6-11-2008

Forage and Cover Crop Considerations for Delayed Planting and Flooded Sites

Stephen K. Barnhart
Iowa State University, sbarnhar@iastate.edu

Forage and Cover Crop Considerations for Delayed Planting and Flooded Sites

Abstract
Extended periods of rainfall, flooding, hail or all of the above have producers scrambling for replant or prevented planting options. Each choice has practical and economic implications, so should be approached with some thought. William Edwards, ISU economist, provides a good overview of crop insurance implications for many of these choices. See his article Economic Impact of Delayed and Prevented Planting Provisions.

Keywords
Agronomy

Disciplines
Agricultural Science | Agriculture | Agronomy and Crop Sciences

ICM News

Forage and Cover Crop Considerations for Delayed Planting and Flooded Sites

June 11, 2008

By Stephen K. Barnhart, Department of Agronomy

Extended periods of rainfall, flooding, hail or all of the above have producers scrambling for replant or prevented planting options. Each choice has practical and economic implications, so should be approached with some thought. William Edwards, ISU economist, provides a good overview of crop insurance implications for many of these choices. See his article Economic Impact of Delayed and Prevented Planting Provisions.

Some options come down to forage crop alternatives and simply 'cover crop.' When considering crops for an annual forage, practical issues include:

- Can I use the forage?

- If I will not be using the forage, can it be sold or rented?
- Will the forage crop be harvested as silage, dry hay, or will it be grazed?

While many species may fit the criteria for these uses, the following are among the most practical, predictable, and economical.

Dry Hay Options	Silage Options	Grazing Options
Foxtail Millet	Foxtail Millet	Foxtail Millet
Japanese Millet	Japanese Millet	Japanese Millet
Sudangrass(maybe)	Sudangrass	Sudangrass
	Sorghum X Sudan Hybrid	Sorghum X Sudan Hybrid
	Hybrid Pearl Millet	Hybrid Pearl Millet
Oats	Oats	Oats

Seed supplies of some of these forage crops are in short supply in normal production years. As you consider these as options for your needs, check on seed availability.

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

Crop	Planting Date	Maturity Date	Yield Dry Matter Tons/Acre	Crude Protein %	RFV*
Oats	now-Aug	early/mid-Sept	1-1.5	12-13	100-110
Foxtail millet	now-Jul 15	early/mid-Sept	1-2.5	11-13	90-100
Japanese millet	now-Jul 15	early/mid-Sept	2-3	11-13	90-100
Sudangrass	now-Jul 15	early/mid-Sept	2-4	11-13	90-100
Sorghum X sudangrass hybrid	now-Jul 15	early/mid-Sept	3-5	12-14	90-100
Hybrid pearl millet	now-Jul 15	early/mid-Sept	3-5	12-14	90-100
Grain sorghum & soybean mix	now-Jul 15	early/mid-Sept	6-7	11-12	95-110

*RFV = Relative Feed Value, 100 equals approximately the digestibility and feed energy value of full bloom alfalfa.

Below are general production and feeding details for each type of forage.

Sudangrass - multiple-cut, summer annual; used for fresh cut forage, pasture (rotation grazing is recommended), or silage; difficult to dry thoroughly for hay; varieties vary in height and leafiness. Plant through early-July.

The first growth is useable in about 50 days. At this late planting date you may get a 2nd harvest or grazing. A hydrocyanic acid poisoning (Prussic acid) risk is minimal, but avoid pasturing severely drought stressed or very short (<12 inches) growth/tiller regrowth, and use caution if grazing soon after frost.

Hybrid Sorghum X Sudangrass - multiple-cut, summer annual; used for fresh cut forage, pasture (rotation grazing is recommended) or silage; varieties vary greatly in height, leafiness, grain yield depending on the parent lines making up the hybrid. Plant through early-July. The first growth useable in about 50 days, Regrowth is from tillers. At this late planting date you may get a 2nd harvest or grazing. There is a hydrocyanic acid poisoning (Prussic acid) risk if plants or tillers are grazed or green fed at short height (<24 inches) or during severe drought and use caution if grazing soon after frost.

Sudangrass, and sorghum X sudangrass hybrids are better adapted than most species to drought, high temperature and low soil pH than corn, but will yield less in seasons with cool August and September temperatures. Sudangrass and sorghum X sudangrass hybrids should be harvested at 2 to 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.

Short Grain Sorghum/Forage Soybean Mixture - planted through early summer. Harvestable within about 60 days. Requires good fertilization for production. Harvest at late vegetative or very-early head stage of the sorghum.

Foxtail Millet - also called German, Siberian or hay millet. Summer annual grass; used as harvested or grazed forage; Plant through mid-July. Useable in about 50 days. One summer growth (vegetative 1-2 ft, with seedhead 2-3 ft); best of the 'millets' for an emergency hay crop; can become a weedy grass if allowed to produce mature seed.

Japanese Millet - a summer annual grass; relatively coarse (stemmy) forage; used as fresh cut forage, hay, silage or pasture. Plant through mid-July. Useable in about 50 days. Very little regrowth if first growth is allowed to reach maturity - if cut at vegetative growth stage, regrowth yields are more likely. Closely related to the grassy weed barnyard grass, so avoid allowing seed formation.

Hybrid Pearl Millet - a multiple-cut, warm-season annual; used for fresh cut forage, pasture (rotation grazing is recommended), or silage; resembles sorghum X sudangrass hybrids in plant structure; plant through early July. Useable in about 50 days. Somewhat slower regrowth than sorghum X sudangrass hybrids; poor production in cool summer seasons; no risk of hydrocyanic acid (Prussic acid) poisoning.

These annual millets have been of particular interest in recent years. Remember that these are warm-season crops and perform best in warm, sunny growing seasons. They have not performed up to expectation during cool, cloudy summers.

Oats - planted June or July as a cover crop**,** can be grazed about any time. Will likely head at a short height. Can be cut and stored as dry hay or silage form late-vegetative through early milk stage. At dough stage, the stems decrease feeding value greatly. Other cereal grains may also fit this use, such as barley, spring wheat, or spring triticale, but their seed will likely more expensive and in shorter supply than for oats.

While it is the farthest thing from our minds now, these annual forages can come under scrutiny later in the growing season for high nitrate risk if the season turns dry.

Stephen K. Barnhart is a professor of agronomy with extension, teaching, and research responsibilities in forage production and management.

Category: Crop Production

Crops:
Forage
Cover Crop

Tags: flooded sites | Forages | cover crops | delayed planting