



'GROW YOUR OWN NITROGEN' DEMONSTRATION

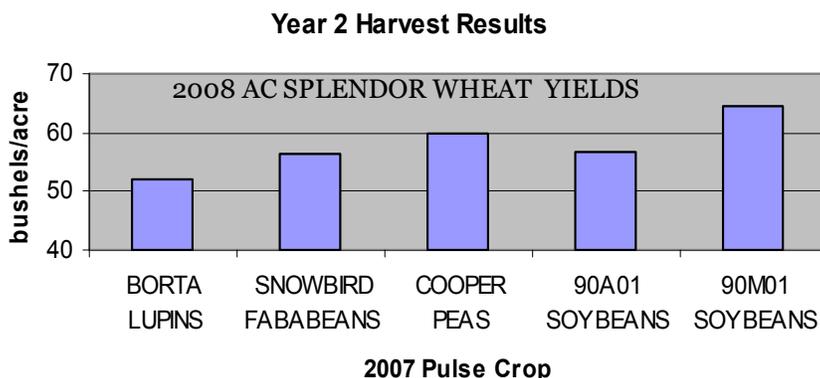
In this trial we demonstrated the use of pulses as a green manure crop to grow nitrogen on-farm and alternative methods to discing or plowing for incorporating the green manure crop.

In 2007, four different pulses were seeded: lupins, fababeans, peas and soybeans. Treatments included desiccating with glyphosate at flowering and podding stages, followed by rolling or mowing to obtain plant to soil contact. With the exception of the peas, the pulses did not 'flatten' with the lawn roller, so everything was mowed in the fall. Each pulse crop area was soil sampled in early May 2008. A Seed Hawk drill was successfully used to direct seed AC Splendor wheat on May 15. Only 50 lb/ac of 11-52-0-0 fertilizer was applied at the time of seeding.

Herbicides applied: Cleanstart on May 16 for a preburn; in-crop application on June 19 of Frontline A @ 40 mL/ac, Frontline B @ 280 mL/ac and Lontrel @ 85 mL/ac. The plots were combined in mid-September with a John Deere 6600 combine and yield data collected.

As depicted in the chart, wheat yields were above average and graded a #1.

The demonstration will be continued in 2009 with the area seeded to a monoculture canola crop. We will also establish a new trial. Since the lawn roller was inadequate for obtaining good plant to soil contact, we are getting an actual 'crop roller'. Stay tuned...



SAFE RATES OF SEED PLACED NITROGEN FERTILIZER

PAMI conducted a study to determine safe rates of nitrogen that can be placed with either cereal or canola seed. The research compared 3 different types of soil openers and 3 different crops.

Wheat and barley:

- ◆ The knife caused emergence and yield to decrease as the nitrogen (N) rate increased. The maximum safe-placed N rate for the knife appears to be about 35 lb/ac for barley and possibly higher for wheat
- ◆ The spoon caused emergence to decrease at higher N rates. However, yields were not reduced, suggesting the safe seed-placed N rate using a 2 inch spoon is about 50 lb/ac
- ◆ The sweep had the least impact on emergence, and yields were generally higher with higher N rates, suggesting safe rates of 70 lb/ac or possibly higher with the seed

Canola:

- ◆ As the rates of seed placed N increased, emergence decreased with all 3 openers, although damage was reduced as Seed Bed Utilization (SBU) or Row Width Utilization (RWU) increased. This is the amount of seedbed over which N has been spread relative to the space between rows, expressed as a percentage.
- ◆ Yield with the knife was reduced at all N rates above 35 lbs/ac and yield with the spoon was reduced at the 105 lbs/ac rate. The sweep demonstrated incremental increases in yield up to the 105 lb/ac rate

Delayed emergence and resulting uneven maturity caused by narrow spreads of seed and high rates of N can cause grade reductions and yield losses in short seasons. For a copy of the full report contact us or go to:

www1.agric.gov.ab.ca

On the next page is a table outlining safe rates of urea fertilizer that can be placed with the seed depending on the opener and guidelines for safe rates of ESN fertilizer placed with the seed.

SAFE RATES OF UREA FERTILIZER WITH THE SEED

The following are considered to be APPROXIMATE safe rates of urea (46-0-0) N applications with the seed *if seedbed soil moisture is good to excellent* (soil moisture at or near field capacity). All rates are in pounds actual N per acre (i.e. divide by 0.46 to get lbs. of 46-0-0 per acre). For cereals in dry soils, reduce N rates by at least 50%.

| | 1 inch spread* | | | 2 inch spread* | | | 3 inch spread* | | |
|----------------------------|-------------------|------|-------|----------------|------|-------|----------------|------|-------|
| | (disc or knife)** | | | (Spoon or hoe) | | | (Sweep) | | |
| | Row spacing | | | Row spacing | | | Row spacing | | |
| | 6 in | 9 in | 12 in | 6 in | 9 in | 12 in | 6 in | 9 in | 12 in |
| | RWU***or SBU | | | RWU***or SBU | | | RWU***or SBU | | |
| Soil Texture | 17% | 11% | 8% | 33% | 22% | 17% | 50% | 33% | 25% |
| Cereal Grains | | | | | | | | | |
| Light (sandy loam) | 20 | 15 | 15 | 30 | 25 | 20 | 40 | 30 | 25 |
| Medium (loam to clay loam) | 30 | 25 | 20 | 40 | 35 | 30 | 50 | 40 | 35 |
| Heavy (clay to heavy clay) | 35 | 30 | 30 | 50 | 40 | 35 | 60 | 50 | 40 |
| Canola & Flax | | | | | | | | | |
| Light (sandy loam) | 10 | 5 | 0 | 20 | 15 | 10 | 30 | 20 | 15 |
| Medium (loam to clay loam) | 15 | 10 | 5 | 30 | 20 | 15 | 40 | 30 | 20 |
| Heavy (clay to heavy clay) | 20 | 15 | 10 | 40 | 30 | 20 | 50 | 40 | 30 |

*Width of spread varies with airflow, soil type, moisture level, amount of trash and other soil conditions, so it must be checked under field conditions

**Some openers give less than 1 in spread

***RWU or SBU is a formula that equates the spread pattern of seed and nitrogen (N) relative to row space. It's the amount of seedbed over which the N has been spread expressed as a percentage: (spread / row spacing) x 100. RWU is a risk analysis tool to help determine the potential for emergence damage and crop reduction. The lower the RWU, the higher the risk of seed damage and crop loss.

Other factors that also have to be taken into consideration are soil moisture, soil texture, fertilizer source, seed quality and crop type.

SAFE RATES OF ESN FERTILIZER WITH THE SEED

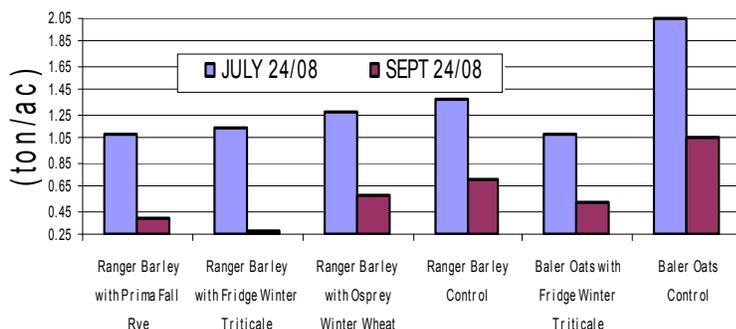
- Results to date by research conducted by Ag Canada in southern Alberta on canola and winter cereals showed no negative effects to seed placed ESN with rates that were 3 - 4X the safe rate of uncoated urea. However, more research is required and producers must take into account the effect handling has had on the polymer surface of the ESN.
- Agrium guidelines: For the established safe rate of N @ 0-50 lb/ac with the seed, ESN may be used to increase the N rate by 50%
For the established safe rate of N @ 60-80 lb/ac with the seed, ESN may be used to increase the N rate by 30%

Intercropping Fall & Spring Cereals to Extend Grazing

Intercropping a spring cereal with a winter cereal offers flexibility. The spring cereal can be grazed or harvested as silage or greenfeed and the winter cereal allowed to regrow for fall and/or spring grazing. Winter cereals seeded in the spring remain vegetative throughout spring, summer and fall. There is no heading out because seedlings do not receive the cold treatment (vernalization) which normally occurs in the fall. With this combination, the spring cereal has very vigorous growth providing excellent forage quality for earlier season grazing or silage/greenfeed harvest. Allowing the winter or fall cereal to regrow provides high quality pasture for fall grazing as regrowth potential for spring cereals and perennials decreases.

On May 14 Ranger barley and Baler oats were seeded in combination with winter cereals (Prima Fall Rye, Osprey Winter Wheat, and Fridge Winter Triticale). Seeding rates were 75% of the recommended rate for solo seeding. Fertilizer rates were 50 lb/ac of 11-52-0 and 140 lb/ac of 46-0-0. Clips were taken for yield comparison and nutritive analysis on July 24 (simulating greenfeed or silage harvest) and on September 24 (simulating fall grazing) and the entire plot area was mowed. Data was not taken from 2 of the treatments because of excessive alsike growth. The plot will be assessed in the spring of 2009 for potential spring grazing. This was a demo only and it was not replicated. From the initial data, the oat control yielded the highest and it was seeded at the normal seeding rate of 142 lb/ac. This demonstration will be repeated.

Yield Results



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DID YOU KNOW...

- ✎ A clubroot resistant canola hybrid (also glyphosate tolerant) could be available as early as this spring
- ✎ Based on Alberta Ag's insect forecast maps for 2009 grasshopper infestations in our MD will be low as will be the risk of a bertha armyworm outbreak
- ✎ The new livestock manifest books will be made mandatory as of March 31, 2009. They are available at auction markets across Alberta.
- ✎ We have many factsheets and other publications at our office for distribution
- ✎ Application Deadline for PFRA Shelterbelt trees is March 15, 2009. Application forms available at our office.
- ✎ By participating in the AgriProfit\$ program, you will receive a detailed financial analysis of your farm, including production costs & returns. Call 780-427-5390 for more information or our office.

\$20 buys NPARA membership & lunch

AG TRADE FAIR

NPARA Agricultural Showcase

Roger Andreiuk, Soil Specialist, RTL
-Getting the Most Out of Your Fertilizer \$ & Soil Quality

Daren Bryant, Taurus
- ESN Fertilizer

Calvin Yoder, Forage Specialist, Alta Ag
-Direct Seeding Into Sod & Herbicide Research Update

Holly Gelech, Biovision Lab
-Seed Quality Diagnostics

Arvid Aasen, Forage Specialist, Lacombe
-Annual Crops for Swath Grazing

Dave Wong, Market Specialist, Alta Ag
-Market Outlook

**NPARA AGM; Research
Hi-Lites & Annual Report**

When: **THURSDAY, APRIL 2**

Time: **8:30 AM**

Where: **BATTLE RIVER
AG HALL**

UPCOMING EVENTS

| EVENT | DATE | TIME | LOCATION | CONTACT | COST |
|---|-------------------|----------------|--------------------------------|--------------------------------------|------------------------------|
| Year Round Grazing Systems with Steve Kenyon | March 6, 7, 8 | 9-5 | Curling Club Lounge, La Glace | Jill Henry 780-513-3955 | \$600 per farm unit |
| Peace Country Classic | March 12-14 | | Evergreen Park, Grande Prairie | | |
| Hedging Seminar with Dave Wong | Tuesday March 24 | 1 pm | Legion Hall, Manning | Nora or Jana @ NPARA 780-836-3354 | |
| Certified Livestock Transporters Training & Certification Program | Saturday March 28 | 9 am - 4:30 pm | Legion Hall, Manning | NAIT @ 1-888-999-7882 | \$205 |
| NPARA Spring Ag Showcase | April 2 | 8:30 am | Battle River Ag Hall, Manning | Nora or Jana @ NPARA 780-836-3354 | \$20 buys membership & lunch |
| Surface Rights Information Meeting | To Be Announced | | Battle River Ag Hall Manning | Nora or Jana @ NPARA 780-836-3354 | |
| Alternative Energy Workshop | To Be Announced | | Battle River Ag Hall Manning | Nora or Jana @ NPARA 780-836-3354 | |
| Pruning Workshop with Lisa Ladd | To Be Announced | | | Nora or Jana @ NPARA 780-836-3354 | |

Please go to www.agric.gov.ab.ca and check under "Coming Events" for a more detailed listing.

CERTIFIED LIVESTOCK TRANSPORT COURSE

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WHAT INTERESTS YOU?

Call us or contact a board member:

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 Arie Loogman, Vice-President @ 971-2103
 Michael Scott, Secretary-Treasurer @ 332-2848
 Ed Schmidt @ 836-2107
 Mark Ressler @ 836-2789
 Teresa Tupper @ 981-3928
 Tim Burdick @ 836-3079

Our office phone number is 836-3354 and we are located in the old ATB Building next door to Bare Bobbins (Sears). Our cell number is 780-836-5230.

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The Alberta Environmental Farm Plan Company
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A sincere thank-you to our funding sponsors:

Municipal District of Northern Lights #22; Alberta Environmentally Sustainable Agriculture Program (AESAP); Agriculture Opportunity Fund (AOF); Alberta Reduced Tillage Linkages; Alberta Agriculture; Agriculture Canada; Agricultural Research & Extension Council of Alberta (ARECA)