservices.wisconsin.gov/pb/index.jsp

http://datcpservices.wisconsin.gov/pb/pdf/05-16-13.pdf

Soybean Planting into Cool Wet Soil

Damon Smith, Extension Field Crops Pathologist, Department of Plant Pathology, University of Wisconsin-Madison

What a difference a season can make! Last year at this time it was unseasonably hot and the drought was beginning to rear its ugly head. This season we find ourselves on the opposite end of the spectrum. Temperatures have been pretty cool and winter just doesn't seem to want to give in to spring/summer. Last week we planted research soybean plots and then found ourselves with saturated soils and 2-inch soil temperatures sliding back into the upper 40s and low 50s at the Arlington Agricultural research station. I suspect many soybean growers found themselves in the same situation around the state.

So what kind of diseases do you run into in these cool wet soils? Species of *Pythiums*, *Phytophthora sojae*, and *Phomopsis* can all cause seed rots and/or seedling diseases when soils are cool and wet. To learn more about seedling disease visit the Soybean Plant Health website at http://fyi.uwex.edu/fieldcroppathology/soybean_pests_diseases/ and scroll down to "Seedling Diseases".

Soybean fungicide seed treatments can help reduce seed rot. However, not all soybean seed treatments are the same. To determine if a fungicide was included in your seed treatment, consult the recently updated "What's on your seed" chart at http://fyi.uwex.edu/fieldcroppathology/files/2013/01/Whats_on_your_seed_FINAL_4.pdf. Efficacy information for some of these active ingredients can be found on the chart "Specific Activity of Soybean Seed Fungicides". The chart is located at http://fyi.uwex.edu/fieldcroppathology/files/2010/11/Specific_Activity_of_Soybean_Seed_Fungicides.pdf.

For *Phytophthora*, resistant varieties of soybean are also available. Consult your seed label to determine what resistance gene(s) your variety has in it. The table below shows which genes are resistant against which races. Remember that "field resistance" does exist in most varieties marketed in Wisconsin. That is to say that even though a certain gene (RPS 1a for example) might not be very effective for a specific race found in a field, varieties with that gene it will perform better than another variety with the same gene. However, "field resistance" can be overcome easily in situations where pathogen pressure is high.

Race-specific Phytophthora resistance genes and their effectiveness in Wisconsin

Soybean genes	Phytophthora races controlled	Effectiveness in Wisconsin
Rps 1a	1, 2, 10, 11, 13-18, 24	limited effectiveness
Rps1b	1, 3-9, 13-15, 17, 18, 21, 22	
Rps 1c	1-3, 6-11, 13, 15, 17, 21, 23, 24	effective in 75% of fields
Rps 1k	1-11, 13-15, 17, 18, 22, 24	effective in 99% of fields
Rps 3	1-5, 8, 9, 11, 13, 14, 16, 18, 23, 25	
Rps 4	1-4, 10, 12, 16, 18-21, 25	
Rps 6	1-4, 10, 12, 14-16, 18-21, 25	
Rps 1k, 6	1-11, 12-22, 24, 25	

For more information on Phytophtora root and stem rot which can occur later in the season you might also consult a new fact sheet recently posted at http://fyi.uwex.edu/fieldcroppathology/files/2013/04/Phytophthora-Root-and-Stem-Rot-of-Soybean.pdf and the Soybean Plant Health page on Phytophthora root and stem rot at http://fyi.uwex.edu/fieldcroppathology/soybean_pests_diseases/phytophthora_soybean/.

Wisconsin Winter Wheat Disease Update – May 15, 2013

Damon Smith, Extension Field Crops Pathologist, Department of Plant Pathology, University of Wisconsin-Madison

The status of disease on winter wheat in Wisconsin is pretty similar to that of last week (http://ipcm.wisc.edu/blog/2013/05/wisconsin-winter-wheat-disease-update-may-8-2013/). Wheat is at Feekes 4 or 5 this week in southern Wisconsin and only Septoria leaf blotch has been observed at low levels on lower leaves. Wheat has responded well to milder temperatures, frequent rains, and nitrogen applications.

Dr. Carl Bradley, University of Illinois plant pathologist, reported low levels of stripe rust in Champaign Co. Illinois this week. Wheat growers and consultants in Wisconsin should continue to scout for rust, especially stripe rust. Reports continue to get closer to Wisconsin and frequent rains and mild temperatures are perfect for spread and development of stripe rust.

For more information about rusts, and stripe rust in particular, check out my previous articles located at http://ipcm.wisc.edu/blog/2013/04/wheat-scouting-and-little-more-about-rusts/ and also at http://ipcm.wisc.edu/blog/2013/03/using-fungicides-on-wheat/.

Plant Disease Diagnostic Clinic (PDDC)

Brian Hudelson, Ann Joy, and Andrew Pape, Plant Disease Diagnostics Clinic

The PDDC receives samples of many plant and soil samples from around the state. The following diseases/disorders have been identified at the PDDC from April 20, 2013 through April 26, 2013.

PLANT/SAMPLE TYPE	DISEASE/DISORDER	PATHOGEN	COUNTY
VEGETABLES			
Tomato	Edema	None	Marathon

For additional information on plant diseases and their control, visit the PDDC website at pddc.wisc.edu.

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December 1996 Revised 2013

ALTERNATE FORAGE CROPS

Dr. Dan Undersander, Forage Agronomist
Department of Agronomy, University of Wisconsin

First, we should put things into perspective by stating that alfalfa is still the best choice, in most cases, for long term production of high quality, high tonnage harvested forage. We also expect to see increased use of corn silage, where topography and farm plans permit in dairy rations, in the alfalfa-based rations.

While grasses can produce high quality forage well in grazing systems, they tend to be high in fiber when allowed to grow to higher yields for harvest as hay or haylage. The high fiber will restrict animal intake in dairy rations. Other legumes, while providing good forage quality, tend to be lower yielding than alfalfa.

The alternatives available for harvested forage tend to be annual crops (table 1). The first portion of the table, covering small grains, is listed in order according to when the crops would normally be harvested for forage. Yield and quality values are intended to represent average occurrences to allow comparisons among forages. It should be recognized that yields on individual farms may be more or less than shown depending on management and weather conditions. All yields are expressed as dry matter tons/acre. When intending use is for silage divide dry matter yields by 0.35 to convert to tons silage at 65% moisture. Yields are estimated for southern Wisconsin under high management and should be adjusted accordingly for other regions. Crude Protein is expressed on a dry matter basis. For crops where more than one harvest is likely, only the date of the first harvest is listed.

Small grains should be harvested at boot stage (head beginning to emerge from leaf whirl) for milking dairy cattle and at early heading for other categories of animals. The same is true for small grains seeded with peas. Small grains are definitely cool season crops and have greatly reduced yields when planted later in the spring or over summer. Fall plantings, except for oats) tend to produce little forage in the seeding year. We would not recommend late summer seeding alfalfa with small grains as the cover crop will slow down development of alfalfa and increase risk of winterkill.

Seeding a mixture of spring oats and winter wheat in the fall will allow for forage harvest in October (primarily oats) and again in the spring (winter wheat).

Small grain-field pea mixtures have gained popularity as an emergency crop. Primary benefit of peas mixed with small grains is to improve quality and palatability; yield effects are variable ranging from 0 to 0.5 t/a increases. Peas may be mixed with oats, triticale, or barley. The top yielding varieties of each species perform better than the poorer-yielding varieties of all other small grain species. Small grain-pea mixtures have wider harvest window. Increased forage quality has been observed with higher pea seeding rates up to 100 lb/A. However, diminishing returns and cost of peas suggest that the optimum seeding rate is 20 to 30 lb peas per acre.

Corn should be harvested for silage at beginning at 65% moisture (which may be close to half milk line). Forage sorghum should be harvested for silage at milk stage.

Forage sorghum, sudangrasses, and sorghum/sudangrass hybrids are better adapted than most species to drought, high temperature, water logging, and low soil pH than corn, but will yield less in seasons with cool August and September. Sudangrass and sorghum/sudangrass hybrids should be harvested at 3 feet of height (two to three cuttings for season). Harvesting at later maturity may increase yield but will result in very low forage quality.

Soybeans should be harvested at R7 stage (when first pods are beginning to turn color). The idea is to harvest just before beans have begun to form. Soybeans do not ensile well because of high oil content and should be mixed with a grass (e.g. corn, sorghum, sudangrass) at chopping to improve ensiling characteristics.

Table 1. Forage Planting Date, Harvest Date, Yield and Quality of Annual Forage Crops

Crop	Planting Date	Maturity Date	Yield (t/a)	Crude Protein	RFV
Winter Rye	September	mid May	3-3.5	12-13	85-90
Winter Wheat	September	late May	3-3.5	11-12	85-90
Winter Triticale	September	early June	3-3.5	11-12	85-90
Barley	mid April	mid June	2.5-3	12-13	100-110
Barley & peas	mid April	mid June	2.5-3	15-16	115-120
Oats	mid April	late June	2.5-3	12-13	100-110
Oats & peas	mid April	late June	2.5-3	15-16	115-120
Wheat (spring)	mid April	early July	2.5-3	11-12	100-110
Triticale (spring)	mid April	mid July	2.5-3	13-14	100-110
Sp. triticale & pea	mid April	mid July	2.5-3	15-16	115-120
Corn (silage)	May 1	mid Sept	7-8	9-10	95-105
Corn (silage)	June 1	mid Sept	5-6	9-10	95-105
Corn (silage)	July 1	late Sept	2-3	9-10	95-105
Forage sorghum1	June 1	mid Sept	6-9	10-11	90-100
Forage sorghum	July 1	mid Sept	2-4	10-11	90-100
Sudangrass1	June 1	mid July	3-5	11-13	90-100
Sudangrass	July 1	mid August	2-4	11-13	90-100
Sorghum-sudangrass hybrid1	June 1	mid July	4-6	12-14	90-100
Sorghum-sudangrass hybrid	July 1	mid August	3-5	12-14	90-100
Soybeans	May 15	July 1	1-1.5	20-21	120-140
Soybeans	May 15	August 1	1.5-2.5	18-20	120-140
Soybeans	May 15	Sept 15	3-4	18-20	120-140
Soybeans	June 1	Aug - Sept	2-3	18-20	120-140
Soybeans	July 1	September	1-2	18-20	120-140
Grain sorghum & soybean	June 1	September	6-7	11-12	95-110
Forage sorghum & soybean	June 1	September	6-9	10-11	90-105
Rape	mid June	September	2-3	20-25	150-250
Turnip - tops	mid-June to Aug 1	September	2-3	20-25	150-250
Turnip - beet	-------	October	0.5	16-20	------
Oats (spring)	August	October	1-2	10-11	140-150
Barley (spring)	August	October	1-2	10-11	110-130
Triticale (spring)	August	October	0.5-1	13-14	130-140
Wheat (winter)	August	October	0.5-1	12-13	150-160
Mix (winter wheat & oats)	August	Oct & May	3-5	10-13	100-120

1 BMR Forage Sorghum and Sudangrass recommended for higher quality

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FOR IMMEDIATE RELEASE

AGRICULTURAL PRACTITIONERS AND FERTILIZER INDUSTRY MEMBERS PLAN TO ATTEND AUGUST 2013 NITROGEN USE EFFICIENCY CONFERENCE IN KANSAS CITY

May 10, 2013 – Norcross, Georgia, USA – The International Plant Nutrition Institute (IPNI) is a leading co-sponsor for an upcoming conference, to be held August 13-15, 2013 in Kansas City, Missouri, to identify solutions to the complex challenges surrounding improved Nitrogen (N) Use Efficiency.

"Higher-yielding crops require wise nutrient input management to achieve realistically attainable yields, and to sustain and improve the soil fertility resource," says Dr. Cliff Snyder, Nitrogen Program Director for IPNI. "Increasing weather uncertainties, and the greater need to protect water quality and air quality, are making it more important than ever to understand the challenges and opportunities to improve farmer profitability while also protecting the environment."

Some small-scale studies have demonstrated that N losses to the environment can be minimized without jeopardizing profitable crop yields. Yet, N losses to the atmosphere as nitrous oxide and ammonia, and nitrate-N losses to surface water and groundwater continue at concerning levels that may pose serious environmental and human health threats.

Private and public sector leaders, who have practical experience in optimizing agricultural N use, and policy experts, will be presenting the latest management science. Case studies will be shared as examples of success, and opportunities for continued improvements in N use efficiency and effectiveness will be revealed.

Managers and advisers on cropland N management will be meeting with other stakeholders to explore the most effective and efficient N sources, implementation of 4R nutrient management, and adoption of technology tools to meet economic, environmental and social goals. Practicing agronomists, crop advisers and extension workers are especially invited to the conference.

All conference attendees can participate in Café discussion sessions designed to recommend actions and policies to improve N management with existing knowledge and technologies. Nationally recognized private and government VIPs will summarize the discussions and the stakeholder input in charting our way forward in optimizing N management.

More details on the conference agenda, registration, and lodging may be found at: https://www.soils.org/meetings/specialized/nitrogen-use-efficiency.

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