

Selecting Crops for Silage



Stuart Thiessen
Namaka Farms Inc.

Selecting Crops for Silage

- ▶ Go through our thought process in selecting crops for silage

Context Behind the Decisions

- ▶ 25,000 Head Feedlot - Fed for slaughter
- ▶ Outside of Calgary (Elevation = 970 m or 3200 ft)
- ▶ A mix of irrigation and dryland
- ▶ Access to 6500 acres of land (not all in silage every year)

Basis of Our Decision Tree

- ▶ Competing “businesses” within the farm
 - Cattle Feeding VS Grain Farming
- ▶ One business shouldn't subsidize the other
- ▶ Treat each as its own cost center.
- ▶ Maximize profits overall

Basis of Our Decision Tree

- ▶ Cattle Feeding Operation is charged out what it would cost to purchase the silage from outside the operation. This leads to appropriate decisions.
- ▶ 1 imperial ton DM = 26 Bu of Barley. Feedlot “buys” it at FMV

Cattle Feeding - What are we looking for in Silage (Full Feed)” ?

- ▶ Primarily we need it to be a “Rumen Tickler”
- ▶ Reasonably prevents acidosis (laminitis, bloat, AIP) - Don't want cattle to burn-out
- ▶ Animals to display “normal” behaviour (not eating fences / bedding / etc)
- ▶ Reasonable Cost - lowest \$/lb gain

Cattle Feeding - What are we looking for in Silage ?

- ▶ At full feed, silage is only 6 to 7% of our ration - slight variations in it's energy value have a minimal impact on our feeding
- ▶ For backgrounding, the energy value of the silage is far more important. While this isn't our core business, we doubt we'd change our silage choices.

Cattle Feeding - Other Realities

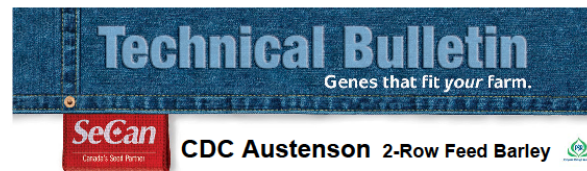
- ▶ Silage is not readily purchasable, so feedlots need a captive supply
- ▶ Trucking silage any distance becomes very cost prohibitive
- ▶ Costly if a cattle feeder is short on silage - robust supply

Grain Farm - Challenge

- ▶ Required to produce silage - about 30,000 imperial tons wet year after year w/o too much variation (Some extra storage)
- ▶ Most profitable if we maximize the output per acre.

Grain Farm - Maximizing Output

► Most important is yield potential



Description:

CDC Austenson is a 2-row hulled feed barley with top grain yield and short, strong straw. CDC Austenson produces grain yields higher than Xena, along with high test weight and large, plump kernels. CDC Austenson is well-adapted across western Canada, and compared to Xena, has shown improved resistance to prevalent races of net form net blotch, spot form net blotch and spot blotch. This variety is particularly well-suited to producers seeking a top-yielding, 2-row feed barley with improved performance over Xena.

Strengths:

- Higher grain yield than Xena
- Large, plump kernels with high test weight (87% plump kernels)
- Stronger straw than Xena
- 2 cm shorter in height than Xena
- Improved leaf disease resistance compared to Xena
- Resistant to stem rust
- Resistant to covered and false loose smut

Neutral Traits:

- Medium maturity, similar to Xena
- Test weight similar to Xena

Weakness:

- Susceptible to scald and true loose smut (similar to Xena)

Breeder:

Dr. Brian Rossnagel
Crop Development Centre
University of Saskatchewan
Saskatoon, SK

2006-2007 Two-Row Barley Registration Trials

Variety	Grain Yield (% of AC Metcalfe)	Maturity (days)	Height (cm)	Lodging 1 = erect 9 = flat	Test Weight (kg/hl)	1000 Kernel Weight (gm)	% Plump	Scald	Net Form Net Blotch	Spot Form Net Blotch	Spot Blotch	Loose Smut
AC Metcalfe	100	88	85	4.8	65.7	43.7	89	P	VP	F	F	VG
Xena	114	86	86	4.3	68.8	48.6	91	P	VP	F	VP	P
CDC Austenson	116	90	83	4.0	66.7	46.5	87	VP	P	VG	G	VP

Grain Farm - Maximizing Output

- ▶ Reliability of getting a crop. (i.e. corn is very productive, but in our area you can expect failures therefore not our choice).

Grain Farm - Maximizing Output

▶ Ability to harvest

- Timing - silage has a smaller harvest window than combining (5 day window at the right stage and moisture)
- Lodged crops not only reduce yield, but also take considerably longer to silage and delay the equipment from getting to the next field.



Grain Farm - Maximizing Output

- ▶ Rotation (for crop health). We don't have enough acres for a true 3 year rotation and are forced to grow cereal crops back to back.
- ▶ Ability to use the crop for another use. We plant more silage we need to cover us in case of drought / hail / etc. Normally, we combine this crop for cattle feed.

Current Cropping Selection

- ▶ For $\frac{1}{2}$ the required acres we use CDC Austenson, which is seeded first.
- ▶ The second $\frac{1}{2}$ of the acres are seeded to AC Sadash Wheat

Current Cropping Selection

- ▶ Both of these cereals were chosen as they are high yielding crops
- ▶ We have split the acres to $\frac{1}{2}$ barley and $\frac{1}{2}$ wheat to spread out the silage season more, as the barley matures earlier.

Current Cropping Selection

- ▶ Using wheat and barley gives us “some” rotational benefits albeit not perfect.
- ▶ The wheat and barley have different weather tolerances, with the combination helping to maximize our chances of getting a reasonable yield.

Current Cropping Selection

- ▶ A large benefit of the wheat is its lodge resistance.
- ▶ The downside of the wheat is that it doesn't fit well into our feeding regiment if we were to combine it

Current Cropping Selection

- ▶ In our area, corn is hit and miss. While we'd enjoy the good years, the low production (or outright failures) would be too costly.

Current Cropping Selection

► Questions?

