nFARMation

Yukon Agriculture Branch Quarterly Bulletin
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Message from the Agriculture Branch

Winter is winding down and spring is around the corner. Quite frankly, the past winter has not been too bad. A couple cold snaps and fairly good snow cover, which is usually good for spring moisture conditions.

Major activities around the Agriculture branch involve the National Agriculture Policy Framework (APF) agreement, review of the Agriculture Policy, disposition of agriculture land and of course our ongoing day to day extension programs. These are busy times at the branch, we are trying to keep up with the APF agreements and programming, as well as other policy and agriculture land disposition concerns.

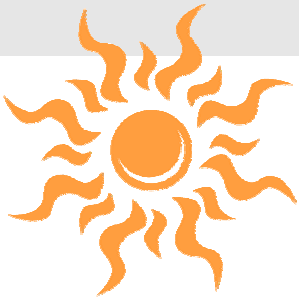
A discussion paper is currently nearing completion on the Agriculture Policy. This discussion paper presents options for discussion that flowed out of the industry consultation phase that took place in late 2003 and early 2004. The discussion paper will be released later this spring for broad public consultation. Once we receive public input work will begin on developing a new policy.

Several members of the Agriculture branch are working on program development with the APF and Implementation agreements. The branch has received outstanding input from the Industry-Government APF Working Group which has helped in deciding which programs may best fit the Yukon. We have relied on input and information from across the country, especially from Newfoundland because of the similarities in distance to market and state of the industry.

The branch continues to handle a number of agriculture land Agreements-for-Sale and dispositions. We are in the process of developing a large parcel of land in the Haines Junction area. Parcels of the land will be disposed of through a lottery system from within this large parcel. We also administered a lottery for a parcel of land in the Dawson City area in late 2003.

If you wish to find out more about any of our programs or activities please contact us. With spring rapidly approaching I wish everyone a successful and productive growing season.

David C. Beckman, Director, Agriculture Branch



Yukon
Energy, Mines and Resources

Klondyke Harvest Fair - Rotary Peace Park on August 21st and 22nd

Pruning is Important

Keeping trees properly pruned is a vital step in ensuring their long-term health. Two keys to successful pruning are to develop an understanding of how the tree reacts to being pruned, and following some simple steps when actually doing the job.

"Diseased wood can provide a source of infection that can move through the tree, and dead wood attracts both insects and other diseases," says Shelley Barkley, information officer, Crops Diversification Centre South, Brooks. "Pruning shapes, controls the size and spread of a tree, removes broken branches and prevents weak crotches which are subject to breaking under fruit or snow loads. It also promotes flowering and rejuvenates old shrubs."

Trees do not 'heal' the way humans do. When wounds are made, the tree produces a callus to cover the wound, and builds walls on the inside to compartmentalize the wounded area. These walls stop the further spread of disease into the tree. However, since trees vary in their ability to compartmentalize, it is best to make small wounds when pruning so the tree can better create the initial callus.

"It's important to understand how the tree reacts when pruned," notes Barkley. "Tree branches grow longer from the bud at the end of the branch and this bud is dominant over all the other buds on that branch. When this terminal bud is removed, a near-by bud is forced to take the lead. So, depending on the plant, the results may be a bushier shrub or a change in the direction of branch growth. New branches grow in the direction in which the bud points, so cutting to an outward facing bud forces plant growth outward."

Plants react to the amount of the branch that is removed. When a plant is cut back severely, the nutrients that sustained the entire length of that branch are more than the remaining branch needs. The plant directs the excess nutrients into vigorous new growth such as watersprouts and suckers.

Cutting a tree back severely also results in the plant setting fewer but healthier flower buds that produce large flowers. This can be a positive when trying to grow prize-winning trees.

"Prune annually, leaving the branch collar intact on the tree. The branch collar is the swollen area at the base of the branch where it comes off the trunk or another branch," explains Barkley. "Begin pruning trees while they are young. Young trees callous wounds faster producing less stress to the tree."

Pruning is usually done either in the dormant season (end of March to the end of April) or during the early summer. Dormant-season pruning invigorates tree growth while spring or summer pruning dwarfs the growth. Pruning in late summer (mid July-August) forces the tree to grow rather than harden properly for winter and increases the chances of winterkill. Fall pruning is acceptable, but can lead to winter damage to the cambium tissue around the pruning wound. Some trees, like birch and maple are bleeders. These trees have a very high sap pressure in the spring and need to be pruned once the tree has leafed out, usually in June.

"Pruning can enhance the shape or detract from the natural shape of the plant. As such, when you're ready to actually prune, start by visualizing the shape of the plant at maturity," says Barkley. "Remove the dead, damaged and diseased wood first. Sometimes this is all that needs to be done to improve the appearance of the tree."

Next step is to do any corrective pruning such as removing weak crotches, crossed branches, suckers and waterspouts. Prune the weaker of two rubbing or crossing branches. Thin the crown leaving well-spaced, strong main, secondary and lateral branches. A thinner crown promotes a healthier plant by allowing more air and sunlight into the centre of the crown.

"Make a clean cut and leave no stubs," advises Barkley. "Make cuts above a bud growing in the direction that you want the branch to grow in. A bud

on the outside of the branch will grow out, while one on the inside grows in. To choose the correct angle place the pruning tool so that the top of the cut is slightly above the top of the bud and the bottom of the cut is even with the bud's bottom. Making the cut too far above the bud will leave a stump that will die back, while cutting too close to the bud may damage it."

If large limbs need to be removed:

- Cut from the underside half way through the branch a foot or so out from the trunk.
- Make a second cut, topside of the branch, a couple of inches out from the last cut through the branch. This removes the weight from the branch and stops the tearing action.
- Remove the stub, leaving the collar intact on the tree trunk.

"Prune spruce and pine when the candles are actively growing, in late May or June. Break a portion of the new years growth. This forces the tree to make more new buds for next year resulting in a bushier tree," says Barkley. "Removing branches can be done the same as with deciduous trees. Remember that when removing whole branches, the buds that can still grow are limited in evergreens; therefore, removal of old wood can leave permanent holes in the tree."

Barkley adds that shaping shade trees early, by removing unwanted lower branches, crossed branches and those growing in the wrong location or direction, results in a stronger tree.

However, she cautions, sometimes less is better. "Pruning is much like a haircut as it is easy to cut off, but hard to put back. So if in doubt leave it. After all you can always prune again next year."

Source: Agri-News February 16, 2004

Covering the Season at Both Ends

Sylvia Welke

Floating row covers have been in use in Europe, Asia and Israel for decades before the technology became popular here. In the past fifteen years however, floating row covers have become commonplace with a wide variety of materials available for use. The covers are sold by seed houses, gardening supply stores and some farm stores. These lightweight covers literally float over crops without support, and rise up as plants grow beneath them. The white covers are made of spun-bonded polyester and polypropylene. The material is permeable to sunlight, water and air, yet provides a greenhouse microclimate. In the spring, this greenhouse climate provides a head start to seedlings and young plants, while the same covers offer a longer season to crops in the fall.

Floating row covers are easy to handle and install. Immediately after seeding or transplanting in the spring, the covers are laid over the area, and edges are held down with soil, soil-filled bags or concrete bars. It is important to leave enough slack in the material to allow for plant growth. Once temperatures are warm enough, the covers are removed. Conversely, in the fall, the covers are placed on mature crops once frost is expected.

Early yields

Row covers lead to early as well as increased, yields of crops. The greenhouse effect created by the covers warms the soil, and can enhance germination, root growth and nutrient uptake. The end result is bigger, healthier plants. In the spring, floating row covers are suitable for cool-season crops, such as radishes, lettuce, spinach, beets, carrots, turnips and parsnips, all of which can be directly seeded into the soil. At the same time, the covers can be used on warm season crops to allow for earlier planting. However, their use on crops with tender growing tips, such as beans and tomatoes, is not recommended unless supporting hoops are used to protect the plants. On the other end of the season, floating row covers can be used.

Frost protection

By trapping the sun’s heat, row covers can warm the soil an extra 0.5-2˚C. Lighter covers can give 1-2˚C protection while heavier covers can provide up to 5˚C frost protection.

"Using row covers to extend the season will also increase yields of crops."

What type of floating row cover?
Frost protection is negligible with the lightest material, which is primarily used as an insect barrier while the heaviest material (>1.25 oz/yd^2) offers the best frost protection. Medium weight covers of 0.5-0.6 oz/ yd^2 (e.g. Reemay) tend to be more popular since they are less expensive and offer most of the advantages of both light and heavy covers. However, medium-weight covers are more likely to tear and have a lifespan of about 1-4 seasons compared to the 5 or more seasons of the heavier weight (1.25 oz/ yd^2) material. This is an important consideration given that row covers are not recyclable and will end up in the landfill. Floating row covers come in various widths ranging from 3 to 60 feet and lengths ranging from 20 to 1000 feet.

Not just frost protection…
Floating row covers also act as windbreaks and thus, aid in frost protection. As well, the covers, which are permeable to water, act to conserve water to some extent by creating a slightly humid microclimate.

One important function of row covers, as most organic growers know, is insect protection. Floating row covers have been successfully used against cabbage root maggot fly, flea beetles, spinach leaf miner, carrot rustfly and Colorado potato beetle, amongst others. However, research has shown that overwintering insects can be trapped under covers and then be ready to infest their favourite crops next spring. These insects include root maggots, flea beetles and the Colorado potato beetle. Soil cultivation in the fall can reduce the number of surviving insects; crop rotation can ensure that surviving insects are far from their host plants.

Facts about floating row covers

- Windy conditions can result in abrasion of leafy crops; installing the covers with hoops can circumvent this problem.
- Floating row covers provide a great environment for weeds, as well as crops, and the covers make it more difficult to monitor weed pressure.
- Drip irrigation, soaker hoses and sprinkler irrigation are all well suited to floating row covers (which are water permeable).
- For ease of use, row covers should be folded or rolled when not in use.
- For insect-pollinated crops such as cucurbits, the row covers must be removed at the time of flowering to allow insects to pollinate the crops.
- Final removal of floating row covers causes less shock to plants if done on cloudy days (ideally before a rain) rather than on sunny, windy days.
- While the warm microclimate under floating row covers can be a good thing, leaving them on too long and thereby limiting available light can lead to bolting in crops such as radishes.
- Since one can't see what's going on under the covers, it can be hard to determine the time of harvest.

Source: EcoFarm & Garden – Winter 2004

Getting chilled won't cause colds

Viruses, not weather, cause colds. Studies have shown that people exposed to bone-chilling temperatures, icy baths and drafts don't catch cold unless they are exposed to viruses. Colds are more common in winter largely because people, especially kids in school, spend more time indoors and thus are exposed to more germs.

Klondyke Harvest Fair 2004

The 10th Annual Klondyke Harvest Fair date has been changed. The fair will be held in Rotary Peace Park on August 21st and 22nd, 2004.

The Yukon Agricultural Association AGM will be held at the Riverview Hotel on 1st Avenue in Whitehorse, on Saturday, March 27th, 2004 from 10:00 am - 2:00 pm. Lunch will be provided with RSVP to Debbie Throssell at 668-6864.

Horse Wolf Tooth or Canine?

Cliff Hanna

No two teeth in the horse's mouth are more misunderstood than the canine tooth and the wolf tooth. Some of the confusion horse people have with these two teeth comes from the fact that they share some common traits.

- They both are located in the same part of the horse's mouth;
- Not all horses have them; and
- Both can create problems for the horse, although in different ways.

Despite these similarities the canine tooth and wolf tooth are distinctly different. As a horse person, learning the details about these two teeth will give you a definite advantage. And the horses you work with and own will benefit a bunch!

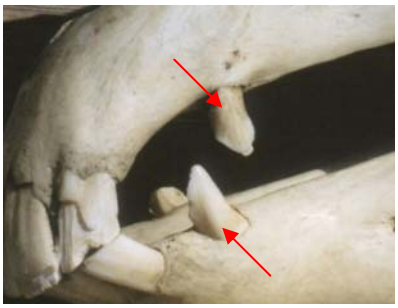
Let me show you why

To start let's look at the canine. The canine tooth is a male fighting tooth. It's main function for the horse is to do damage to his opponent in a fight. There are normally four of them. Two are located in the upper jaw and two in the lower jaw. They are found in the interdental space of the mouth. This is the part of the mouth between the incisors and molars also called the bars of the mouth.

The canines are usually about an inch (2.5cm) or so behind the corner incisors. The bottom two on the lower jaw tend to get quite long and sharp. They are deeply rooted teeth and very strong.

Female horses don't usually have canine teeth

However, some of the girls didn't read the book! If a mare does have canines they usually occur only on the bottom jaw and are very small. They are also commonly placed quite close to the incisors.



Mature canines

The canines start to appear in a stallion or gelding's mouth at about 4 ½ years of age. By 5 years old they will be mature. This fact can be a handy clue to what a horse's age is. If he is a male and does not have canines he will be less than 4 years old. If he has mature canines you will know he is at least 5 years old.

Long lower canine

As we mentioned, the **lower canines often get long and sharp.** This creates potential for a couple of problems. First there is the chance of cutting his tongue on these teeth. The other difficulty is usually related to bit interference.

The mature lower canine often is higher than the lower incisors in front of it. When the horse opens his mouth to allow the bit to come in it will clear the lower incisors but sometimes hit the higher canine tooth behind them.

This striking the canine with a bit doesn't have to happen very often before the horse will start getting nervous about the bit going in and out of his mouth.

To prevent this problem developing it is a good idea to have your equine dentist trim and round off the lower canines. This will accomplish two things. The shorter tooth will be much less likely to be struck by a bit. And it will no longer be sharp so he will not cut himself or another horse with it.

Upper wolf tooth

Now the wolf tooth is quite a different character. It is a small tooth often about the size of the end of a pencil. It is usually located just in front of the first molar. The most outstanding feature of the wolf tooth is that it is very unpredictable!

They can occur in either a male or female horse. There can be four of them, one on each arcade, but that is rare. They most commonly occur on the top jaw and sometimes there is only one.

They normally will be positioned close to the first molar. They may be pointed out at an angle or tipped in toward the tongue. Sometimes they grow out sideways or parallel to the jawbone. They may not actually come through the gum at all. These are called blind wolf teeth.

As you can see, wolf teeth are unpredictable and troublesome
About 12-15% of horses will develop one or more wolf teeth. If they are going to have wolf teeth they will appear in the first year of the horse's life. If a horse does not have any wolf teeth by the time it is 2 years old he will not get any. A wolf tooth has a small simple root that makes it relatively easy to extract. Removing wolf teeth is usually a good idea.

Some extracted wolf teeth

Here's why
When a bit is properly placed in a horse's mouth it folds a corner of the soft tissue of the mouth in behind it. This fold of skin normally comes up against the smooth shoulder of the first molar. No problem. Enter the wolf tooth, which is often pointed and sharp. As soon as the rider makes contact with the bit this fold of soft skin is pushed against the sharp wolf tooth and pinches the horse.

The pain caused by a wolf tooth in this way can create a lot of behavior problems
A horse may become reluctant to give properly to the bit on the side where the wolf tooth is located.

- In race horses lugging away from or into the rail is often a result of a wolf tooth.
- A barrel horse may tend to blow his turns one way.
- A dressage horse may not flex well on one side because of a wolf tooth.

These and other similar problems can be solved or prevented by removing the wolf tooth. It is a good idea to have any horse you work with checked for wolf teeth. Taking care of this detail can make a huge difference for both you and the horse. The canine or wolf tooth can cause your horse trouble. Having problems caused by these teeth solved or prevented is the mark of a savvy horse owner. Your horse will be grateful that you helped him.

Cliff Hanna is a practicing equine dentist in northern Canada and publishes a bimonthly newsletter for horse owners. He is also author of the horse owner's dentistry handbook, **"Look a Gift Horse in the Mouth."** For questions or more information contact Cliff at www.thehorsedentistryhandbook.com or phone 867-633-4071.

Update on APF

The Yukon Agriculture Policy Framework (APF) Advisory Committee met three times since the beginning of 2004, to discuss new agriculture program development that will help develop the Yukon industry.

The January meeting focused on the Environment chapter of the APF. Most of the discussion was on a environmental farm scan for the Yukon that looked at potential environmental concerns or impacts that the industry might have on the major agricultural regions of the territory. One specific program initiative suggested by the committee was to assist farmers that irrigate from major waterways with fuel containment systems. The committee also suggested that a positive statement on the environmental benefits of locally grown and organically produced be included under the Yukon environment chapter.

In February the committee met to discuss business risk management options for Yukon farmers. Based on a study of the industry needs by Alberta Financial Services Corporation, the Canadian Agriculture Income Stabilization (CAIS) program was recommended as the most suitable option. This option was endorsed by the committee as the one that would provide the most comprehensive benefit to the growth of the industry. Options on when and how to enter CAIS are currently under review by the Agriculture branch.

The committee met again in early March to review APF program options that fit under the Renewal chapter. Six Yukon program initiatives and a number of federal programs were presented and discussed to make sure that these were the ones that would cover local industry needs. Renewal programs involve access to consultants, industry training needs, value added and diversification options, market development and new or young farmer initiatives.

Formal APF program announcements from Agriculture and Agri-food Canada and the Department of Energy, Mines and Resources can be expected to be made throughout the 2004/05 fiscal year.

Robotics and Computerization Speed New Livestock Tests

A new rapid test for transmissible spongiform encephalopathie uses robotics and computerization to greatly increase the speed that these tests can be completed. Through a special permit from the Canadian Food Inspection Agency, Alberta is now able use the internationally recognized Bio-Rad kit from France to detect Bovine Spongiform Encephalopathy (BSE) in cattle, Chronic Wasting Disease (CWD) in elk and deer and scrapie in sheep. Yukon testing for CWD is done through an Alberta lab.

"Due to the increased automation associated with these new rapid-test kits we will be able to cut our turn-around time in half once the samples arrive at the lab," says Dr. Gerald Ollis, chief veterinarian, Alberta Agriculture, Food and Rural Development, Edmonton. "The actual test itself only takes about 48 hours which is a tremendous improvement over previous procedures."

Dr. Ollis says that what is even more important than the improvement in speed is the increase in output. "The Bio-Rad procedure is more automated than previous tests meaning we can triple our output. We'll be able to run about 1,000 tests a week the way we're set up right now. With further automation we'll be able to do even more." … "This whole process uses a lot of robotics and computerization to really speed things up," notes Dr. Ollis. "As well, this test is done on equipment that can be programmed to run automatically overnight, which is another big factor in the improved turn-around time."

Adapted from: Agri-News February 16, 2004

Alaska Census Numbers

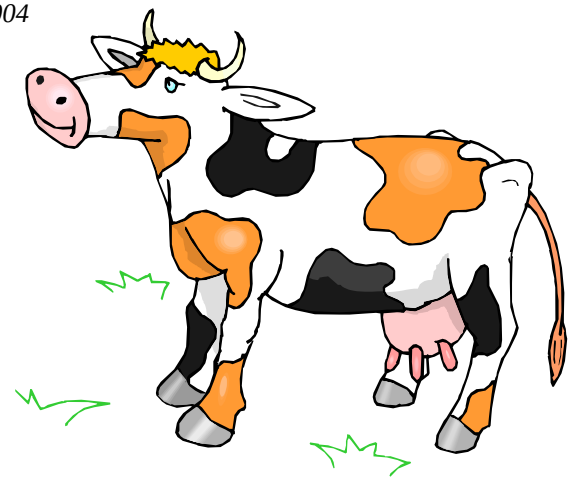
	2002	1997	1992	1987	1982	1978	1974
Number of Farms	609	548	512	574	570	383	291
Land in Farms (acres)	900,714	881,045	923,037	1,026,732	1,323,953	1,286,463	1,633,070

Livestock (number of head)
As of January 1, 2004

	Tanana Valley	Matanuska Valley	Kenai Peninsula	Southwest Southeast	State Total
Cattle and Calves	1,330	2,490	520	8,160	12,500
Beef Cows/Calved	400	450	200	4,050	5,100
Milk Cows/Calved	200	980	10	10	1,200
Heifers (500+ lbs)	350	530	60	760	1,700
Bulls/Steers (>500 lbs)	230	170	130	1,570	2,100
Calves (<500 lbs)	150	360	120	1,770	2,400
Hogs and Pigs	860	580	60	0	1,500

Source: Alaska Farm Reporter Alaska Agricultural Statistics Services 2004

Did you know a single chickweed plant produces an average of 12,000 seeds? The dry seeds easily float on water, and a major method of distribution in your garden is rainfall or irrigation! If you try to chop out the plants with a hoe, each piece left in the garden, even pieces only ½ inch long, can root and form a whole new plant!



4-H Update

For a little over a year now, the Whitehorse 4-H Multi-club has been involved in a creative fundraising project. Late in 2002, our members started collecting Partridge Creek Farm egg shipping boxes from Food Fair and the two Super A Foods stores here in Whitehorse. In return for collecting and returning these boxes, a refund was paid to the club from Partridge Creek Farm and since this project began, we have raised approximately $500.00 for club functions. We would like to take this opportunity to say a big thank-you to Partridge Creek Farm, Super A Foods and Food Fair for their continuing support of youth development programs in the Yukon. If you are interested in 4-H and would like to find out more, you can contact them at 633-8416.

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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If you would like to speak to someone in person please stop by the Agriculture branch in room 320 on the 3rd floor of the Elijah Smith Building on Main Street.