



InFARMation

Yukon Agriculture Branch Quarterly Bulletin

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Inside this issue...

Annual Conference	2
Farmer of the Year Nominations Sought	2
Yukon Gardener's Manual	3
Rhizobia	3
Baling Silage	4
Harvesting Alfalfa in the Yukon	5
National CAIS Committee	5
How to Read a Feed Analysis	6
Weather Wise	6
Preventing Aphids in your Garden	7
Fall Fair Results	8
Fall Gardening Tips	8
CAIS Information Meetings	8

Message from the Agriculture Branch

Well the summer of 2005 is over. It certainly wasn't the nicest summer we have seen in the territory, but there have been reports of outstanding yields particularly with forage crops and vegetables. Other sectors like honey have really struggled because of the overall cooler, wetter conditions. Let's hope the fall works out all right. The long range forecast is for a warm but wetter than average autumn.

Our annual North of 60° Agriculture Conference and Banquet is scheduled for November 5th, 2005. We are planning this year's conference around various government programs that are available such as Advancing Canadian Agriculture and Agri-Food (ACAAF), Canadian Agriculture Income Stabilization Program (CAIS), and the Agriculture Policy Framework (APF). These are important programs to our industry and we want to provide in depth information on these programs, money available, purpose, and how to apply, etc. I urge you to get out to our annual conference to learn more about these important initiatives.

Thanks again to all those who participated in the latest public consultation on the Draft Agriculture Policy. The Draft Agriculture Policy was again released for public consultation until September 30, 2005. Hopefully everyone has submitted their comments and suggestions.

In the winter of 1987/88 the first InFARMation was published. Margaret Ames and I wrote the first edition. I reported in that first InFARMation that I started work on October 5th, 1987. Well 18 years and 69 InFARMations later my work as Director of the Agriculture Branch is over. I am retiring on October 14, 2005.

It is impossible to say enough good things about the staff of the Agriculture Branch. I am so grateful and appreciative for all their help and support over the years. Mary Lynn, Matthew, Kevin, Tony, Edward, David, Patricia and Zodie. THANKS!! It is also impossible to say enough good things about working for and with the agriculture community (farmers, ranchers, outfitters, trappers, gardeners, etc.) in the territory. The best to all of you in the future. I firmly believe in the future of the industry in the Yukon. I have seen so many positive changes. These changes have been brought about by the hard work and dedication of numerous individuals who have a strong vision of industry growth and development. Stay the course!!

On a final note, remember folks that the Agriculture Branch is here to serve you. Please continue to use the fine services provided by the dedicated staff. SO LONG!!

Dave Beckman, Director

Agriculture Conference November 5th, 2005

Annual Conference & Banquet Scheduled for Saturday, November 5th

The annual North of 60° Agriculture Conference and Banquet will be held at the Yukon Inn this year on Saturday, November 5th. This year we are highlighting programs available to the agriculture industry under the Canada-Yukon Agriculture Policy Framework (APF) agreement.

The agenda for the conference is shaping up and although the order may change, the line up looks like this:

1. What is the APF?
 - Who is eligible for program funding and what it can do for your farm operation.
2. Renewal Programs:
 - National Renewal programs involving farm planning and business advisory services, planning for value added production and skills services.
 - Yukon Renewal programs in marketing, diversification, agriculture development, land enhancement, and human resource development including new entrants to farming.
3. Key Note Speaker:
 - Audrey vanSon-Turner will be in the Yukon to talk about the multi-generational farm and an intro to farm transfer. Her seminars provide direction on where to start and what to avoid in farm transfer planning. Her presentations are stimulating and interactive and involve a variety of teaching techniques such as lectures, questions and answers, group work, handouts and use of multi-media. Her presentations provide new insights and perspectives to her audience.
4. Environmental Farm Planning in the Yukon:
 - Programs under the Farm Stewardship program, the Greencover program and the National Water Supply Expansion program will be highlighted.
5. Business risk management and the Canadian Agriculture Income Stabilization program (CAIS):
 - Program managers will be in the Yukon to de-mistify the CAIS program and provide the latest information on agriculture support programs.

6. Advancing Canadian Agriculture and Agri-Food (ACAAF) program:
 - The ACAA program is a five-year, \$240 million program aimed at positioning Canada's agriculture and agri-food sector at the leading edge to seize new

opportunities. As a successor to the Canadian Adaptation and Rural Development (CARD) Program, the new program will provide funding for eligible projects identified and carried out by the agriculture and agri-food sector.

Concurrent to these presentations will be an organic production taskforce consultation on the development of national regulations and a chance to meet one-on-one with program people from the APF, CAIS, ACAA and the Farm Credit Corporation. These meetings will be scheduled in a separate room beside the conference.

The banquet is also being held at the Yukon Inn and will feature Yukon grown and raised products harvested in 2005. Delicacies will include Icy Waters Arctic Char and we are working on serving a desert wine from the cellars of the Albertini cottage winery.

Nominations Sought for the Yukon 'Farmer of the Year' Award

With our annual fall conference on the horizon it is time to get your nominations in for Farmer (or Farm Family) of the Year. The award will be presented at the Annual Agriculture Banquet on November 5, 2005. Submit your nominations, in writing, to the Agriculture Branch with a brief explanation of why the candidate(s) are worthy of the award. Include their contribution to agriculture development in the Yukon, development of agri-business, assistance to the future of agriculture in the Yukon, good farm management practices or any other reason you feel your candidate should be chosen.

The deadline for nominations is November 2, 2005 at 4:00 p.m. This will give us a little time to compile the nominations, engrave the award and put together a little background information. So, think about it. There are many people that have made a contribution to agriculture in the Yukon over the past year. All the nominations must be in writing and signed by the nominator(s). Facsimiles and e-mails will be accepted. These may be delivered to the Agriculture Branch Room 320, Elijah Smith Building, faxed to 393-6222 or emailed to: marylynn.drul@gov.yk.ca.

**What do you call a
cow with 3 legs?
Lean beef**



New Yukon Gardener's Manual Is Now Available

After a year or so of work, trial runs in the Yukon Master Gardener's course and revisions, the new Yukon Gardener's Manual is completed. The new manual replaces the Yukon Garden Handbook and the previous Yukon Gardener's Manual and provides information relevant to northern gardening.

The Yukon Gardening Manual was created under the direction of Tony Hill, Agrologist with the Yukon Agriculture Branch. Jeanne Burke and Debbie Abbott wrote the manual. Course instructors provided valuable input and feedback during the writing process.

The idea for improving and re-writing the previous manual came from Jeanne Burke, a Yukon Master Gardener course graduate. Other Master Gardeners over the years also contributed slides, course ideas and suggestions for manual improvements.

Funding for manual development was provided by the Canada/Yukon Agricultural Policy Framework Agreement.

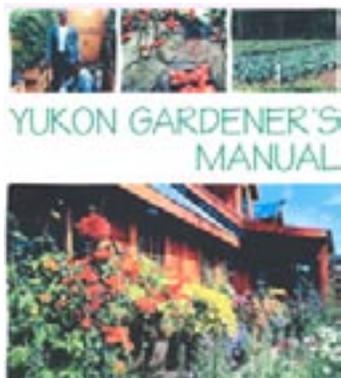
The manual includes chapters on botany, soils, outdoor vegetable gardening, lawn & ground covers, woody perennials, flowering plants, greenhouse growing, and pests and diseases. The manual is now available at the Agriculture Branch for \$20 + GST. Anyone interested in northern gardening should pick up a copy.

For further information about the manual, the Yukon Master Gardener's course or other services provided by the Yukon Agriculture Branch, please contact us:

Phone: 867.667.5838

Fax: 867.393.6222

Email: tony.hill@gov.yk.ca



Legume (alfalfa) with nodules

Rhizobia

In the Yukon, with young, cold, mineral soils, low organic matter coupled with slow decomposition limits the amount of nitrogen available for plant growth. We compensate for the lack of nitrogen through the incorporation of fertilizers. The forecast is for a rise in cost of production and transportation of chemical fertilizers due to the increased cost of natural gas.

Before chemical fertilizers gained a strong foothold in modern agriculture in the early 20th century, farmers relied on the rotation and incorporation of legumes in their farm system for soil nitrogen. Legumes have the extraordinary ability to form a symbiotic relationship with a specific bacteria known as rhizobia. Legume rhizobia symbiosis contributes the largest amount to biological nitrogen fixation in the biosphere.

Biological nitrogen fixation is the reduction of atmospheric nitrogen gas (N_2) present in the soil to ammonium (NH_4^+) and other forms of nitrogen accessible to plants. The enzyme nitrogenase catalyses the conversion. It is only in the presence of legume and rhizobia that allow for the enzyme to be formed. This enzyme is also sensitive to oxygen, so leghemoglobin, similar to hemoglobin in our blood acts as an oxygen carrier, separating the nitrogenase from the oxygen in the bacterial cell.

In a complex but well understood relationship, the legumes send a hormone signal into the soil to attract any rhizobia in the vicinity of the plant roots. If these rhizobia are present then another signal is sent back to the plant allowing the rhizobia to infect the plant root hairs. This leads to nodules on the roots of the legumes. These nodules can range in size, some over a centimeter, so they are easy to see. Dig up a legume very carefully and you might find nodules on the roots, split one open and you'll see the red colouring - this is the leghemoglobin - you are watching the rhizobia at work!

Baling silage

Bale silage is when you put high moisture forage, cereal or hay crops in an enclosed airtight system. This way of ensiling preserves feed with minimum nutrient and harvest losses.

“Bale silage should be put up at 45 to 55 per cent moisture,” says Russel Horvey, beef and forage specialist with Alberta Agriculture, Food and Rural Development, Stettler. “If moisture is limited, the material is susceptible to microbial growth. On the other hand, excess moisture can cause leaching as well as an extended fermentation period that can cause a larger loss of protein and energy.”

Once silage is baled, the sooner the bales are wrapped the better. When conditions are ideal bales should be wrapped within 6 to 12 hours. If conditions are less than ideal, bales should be wrapped in 3 hours or less. If too much time passes the bales may heat rather than ferment.

“Once the feed material is put into the silage bags or tubes, and the system is sealed, respiration of the plant consumes the oxygen present and burns some of the plant sugars and carbon dioxide and heat are produced,” explains Horvey. “Once all the oxygen is used, anaerobic microbes begin to grow and fermentation begins. These microbes produce lactic acid from the fermenting plant material and this lowers the pH of the environment until all microbial growth ceases and fermentation is complete.”

The bales should be wrapped tightly to reduce the amount of oxygen in the bales. The plastic needs to be stretched and completely sealed or oxygen may continue to enter the system. When this happens, respiration continues to occur and heat continues to be produced. If the temperature rises

above 45 degrees Celsius, heat damage occurs and protein is denatured. The damaged protein is unavailable to the animal.

“It takes about three to four weeks for the pH to get low enough to stop all microbial growth,” says Horvey. “After that amount of time, when the fermentation process is complete, silage bags can be opened and fed out.”

Crops that work the best for bale silage:

- Legumes contain limited amounts of water-soluble carbohydrates (WSC) and are more difficult to ensile
- Legume/grass mixtures have a lower buffering capacity, therefore should ferment better than legumes
- Cereals are easily ensiled because of their high WSC levels and low buffering capacities.
- Do not try to ensile a feed that was originally meant for hay or green feed and was rained on. The WSC will have decreased and any dirt that splashes on the feed could cause unwanted moulds.

“One of the significant advantages of ensiling feed is that this process allows you to harvest a crop when it is of highest quality without waiting on the weather,” adds Horvey. “Also, bale silage increases the ratio of dry matter yield per acre because of lower leaf loss. The wide range of crops that can be used in the process makes it a very versatile option. In addition to lower harvesting losses and feeding costs, bale silage allows producers to use haying equipment, and does not require an investment in silage harvesting equipment.”

Additional silage information is posted on Alberta Agriculture’s website at www.agric.gov.ab.ca

- Agri-News August 29, 2005



Bale wrapper purchased through assistance under the Renewal Program of APF

Harvesting Alfalfa in the Yukon

There is a critical period when Alfalfa should not be harvested in the Yukon and this often does not coincide with peak forage yield. Alfalfa harvest should take place at least four weeks and preferably six weeks before the first killing frost (-2.2°C) in the fall.

Later in the summer with shorter days, cooler temperatures and drier soils trigger slow growth when plants begin to store root reserves for the winter and for growth the following spring. If alfalfa is cut during this period and begins to regrow it will begin using those root reserves. If a killing frost occurs before root reserves are restored to 10 inches or to the bud stage, the plant may not have enough reserves for the winter and spring regrowth.

“Cutting during this critical period is less likely to injure a newly established stand of alfalfa than an older stand of three years and older,” said Mark Johns, Forage Specialist with the Ag-Info Centre, Alberta Agriculture Food and Rural Development. “Younger stands are healthier and free of crown and root diseases. The available nutrients are also higher in younger stands and improve winter survival.”

Fertility is a very important part of winter survival. Alfalfa can fix nitrogen, but it will still require large amounts of the other nutrients. Potassium (K) helps protect the plant tissues from freezing, plays a role in storing winter reserves, and improves resistance to diseases. Phosphorus (P) will help establish strong root systems and promote vigorous spring growth. The most efficient way to provide these nutrients is at the time of establishment.

“Other factors that affect winter survival include variety, fall moisture conditions and soil pH”, says Johns. “Not all alfalfa varieties are the same when it comes to winter hardiness. Producers should remember that rapid growth and yield usually come at the cost of winter hardiness.” (Peace is one variety recommended in the Yukon.)

A second cut of hay is unlikely in the Yukon especially in fields with alfalfa as it is more difficult to dry than grass hay alone. If you are going to pasture horses on your field it is best to wait until after freeze up to allow the plants to store as much energy as possible for spring regrowth.

- Adapted from Agri-News September 5, 2005



A new stand of alfalfa flowering at the Takhini Forestry Farm in 2005

National CAIS Committee “Canadian Agriculture Income Stabilization”

This committee was formed to make recommendations directly to the Federal Agriculture Minister. It consists of 39 farmers and administrators from across the country. The Yukon industry representative is Dave Andrew and the Yukon Government representative is Tony Hill. If any producers have questions or concerns regarding CAIS, contact either representative so that they can take your concerns to the meetings and inform you about proposed changes.

Dave Andrew
Phone: 867.667.7844
Email: raftera@northwestel.net

Tony Hill
Phone: 867.667.3417
Email: Tony.Hill@gov.yk.ca



Agriculture Banquet tickets now on sale - stop by the Branch office to pick yours up today.

How to read a Feed Analysis

Moisture

The percentage of moisture in the feed at time of analysis. Calculations are made on an As Fed basis and a Dry Matter basis. The As Fed basis includes moisture in the calculation. It is important when comparing feeds to use the Dry Matter basis that does not include the weight of the water. The mean moisture content value of Yukon hay that has been tested by the agriculture branch is 11.1 per cent.

Crude Protein

The total protein content of the feed as determined by measuring nitrogen content and including all true proteins. The mean crude protein value of Yukon hay that has been tested by the agriculture branch is 11.8 per cent.

ADF - Acid Detergent Fibre

The percentage of lignin and cellulose and is the least digestible portion of a roughage. The ADF content of forages is used for determining the digestibility and energies. The higher the ADF value, the poorer the quality of forage. Forages generally range from 35 – 45 per cent ADF. The Average ADF value of Yukon hay that has been tested by the agriculture branch is 35.6 per cent.

TDN - Total Digestible Nutrients

Used to describe the digestible value of a feed based on the ADF content and is relevant to ruminant animals only.

DE - Digestible Energy

The amount of energy consumed by an animal minus the amount of energy lost in the feces.

NEG – Net Energy for Gain

Based on the ADF, it is used for ration balancing for ruminants and is a measure of the energy required for growth or weight gain.

NEL – Net Energy for Lactation

Based on the ADF, it is used for ration balancing for dairy cattle and is a measure of the energy required in milk production.

NEM – Net Energy for Maintenance

Based on the ADF, it is used for ration balancing for ruminants and is a measure of the energy required to maintain an animal with no change in body weight or composition.

Commercial producers are welcome to bring in hay samples for analysis. Make sure that sample is collected from a variety of bales making the total sample the size of a large ziploc bag. The results of tests show that Yukon hay is above average compared to imported hays.



Weather Wise

The three summer months of June, July and August recorded temperatures slightly above normal in the South and slightly below normal in the central areas. Rainfall was above normal for all stations, except for Watson Lake where it was slightly below normal.

The highest temperature recorded this summer at the airport was 29.3°C in August while the lowest was 0.6°C in early June. The summer temperature was 0.4 degrees above normal with only July recording a monthly average temperature below the 30 year average. The cloud cover kept the overnight lows above average for all three months. Rainfall was particularly heavy in June with 82.3 mm falling contributing to a summer of three months of above normal rainfall and a total of 62 per cent more than average.

With what seems to have been a lot of rain this year just how did we stand as compared to other years?

June	82.3 mm
July	47.4 mm
August	39.8 mm
Total	169.5 mm

This stacks up to the 4th rainiest summer on record (recorded since 1942). The rainiest summer was 1953 when 204.4 mm fell.

- Bill Miller, Meteorological Services of Canada

Preventing Aphids in your Garden

Aphids are small insects, usually about the size of a pinhead, but easily spotted with the naked eye. These insects can range in colors from green, yellow, black or even pink and can be with or without wings. They excrete a sticky, honey colored residue. Aphids attach themselves to your plants and extract fluids from them, harming the vegetative growth of your plant and effecting your plants' potential growth. An infestation of aphids can cripple a garden in a matter of days. They can be controlled very effectively using two common types of treatment (not including prevention): insecticides and predator insects.

Preventing aphids in your outdoors garden is nearly impossible, however, you can prevent a major infestation (using insecticidal sprays and predator insects, which are described later) from forming while in it's infancy.

In your indoor garden you can prevent aphids by not introducing them into the environment. Don't make your usual rounds in the outside garden and then go straight to your inside garden. You should check yourself for bugs, and wash your hands thoroughly before entering your indoor garden. Also, be sure to seal your indoor garden properly, leaving no crevices, and cracks for them to sneak in through. If you think you spot an aphid, use a mild form of extermination, such as spraying it with an insecticide immediately or by releasing a few predator insects (both described later) in the area of the garden where you spotted it. You can also use the manual form of elimination (recommended for a few bugs, because it's very time consuming) and squish them between your fingers. Aphids are slow fliers and can be caught quite easily. They are also vulnerable while they are feeding and stuck to your plant by their suction tube.

Aphids are very easily defeated by insecticidal soaps and pyrethrum sprays. Pyrethrum and insecticidal soaps are applied in basically the same manor. If mixing is required, first mix according to product usage label, then apply liberally to the foliage of your plants, being sure to cover the majorly infested areas of your plants. Approximately 5-10 days later repeat the spraying. This should kill most of the newly hatched

eggs and remaining adults. A third treatment is just to be safe and kill any survivors that may remain. In 5-10 days following your third treatment check your plants thoroughly for any remaining aphids and spray accordingly.

An alternative to insecticides is a homemade, natural insect spray: blend together 1 garlic bulb, 1 small onion, 1 t cayenne pepper, 1 quart water. Steep one hour and add 1 T liquid hand soap. Store in the refrigerator.

Predator insects are good exterminators of aphids, both in the indoor and outdoor garden. For their best effectiveness they should be placed out at the first sign of aphids on your plants. The two insects that are most used for aphid infestations are lacewings and lady bugs.



Lacewings are the most menacing predators for aphids. They are released at a rate of 1-20 lacewings per plant, depending on your infestation size. After you have reduced your infestation to minimal levels, place lacewings out at about 1-5 per plant every month there after until harvest. If adult lacewings are available, they are preferred over the larvae. Larvae take time to grow into adults and the aphids can devastate a garden in a matter of days.

Lady bugs are also an excellent and easy to obtain exterminator of aphids. During the summer months you can find them available at some retail nurseries. Indoor lady bugs can be almost ineffective, due to their attraction to lights. If your indoor garden has a high-intensity discharge (HID) lamp, the lady bugs will fly toward it and likely fry (lacewings are the preferred, indoor garden, aphid predator). Lady bugs are released at a rate of about 50 per plant, if you have a HID lamp about half of them will fly toward the lamp and pop! Outside they should be released at a rate of 5-20 per plant once every month after the initial predator application. Inside they should be released at a rate of 5-20 per plant about 1-2 weeks after the first release and repeated again every 1-2 weeks there after until harvest. With early detection, and extermination measures aphids should pose no problem to your indoor or outdoor garden.

- Adapted from eSSORTMENT 2002

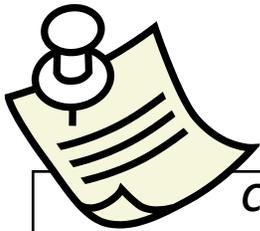
Fall Fair Results

The 11th Annual Klondike Harvest Fair teamed up with the Yukon International Storytelling Festival to put on another successful fair. Here is a list of the Grand Aggregate winners:

Best Vegetable Garden - Dorothy Burke
Best Greenhouse - Dorothy Burke
Best Home Grounds - Margie McLauhlin

1st Grand Aggregate - Judy Lightning
2nd Grand Aggregate - Paula and Mike Nugent
3rd Grand Aggregate - Dorothy Burke

1st Junior Grand Aggregate - Ross McBee
2nd Junior Grand Aggregate - Erin Kabanak
3rd Junior Grand Aggregate - Eric Bookless



Classifieds

Herd of Scottish Highland Cattle For Sale

Pure Bred and Registered! Very Gentle!
5 Cows with calves on the side
1 Purebred Breeding Bull
Excellent Beef Producers!
Phone: 867.393.3477

Wanted to Buy

Used Farm Equipment
70HP Plus Tractor, Discs and Baling Equipment
Phone: 867.333.3565

Fireweed Community Market Society

Downtown Market
Thursday 3 pm - 9 pm
Shipyards Park
May - September
Yukon Made Market
Saturday 9 am - 2 pm
Summer at the Takhini Gas Station
(corner of the Hotsprings Road and North Klondike Highway)
Winter at the Hootalinqua Firehall
For Information
Phone: 867.393.4628

Email: fireweedmarket@yahoo.ca

"It's about more than good food"



Fall Gardening Tips

A lot of gardeners wonder if it is better to clean their gardens in the fall or the spring. It's really a matter of choice and timing, but there is one benefit to be gained from leaving some of your plants in the garden though the winter. Many annual flowers will self-sow throughout your garden, popping up in unexpected places and creating a natural flow in the border.

In perennial beds, clean dead perennial foliage after it dies down naturally and discard. Apply winter mulch after the ground freezes.

Talk to the experts, advice is free and the gardening stores in town offer great advice from experience.

Canadian Agricultural Income Stabilization

One-on-one consultations available with CAIS program managers, they will be in Whitehorse the weekend of the North of 60° Agriculture Conference.

If you are interested in meeting with a program manager or for more information on schedules, location and times please contact Tony Hill at the Yukon Agriculture Branch 667-3417 or Dave Andrew at 667-7844.

InFARMation is...

A Yukon government newsletter published by the Agriculture Branch of the Department of Energy, Mines and Resources. If you would like to add your name to the newsletter mailing list, comment on an article or contribute a story, then please write to:

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Or call Tony Hill at 867-667-3417, outside of Whitehorse at 1-800-661-0408 local 3417, or stop by the Agriculture Branch. We are located on the third floor, Elijah Smith Building, room 320.

Web site: www.emr.gov.yk.ca/agriculture