

Alfalfa & Forage Production

Alternative Forages



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Company Overview

- Original company started around 1920; headquartered in La Crosse, WI
- Focus on forage, turf, cover crop seeds and complementary products
- Our primary market is input supply companies (ag retail & seed dealers)
- No different than NRCS/SWCD & other agencies, land-grants, our work includes engaging new users and promoting sound agronomics

We strive to get it right!



Alternative Forages

Why?

What are the options?

When to harvest

Why?

- Perennial forages are the foundation, but sometimes other factors dictate that additional options should be considered
 - Emergency forages
 - Changing or transitioning crop rotations
 - Cover crop utilization
- Risk management
- Spread out work load


Alfalfa is king!

- Traditional rotations are established for a reason
- Alfalfa is the best choice for long term production of high quality & high tonnage
- Alfalfa-based rations in combination with corn silage typically provide basis for success
- Perennial grasses are great, but.....
 - Fiber contents can be elevated when allowed to yield to greater levels
 - These levels can restrict intake in dairy or high-level production systems
- Other legumes offer high quality, but usually lack tonnage

Alternatives = annual forages

- Small grains
- Small grain/pea mixtures
- Brassicas
- Summer annuals
- Soybeans

Small grains for forage

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- Cereals lower the TDN in the ration = less energy
 - Lower energy levels keep heifers/dry cows from getting overweight
 - Early planted small grains allow livestock to make multiple fall grazing passes (and in spring)
 - Allows manure apps in fall before seeding and again in spring after harvest
 - Covers keep erosion in check and present benefits to soil and soil health
 - Typical harvest is in boot stage (boot – dough stage) for silage

Small grains for forage

- Winter rye – quick growth in fall AND spring
- Winter triticale – best suited for grazing pasture
 - Because of its large stems, hay wilting and silage packing can be difficult
- Winter barley – most susceptible to winter injury, so consideration should be made when grazing later into the season
 - Barley has excellent value as a silage crop – most comparable to whole-plant corn silage (90-95%)
- Spring oats – usually need at least 75 days to maximize production
 - Plant in late July / early August
 - Harvest for silage in boot stage, for hay in boot-heading stage
- Spring barley – quicker harvest allows for more flexibility for double-crop

Small grain/pea mixtures

- Planted in spring, peas mixed with spring grains offer more palatable and high quality silage than small grain alone (U of Wisconsin)
 - Usually increasing crude protein by 2-3%
 - Typically reducing NDF by 4-8 points
- Research shows optimum seeding rates:
 - 40-50 lbs. oats or spring barley/triticale
 - 50 lbs. forage peas
- Harvest should be based on the maturity stage of the small grain
 - Late boot stage (few heads showing) for lactating dairy cows (125-130 RFQ)
 - Soft dough stage for heifers, dry cows, and beef cattle (around 100 RFQ)

Brassicas

- Extremely high forage values (high in easily digestible carbs & low in fiber)
- Many different disorders if fed 100% brassicas
- Traditionally the number was 2/3; but we think it needs to be lower
- Introduce livestock slowly & avoid turning them out HUNGRY
- Provide plenty of fiber (grass or grass hay)
- Plan on rotating OFTEN
- Brassicas can be really high in nitrates too!!!

Forage sorghums / Summer annuals

- Take advantage of heat and dry weather (when cool-seasons are dormant)
 - Forage Sorghums (1 Cut)
 - Sorghum Sudangrass / Sudangrass (Multiple Cuttings)
 - Pearl Millet, German Millet
- Sorghum/SxS plants contain a compound that can break down to release prussic acid (hydrogen cyanide-HCN) – which is high in young plants
 - Do not graze (regrowth too) or cut for green chop until the plant is $\approx 18''$
 - After drought, don't allow livestock to graze new shoots
 - Do not graze or green chop for 7-10 days after a killing frost
- Elevated nitrogen fertilizer or manure = \uparrow prussic acid & nitrate poisoning
- Most HCN is lost during curing. Hay/silage are rarely toxic even if the original forage was

Forage sorghums / Summer annuals

- Silage – forage sorghums should be harvested at the mid-dough stage
 - Non-heading types usually require killing frost for plant to get dry enough to ensile
- Hay – highest yields are gained when sudangrass/SxS hybrids are harvested at soft-dough, however....
 - Curing can be difficult and quality is jeopardized when harvested this late
 - Harvest for hay whenever forage is $\approx 30''$
 - Sorghum-sudangrass hybrids can be difficult for hay due to their large stems
 - Chop higher than lower
- Pasture – sudangrass or sudangrass hybrids can be grazed after the plant has reached $\approx 18-20''$ inches (usually 4-5 weeks after planting)
 - Graze often and use heavy stocking rates
 - Shorter grazing cycles reduces prussic acid risk

Forage soybeans

- High tonnage when planted early
- Watch herbicide intervals!
- Should be harvested at R7 stage (when first pods begin to turn color)
 - Harvest just before beans have begun to form
- Soybeans do not ensile well - high oil content
 - Mix with grass (corn, forage sorghum) at chopping to improve ensiling
 - Feeding with grass will greatly increase palatability



Progressive Forage



THANK YOU!

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