INFARMATION

Yukon Agriculture Branch Quarterly Bulletin

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MESSAGE FROM THE AGRICULTURE BRANCH

It has been a cool spring this year in southern Yukon although we heard the central areas fared better and had leaves on the trees for weeks before we did. Another sure sign of spring was the opening of the Fireweed Market in Shipyards Park in Whitehorse. They are open every Thursday from 3 – 8 pm. Buy local whenever you can. It supports Yukon producers and reduces our dependence on imported foods.

The really big news this spring was that on April 5, 2006 government released the new Agriculture Policy "Vision for Yukon Agriculture". Congratulations and thanks to all of industry and stakeholders for your valuable input in helping to create a policy that will give our branch direction, and guide industry development over the next decade. It took time to get it right, but all the feedback received by the Agriculture Branch has been positive.



Irrigating at Eldorado Game Ranch June 2005

Another new development this spring was the formation of the "Agriculture Industry Advisory Committee" made up of five industry members, nominated by the groups they represent, and appointed to the committee by the Minister, to work with government on Yukon agriculture issues. The first meeting of the committee was held on May 12, with a full agenda of issues ranging from implementation of the new agriculture policy, to a review of Environment Chapter programs under the current Agricultural Policy Framework Agreement (APF). Your industry representatives include; Shelia Alexandrovich, representing Yukon Organic Growers; Bill Drury, representing the Game Growers Association; Wayne Grove and Dave Andrew representing the YAA; and Art Hutchison is the industry member at large. These people have been appointed to represent you at this forum and I

encourage you to contact them, or the Agriculture Branch if you want to have input to this committee.

Have a great summer with plenty of growing degee days and I look forward to visiting with you all at the Klondike Harvest Fair in August.

Tony Hill, A/Director Agriculture Branch

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NORTHERN AGRICULTURE

YUKON SUPPORTS AGRICULTURE INDUSTRY WITH MODERNIZED POLICY

The Government of Yukon has reinforced its support for a healthy and growing agriculture industry with the new *Vision for Yukon Agriculture: 2006 Yukon Agriculture Policy.*

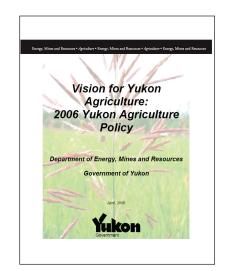
"Yukon's agriculture industry is very important to our communities and our economy," Energy, Mines and Resources Minister Archie Lang said. "The modernized policy supports the growth of Yukon's agriculture industry to become economically viable, environmentally sustainable and a contributor to community wellbeing."

The Vision for Yukon Agriculture: 2006 Yukon Agriculture Policy recognizes that the Yukon has considerable potential to grow and provide a greater range of agricultural products to Yukon consumers. Key components of the policy include:

- Improved marketing of the Yukon agriculture industry and its products;
- Support of increased value-added agricultural production, and a commitment to continue making new land available for agricultural development;
- A new agricultural land pricing formula, where every dollar of approved development work will offset the land purchase price by a dollar;
- Expansion of government's role in providing the agriculture industry with extension services including support for the increased growth of organic farming;

- Commitment to amend the Subdivision Act to support farm succession and increase agricultural land use utilization;
- Continued cooperation with the Government of Canada to deliver industry development programs and the Agricultural Policy Framework; and
- Commitment to advance planning for agricultural land development.

The Yukon government updated and modernized the agriculture policy in consultation with industry, First Nations and affected stakeholders. The consultation ensured that the changing needs and the future growth of the agriculture industry were addressed.



Copies of this policy are available in Whitehorse at the Agriculture branch, on the third floor of the Elijah Smith building, or the main information desk of the Yukon government administration building on 2nd Avenue. The policy is also available at www.emr.gov.yk.ca/ agriculture.

For additional information call the Agriculture Branch at (867) 667-5838 or toll-free 1-800-661-0408 extension 5838.

MOBILE ABATTOIR UPDATE BY KEVIN BOWERS

Russ Tait of Tait's Trailers recently confirmed that the construction of the mobile abattoir unit is well underway and should arrive in the territory in August of this year.

In addition to initiating the construction of the trailer, the Agriculture Branch held a public presentation for Red Meat producers in Whitehorse in March. The meeting was well attended by farmers, and processors alike. The presentation included speakers from Yukon Environmental Health and Canadian Food Inspection Agency as well as branch staff.

The Yukon government has now issued a Request for Proposals for the operation of the mobile abattoir once it arrives.

Branch staff are now meeting with Environmental Health and Department of Environment officials to determine the regulatory requirements that farmers must meet in order for the mobile abattoir to process on their individual farm locations. We have a test farm and farmer that we are working with and hope to have a refined process completed soon.

I would like to take this opportunity to thank Mike Blumenschein, the YAA representative, for his continued support and assistance as the Agriculture branch works towards ensuring that the mobile abattoir is ready to roll soon after its arrival in the territory.

For more information please contact Kevin Bowers at (867) 667-3043.

NORTHERN AGRICULTURE

PAN-NORTH AMERICAN CIRCUMPOLAR AGRICULTURE CONFERENCE - CALL FOR DELEGATES

The NWT Farmers Association will be hosting a two day conference on Circumpolar Agriculture on September 11 and 12, in Hay River, NWT. The conference will feature a number of presentations on issues facing northern agriculturalists, and it will explore some of the themes that are will be discussed in upcoming Circumpolar Agriculture Conference being held in Happy Valley-Goose Bay, Labrador in September, 2007.

The Agriculture Branch is looking for 2-3 industry delegates that are interested in attending the conference in Hay River. Delegates should be interested in contributing to the development of conference themes for the next international conference, and have a desire to exchange information with agriculturalists in circumpolar nations. The first day of the conference will have presentations on emerging circumpolar agriculture industry opportunities, changing markets and issues. The second day will be used to discuss and develop ideas for the 2007 conference from a Pan-North American perspective.

If you are interested in participating in the Hay River conference this September, please submit a brief letter of interest including any experience or interest you have with circumpolar agriculture to the Agriculture Branch at room 320-300 Main Street, Whitehorse by July 15, 2006. Once delegates have been selected, an application for funding will be made to cover expenses to attend the conference. For more information, call Tony at (867) 667-3417.

NATIONAL WATER SUPPLY EXPANSION PROGRAM

Yukon farmers now have access to \$120,000 to help develop, enhance and protect agricultural water supplies. The assistance is being provided through the Canada-Yukon Water Supply Expansion Program, announced by the federal and territorial governments.

"The relationship between Yukon farmers and the land is one that is built on tradition and sound environmental stewardship," said the Honourable Chuck Strahl, Minister of Agriculture and Agri-Food and Minister for the Canadian Wheat Board. "Through this program, Canada's new government is building on this tradition to help create, protect and secure sources of quality and reliable water for the agriculture industry."

"The Yukon government is strongly committed to the future growth and stability of the agricultural sector," said Energy, Mines and Resources Minister Archie Lang. "We are confident that this program will greatly assist the further development of the agriculture sector in the Yukon."

The Federal government is investing \$100,000 in the program, while the Yukon government is contributing \$20,000 towards water projects and an additional \$10,000 of in-kind support. Farmers and/or groups of farmers can apply for three types of technical and financial support:

- Tier One on-farm infrastructure, up to \$5,000 per project;
- Tier Two multi-user infrastructure, up to \$50,000 per project;

• Tier Three – strategic initiatives, up to \$30,000 per project.

All projects must be for commercial agricultural production and have a water supply component. Program applications will be accepted throughout the year.

The Canada-Yukon Water Supply Expansion Program is being administered under the National Water Supply Expansion Program, an initiative ending March 31, 2008.

For additional information or to obtain a program application, please contact: Agriculture Branch at (867) 667-5838 or toll-free at 1-800-661-0408 (extension 5838); or the AAFC-Prairie Farm Rehabilitation Administration at (780) 349-3916, or the AAFC-Client Service Centre at 1-800-667-8567; or visit www.agr. gc.ca/h2o.

FARM INCOME PAYMENT PROGRAM

Yukon farmers who reported agricultural income in 2004 can receive funds from the Farm Income Payment Program. The application form is included in this newsletter and must be completed and submitted to the Department of Energy, Mines & Resources before 4:30 p.m. July 21, 2006.

To be eligible for this program you must have been actively engaged in farming in the Yukon and reported 2004 agricultural income to Canada Revenue Agency. The \$273,000 available to Yukon farmers is the Yukon allocation of the National Farm Income Payment Program that provides income support to Canadian farmers who suffered a decline in commodity prices in 2004.

SCIENCE & RESEARCH

OILSEED UPDATE

Well it looks like a poor year to begin our oilseeds study. We experienced below average temperatures through May, and our local weather expert is predicting a cool summer. Regardless, we have all the plots seeded for the first year of a multi-year study into the possibility of producing oil from oilseeds in the Yukon. The experimental plots are located around Whitehorse and as far North as Pelly. There are five sites, two of which are irrigated, and all have different historical management.

The seed was provided by Hytech Production from Lethbridge Alberta. The seed is certified and is grown in an area away from any GMO crops on contract land holdings mostly in Alberta. Hytech also ships seed to Europe where seed is required to be 100% GMO free. They provided three different seeds both a Napus and Rapa Canola, and Flander's Flax. The fourth seed is a False Flax provided by Agriculture Canada. The seeding is in small areas of 100 square meters. Soil samples have been sent away for analysis and most sites are being fertilized to soil test recommendations. Initial crop germination suggests that the crops are off to a good start with the exception of the Rapa Canola which has poor germination at all sites.

A big thank you to the Advancing Canadian Agriculture and Agrifood program for granting funding.

ALFALFA UPDATE

We had some interesting results after the first year of the alfalfa study which is supported by the Advancing Canadian Agriculture and Agrifood program. In an establishment year, we had



Oilseed site at Bluebell Gardens May 2006

yields of up to 2800 kg/ha, with 21% protein, these are good numbers considering we did not add any nitrogen to the soil. In the second year we are setting out to duplicate some of the trials to backup the alfalfa productivity in the establishment year, as well as monitor the alfalfa into the second year to look at winter survival and second year production. As of early June the sprouts are up and looking for sunshine.

Research and Demonstration Field Day

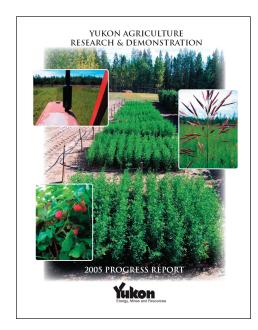
We are planning a field day July 28 from 10 am - 3 pm for the public to come and visit the Takhini Research Farm. A tour of the facility will take place at 12 pm. The farm is located within the Gunnar Nilssen and Mickey Lammers Research Forest on the west side of the Mayo Road, just South of the Takhini Gas Station.

Come by for a look at the various projects being worked on in the Yukon, from oilseeds to forages and berries.

If you can't make it July 28, please feel free to stop by, whenever the gate is open. Once you come through the gate, stay to the right as the road forks.

RESEARCH REPORT ON THE WEB

The 2005 Research and Demonstration Report is now available online. The document details the research conducted by the Agriculture Branch during the 2005 field season. Highlights include the first commercial harvest of raspberries, results from the elk nutrition study, data from alfalfa research, and a comparison of yeilds on brome and timothy grass. This report also has an extensive section on agroclimate data from five sites throughout the Whitehorse area and into the central Yukon. The document is available from our office or online at http://www.emr. gov.yk.ca/agriculture



OUT STANDING IN YOUR FIELD

HAY BALE STORAGE

Enemies of hay storage: moisture, temperature, and time.

Molds and bacteria that consume nutrients contained in hay cause most of the dry matter and quality losses that occur during storage. Molds and bacteria grow and reproduce faster if the hay is warm and moist, and of course, the more time they have to work, the more damage they can do. This means losses are lowest if hay is kept cool and dry and stored for as short a time as possible.

Livestock feeders and hay processors often need to store hay for year-round use, so their primary option for reducing storage time is to make sure that the first hay harvested is the first hay fed. They have little ability to control hay storage temperature, since most hay is stored outdoors or in buildings that have no environmental control.

Protection of bales in the environment: when storing dry hay outside, it is worth considering methods to prevent direct contact between the ground and the bottom layer of bales, because the bales resting on the ground will absorb enough moisture to support mold growth. Research studies and farmer experience have shown that placing hay bales on layers of coarse gravel, old tires, or wood pallets has been effective for preventing rewetting of hay by soil moisture.

Various hay storage studies have been conducted to determine losses that can be expected for different storage methods. Bales were stored about eight months and then reweighed, re-sampled, and sold.

Storage methods included:

- Uncovered, directly on the ground (on pasture, or sod)
- · Uncovered, on gravel
- Covered with a tarp, on gravel
- In a shed that had an earthen floor and an enclosed north side

The rectangular bales were stored in piles of eleven bales, all oriented the same direction, and resting on their four-foot wide sides. Nine of the rectangular bales were stacked three wide and three high, and the top two bales were placed over the cracks between bales in the lower layers.

The bottom bales in piles that were stored uncovered, on sod, rewet from their initial moisture content of 18% to a final moisture of about 32%, high enough to cause significant spoilage by mid-June. Spoilage would have been even worse if bales had been left in place through the summer. The percentage of the total volume of bottom bales that appeared to be spoiled was about 22% for rectangular bales. This compared to 1 - 8% of the volume spoiled for bottom bales stored on gravel or in the barn. Water from rain and melted snow can also rewet hav to moisture levels that are high enough to support mold growth. In our study, the advantage of covering was about six percent; average dry matter loss for bales stored covered on gravel was 4.8%, compared to 10.9% for bales stored uncovered on gravel.

In the treatment where bales were stored uncovered on sod, the upper layers of rectangular bales rewet slightly to an average of about 22% moisture. Even though the average moisture absorption in the upper layers was relatively small, the "water-shed" locations (points where water ran off on upper bale onto a

lower one) showed greater moisture increases and very obvious mold development, particularly in the large rectangular bales. Average dry matter losses in the uncovered piles on sod were 11.2% vs. 2.3% in the barn.

Besides losing dry matter, uncovered hay also loses quality as determined by nutritional analysis and appearance. The loss in dry matter reduces weight available for sale and the loss in quality can have a large impact on animal performance and price.

Protection of hay in building storage: when planning a storage building make sure that there is good drainage of rain and meltwater from both the roof and surrounding area. The storage floor should be crowned about a foot above the surrounding ground level. Air exchange through the storage facility must be allowed for, either by natural ventilation, or a fan system. Buildings open at one end will experience adequate natural ventilation if the opposite end wall or gable is equipped with louvres or similar vents. Soffits of gable roofed buildings should also be of open design for maximum ventilation. Bale stacks should be dense and tightly fitting to resist moisture penetration. As well, stacks should be built as high as is practical to reduce the number of top and bottom bales exposed. If proper practices are used then hay loss can be restricted to 5%.

Summary: for hay that is stored uncovered, use bales harvested early in the season first. If bales are stored outside, place them on gravel, old tires, or pallets rather than directly on the ground to protect them from losses caused by soil moisture. The best option is to keep hay cool, dry and under cover.

TIPS & TRICKS

TARGETING THE CABBAGE BEETLE (*Hylemya brassicae*)

Description: the adult cabbage beetle is an ash-grey fly about ¼ inch long with black stripes on thorax and black bristles over body, resembling a small house fly. White eggs are laid at the base of the plants at soil line. Larvae are white, about ¼ inch long, blunt at the rear end and pointed at front.

Host Plants: Cabbage, cauliflower, broccoli, brussel sprouts, radish, turnip.

Symptoms: Flies lay eggs; the eggs hatch into larvae, which eat and tunnel into the roots, causing the plant to wilt and develop bacterial and fungus diseases.

Life Cycle: Larvae will feed for three to four weeks before pupating, then hibernate in the soil as pupae. Adults emerge from pupae and lay eggs that hatch into larvae. Cabbage maggots overwinter as pupae in the soil.

Predators and Parasites: Rove beetles prey on maggot eggs and young larvae; the larvae of the beetles also parasitize the pupal stage of the maggot. Ground beetles also feed on the larval stage of the maggot. Higher organic matter levels in the soil attract these beneficial beetles.

Other Controls: Use big healthy transplants and cover them with a floating row cover throughout the month of June until they are well established. Put little 6" collars around the base of the transplants and keep them free of soil so maggot flies can't lay their eggs close to them. Pull up and remove infected plants. Remove wild mustard weeds – they can harbour cabbage maggot flies.

YUKON INVADERS AND WEED CONTROL

A new weed booklet, **Yukon Invaders**, has been produced by
Bruce Bennett of the Department
of Environment in cooperation
with the City of Whitehorse. There
are over 140 introduced plant
species in Yukon, eight of which are
highlighted in this booklet:

- · Perennial Sow-thistle
- Greater Butter-and-eggs
- Spotted Knapweed
- Foxtail Barley
- White Sweetclover
- Common Tansy
- Canada Thistle
- Altai Wild Rye

Use this brochure to learn how you can help reduce the spread of these, and other invasive plants, and their threat to Yukon's crops and biodiversity.

The most cost-effective way to control weeds is to prevent their introduction. Once rooted, weeds reduce crop yields and increase herbicide and defoliage use. Nuisance plant species can be carried onto your fields by wind, water, livestock, wildlife or humans.

Use the following list to help control weed introduction:

- 1. Use clean seed.
- 2. Clean machinery when moving from field to field.
- 3. Cut weed infested crops before the onset of weed seed production.
- 4. Clean livestock and feet before moving.
- 5. Control weeds in field and bedding grounds.
- 6. Use only well rotted manure.
- 7. Practice total farm weed control.

Pick up your copy of the brochure at garden shops, Environment

Yukon offices, the Yukon Agriculture Branch office, and the Inquiry Desk of the Yukon Government Administration Building on Second Avenue in Whitehorse.

Understanding Soil PH

We are often asked about the pH scale and how to increase or decrease soil acidity. Soil pH is important to crops because it affects a plants ability to absorb soil nutrients with its roots.

In 1909, a Danish biochemist devised a numerical scale (the pH scale) to describe the acidity or alkalinity of soil. The scale runs from 0 to 14, where a pH of 7 is neutral, a pH below 7 is acidic and a pH above 7 is alkaline. The pH scale rate of change is such that each unit is ten times greater than the next unit. A pH of 5.5 would be ten times more acidic than a pH of 6.5.

Most cultivated plants grow best in soils with a pH between 6.0 to 7.0. Although a pH of 7.5 or 5.5 has a negligible effect on plants. Northern exceptions to this rule include acid loving plants such as blueberries and potatoes.

Acidic soils (low pH) can disrupt the process of both bacterial and macro fauna activity in the soil, and reduce the availability of calcium, magnesium, molybdenum and phosphorous to plants.

Alkaline soils (high pH) have high levels of salt residues due to the rapid evaporation of soil water. In the Whitehorse area, high alkalinity reflects the local geology with substantial free lime in the soil. This slows down bacterial activity, affects soil animal populations and reduces the availability of copper, boron, iron, manganese, phosphorus, magnesium and potassium.

TIPS & TRICKS

To make the soil more alkaline (to raise soil pH 1 unit) spread 2 kg of agricultural lime per 30 sq. metres.

To make soil more acid (to lower the pH unit) add 0.5 kg. of ammonium sulfide 21-0-0-24S) per 30 sq. metres.

If you farm commercially, you can have the Agriculture Branch send your soil samples to a professional lab for analysis, free of charge. Soil test results can be reviewed with our clients to determine fertilizer recommendations, amendments and cropping practices to suit the individual farm.

FERTILIZER: ORGANIC VS. INORGANIC

There has been much controversy over organic versus inorganic fertilizers. It is important to realize that plants do not recognize the difference between organic and inorganic fertilizers. Their tiny root hairs can absorb only nutrients that have been broken down into inorganic, water-soluble forms. It makes no difference to your tomato plant if the atom of nitrogen it is absorbing has come from a compost pile or a fertilizer factory. There are, however, advantages and disadvantages to each form of fertilizer, organic and inorganic.

Organic Fertilizer

Advantages - Organic nutrients include such things as cow, sheep, poultry and horse manure. (One should avoid using pig, dog or cat feces because of the problems involved with internal parasitic worms which may be transferred to humans.) Bonemeal, bloodmeal, compost, and green manures will also provide nutrients for your plants.

There is less danger of overfertilization by adding decomposed organic material to a garden. It provides a slow release of nutrients as micro-organisms in the soil break the organic material down into an inorganic, water soluble form which the plants can use. The addition of organic material improves soil structure or "workability" immensely. It also vastly improves the waterholding capacities of sandy soils, a distinct advantage in arid climates such as ours.

Disadvantages - For the most part, organic fertilizer is not immediately available to the plants. As noted above, this "slow-release" feature can be an advantage. However, if there is an immediate need for nutrients, organic fertilizer cannot supply them in a hurry. Furthermore, information on the amount of nutrients and the exact elements in an organic fertilizer such as manure is not readily available to the home gardener. In contrast, when you apply manufactured inorganic fertilizer you know the kinds and amounts of the elements it contains, and this allows you to be more precise in meeting a plant's nutritional needs.

The possibility of nitrogen depletion is another drawback of organic fertilizers. Because of complex bacterial action, the addition of a large amount of organic material can cause a temporary nitrogen depletion in the soil and therefore in the plants.

Inorganic Commercial Fertilizer

Advantages - The primary advantage of using packaged commercial fertilizer is that nutrients are immediately available to the plants. As well, the exact amounts of a given element can be calculated and given to plants.

Disadvantages - Commercial fertilizer, especially nitrogen, is easily washed below the level of the plant's root system through the leaching of rain or irrigation. An application which is too heavy or too close to the roots of the plants may cause "burning" (actually a process of desiccation by the chemical salts in the fertilizer). As well, overly heavy applications of commercial fertilizers can build up toxic concentrations of salts in the soil, thus creating chemical imbalances. If organic materials are readily available and cheap, the expense of the commercial fertilizer should also be considered

Whether a gardener chooses to use organic, inorganic or a combination of both types of fertilizers, it's important to follow the guidelines regarding timing of application, placement of the fertilizer, and the proper amount of fertilizer to be used.

Excerpt from "Fertilizer: Application (Organic Vs Inorganic)" by Sara Williams, Division of Extension and Community Relations and the Department of Horticulture Science, University of Saskatchewan.



AGRICULTURE BRANCH EXTENSION SERVICES

The Agriculture Branch offers extension sevices and can help out in the field or the garden with weed identification and control, soil testing, disease identification, and decisions on farm management.

Infarmation Summer 2006

CALENDAR OF EVENTS

FIREWEED COMMUNITY MARKETS

Downtown Market

Every Thursday 3 pm - 8 pm Shipyards Park (on the riverfront at Ogilvie street) May 18 - September 14, 2006



Yukon Made Market

Every Saturday 11 am - 2 pm Takhini Gas Station (corner of the Hotsprings Road and Mayo Road) May 20 - September 9, 2006

For Information
Phone (867) 393-4628 or
Email fireweedmarket@yahoo.ca

"It's about more than good food"

RESEARCH AND DEMONSTRATION FIELD DAY July 28 from 10 - 3
There will be a tour of the research farm at 12 pm.

KLONDIKE HARVEST FAIR

August 19 & 20 @ Shipyards Park

PAN-NORTH AMERICAN CIRCUMPOLAR AGRICULTURE CONFERENCE September 11 & 12, Hay River, NWT

ABATTOIR START UP Scheduled for early September

CLASSIFIEDS

Elk Meat For Sale

25 or 50 lb packages with lean burger, prime rib, t-bone, ribs, etc. Low fat, low cholesterol and high protein.

Ford Elk Farms Ltd 633-4342

Velvet Antler For Sale

30 or 100 capsule bottles. Natural and healthy. Ford Elk Farms Ltd 633-4342

Top Quality Yukon Grown Hay For Sale

100% Guarantee. Buy 10 bales get 1 free! 800 lb round or 50 lb square. Rafter A Ranch, lbex Valley Phone 667-7844 or email raftera@northwestel.net

Goat meat for sale cut and wrapped

Wild Blue Yonder 867-399-7021

7' john deer brush cutter in good shape \$3,500 Wild Blue Yonder 867-399-7021

ANNOUNCEMENTS

PHOTO CONTEST

The Agriculture Branch is going to run another photo contest this year. Submit your photos to the Agriculture Branch all season long. A showcase of the best photos and prizes for the top three will be presented at the North of 60° Agriculture Banquet November 4, 2006.

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 or remove your name from the newsletter mailing list, comment on an article, or contribute a story, please write to:

InFARMation

Department of Energy, Mines and Resources - Agriculture Branch Box 2703 Whitehorse, YT Y1A 2C6 Phone: (867) 667-3417 | Fax: (867) 393-6222 | Email: tony.hill@gov.yk.ca

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.

Online: www.emr.gov.yk.ca/agriculture

