nFARMation

Yukon Agriculture Branch Quarterly Bulletin

Summer 2007

Volume 20 Issue 2

Message From the Agriculture Branch

The Agriculture Branch received the figures from the 2006 Census of Agriculture for the Yukon on May 16. As we had heard throughout the winter, the total number of farms dropped from 170 in 2001 to 148 in 2006. Closer analysis revealed gains being made in key areas showing signs of a maturing industry.

Under “Farms classified by industry group” the number of farms reporting “Other animal production” dropped from 65 to 44. In the Yukon, this category includes sled dog breeding operations, horse outfitting and rigging and game farmers. The first two groups don’t report their business income as agricultural sales and I don’t think they were pursued to file a census form as vigorously as in 2001. The game farmers suffered a market collapse after the 2001 Census and are slowly developing into a smaller sustainable meat industry. This likely accounts for the reduced number of farms. While total farm area dropped from 29,318 acres to 25,020 acres, the drop is accounted for in less “natural land for pasture” (grazing) by 3228 acres and titled woodlands on farms by 1425 acres. Both of these land uses are consistent with the activities of the groups mentioned above. The total area in crops and seeded pasture actually went up from 7955 acres in ’01 to 8327 acres in ’06 with 22 fewer farms reporting. The other indicator of improved land utilization is “irrigated acres” that increased from 1395 acres in ’01 to 1851 in ’06.

What is really encouraging is to see that “Total feed, supplement and hay purchases” and “Feed supplement and hay purchases from commercial suppliers” dropped by over half, while total livestock numbers (not including poultry) remained almost the same as in 2001, indicating that more local hay and feed is produced on Yukon farms than ever before.

A couple of other bright spots to note include an increase in vegetable acres from 24 to 37 and fruit acres (primarily saskatoons) going from 11 in 2001 to 24 acres in 2006. Farm capital including all land and buildings was reported to be over $66,000,000 an increase of close to $16,000,000 on 22 less farms. Organic agricultural products are now being produced on 26 Yukon farms.

The Census numbers show that we still import the majority of the agriculture products we consume from other parts Canada and the world. The vision as stated in the 2006 agriculture policy is “an industry that significantly increases its production of healthy locally grown food for local consumption.” We’re getting there.

Anyone wanting to see the detailed Census results should contact Matt Ball at the Agriculture Branch. Please enjoy the summer reading of this edition of the newsletter and have a great harvest.

Tony Hill
Director
Agriculture Branch

Yukon
Energy, Mines and Resources

Northern Agriculture

Statistics

Results from Statistics Canada's 2006 Census of Agriculture report a decrease in the number of farms in the Yukon. The majority of this decrease is in the "other animal production category" which decreased from 65 in 2001 to 44 in 2006.

There was a marked increase in the number of farms reporting higher capital value in 2006. In 2001 there were no farms reporting capital value over $1.5 million, while in 2006 eight farms reported capital value in excess of $1.5 million.

See tables below for more detailed information.

Table 1: Farms classified by industry group, census years 2006 and 2001

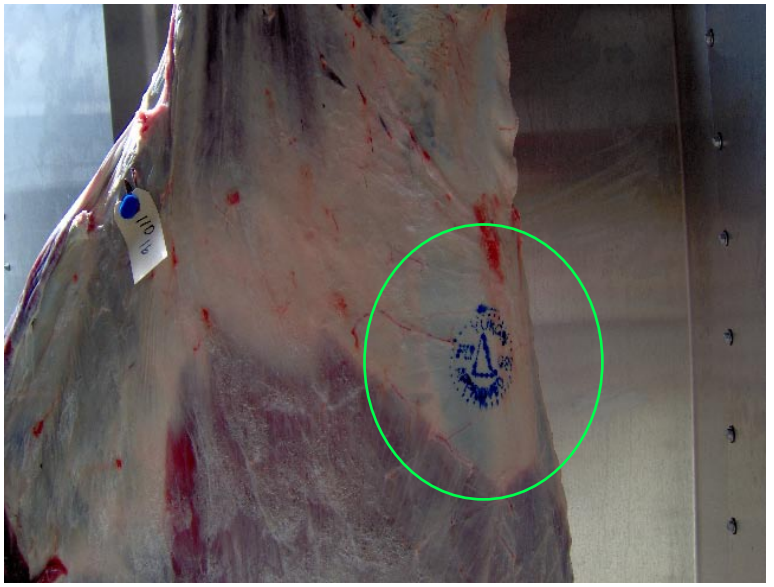
	2006	2001
Total	148	170
Cattle ranching and farming	2	2
Hog and pig farming	2	1
Poultry and egg production	10	14
Sheep and goat farming	1	0
Other animal production	44	65
Oilseed and grain farming	5	5
Vegetable and melon farming	12	7
Fruit and tree-nut farming	4	3
Greenhouse, nursery and floriculture production	22	22
Other crop farming	46	51

Table 2: Yukon farms classified by total farm capital, census years 2006 and 2001

	2006	2001
Total	148	170
< $10,000	13	24
$100,000-$199,999	28	52
$200,000-$349,999	50	51
$350,000-$499,999	23	16
$500,000-$999,999	20	21
$1,000,000-$1,499,999	6	6
$1,500,000-$1,999,999	3	0
$2,000,000 +	5	0

Table 3: Yukon farms classified by total gross farm receipts for calendar year prior to the census, 2006 and 2001

	2006	2001
Total	148	170
< $10,000	86	108
$10,000-$24,999	32	22
$25,000-$49,999	10	21
$50,000-$99,999	11	9
$100,000 +	9	10



Meat Inspection Stamp

The abattoir is in full swing driving along the highways in the southern Yukon providing inspected slaughter services for red meat producers. So far this spring we've had 2 slaughters with 3 bison, an elk and one beef inspected.

The stamp shown on the elk side above is going on any carcass that is for retail sale. In order that meat be for retail sale, the meat must be moved in an inspected conveyance and slaughtered and processed in inspected facilities.

The mobile abattoir is here to provide an inspected slaughter facility for beef, hogs, elk, bison, sheep, and goats. Farmers can get price information and make arrangements for slaughter services by contacting Art Locke at 393-4978 or by email lock@northwestel.net.

Northern Agriculture

Yukon Agriculture Association and You

The YAA needs you to join us in fighting for the interests of Yukon agriculture and for the local provision of our food supply for our food health, our food security and for the important contribution of agriculture to our economy and our community at large. A year's membership is only $10, or you can have a multi year membership by sending us $10 for each year. You'll find the membership forms on our website http://www.yukonag.ca/html/downloads.html. Do fill it out and send it in. Our industry and our growers are too important not to be represented in the battle of competing interests and priorities which affect agriculture, and indeed, all of us as consumers of food need to be concerned about Yukon agriculture and our food supply. Whether you are a farmer or a gardener or just someone who likes the idea of being able to buy healthy, locally grown food, the YAA is the umbrella organization that represents all Yukon agricultural interests. Call 668-6864 or email admin@yukonag.ca if you have any questions.

I'm looking forward to hearing from you.

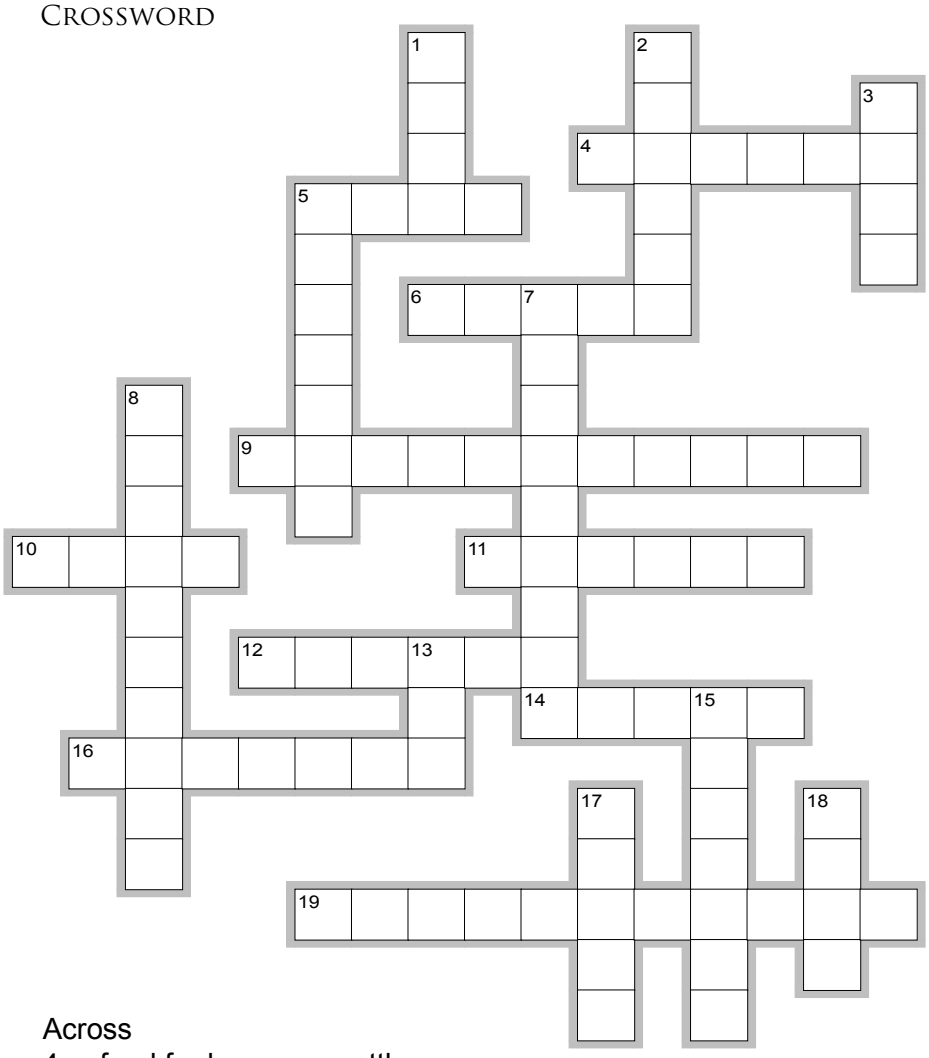
Rick Tone
Executive Director
Yukon Agricultural Association

Specified Risk Material (S.R.M.)

Canadian Food Inspection Agency (C.F.I.A.) officials were in Whitehorse on June 8th. While in town they provided a presentation to local producers and processors on the new rules governing removal and disposal of specified risk materials from cattle (effective July 2007). For those that were unable to attend this presentation, information is available from the YAA office.

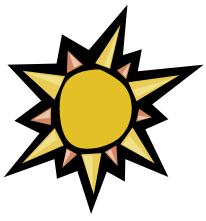
Call 668-6864 or
email admin@yukonag.ca

Crossword



Across
4. food for horses or cattle
5. flowers or leaves not fully open
6. mixture of wet grass and leaves
9. to put forth shoots
10. material on the surface of the earth on which plants can grow
11. the fertilizing element of flowering plants
12. slang for a vegetable
14. part of a plant attached to the soil
16. seed from which oil is expressed
19. the production of crops, livestock or poultry

Down
1. any undesirable or troublesome plant
2. implement for cutting or turning up soil
3. to breed and raise livestock
5. fuel produced from plant biomass
7. a machine for cutting grass
8. artificial application of water to sustain growing plants
13. acronym for Growing Degree Days
15. a powerful vehicle used for pulling farm implements or machinery
17. an edible, usually sweet and fleshy form of a plant
18. agricultural holding



Answers on page 8

Science & Research

What is Camelina sativa?

In 2006 the Agriculture Branch setout to investigate the potential of oilseeds in the Yukon for biodiesel. Research was conducted to see what type of oilseeds would have the best potential in the Yukon. During this time, Plant Pathologist, Richard Gugel, M.Sc., with the Saskatoon Research Centre of Agriculture and Agri-food Canada recommended *Camelina sativa*.

Camelina sativa is also known as False Flax, Gold of Pleasure, German Sesame and Siberian Oilseed. Camelina belongs to the same family as rape and canola but is of a different genus. Camelina is an ancient crop used in Europe as far back as the Roman Empire as an oil source for lamps and also a common edible product. Today's production of this crop has been grown in limited quantities mostly in Europe for the cosmetic industry. With the interest in biodiesel from oilseeds, *Camelina sativa* is gaining popularity and is being cropped on more acreage in Western Canada and parts of the United States. The reason for the new popularity is that Camelina is a low input crop which can be grown in more arid conditions and with less fertilizer, herbicides and pesticides compared to other oilseed crops. The crop also competes well with weeds and the use of higher seeding rates can help reduce weed problems without the use of chemicals. For the Yukon, it is capable of germinating at just above freezing and in it's early stages is very frost resistant.

The oil content of this crop has been estimated at 35-40%, and yield is anticipated at 1200 to 2320 lbs per acre, as quoted by Camelina Canada. The Camelina grown last year in the Yukon at one location achieved oil content as high as 48.3% with yields comparable to the 1200 to 2320 lbs per acre range.

Although this crop is finding promise as an oilseed for biodiesel, it is getting a lot of attention as a food product as well. The oil profile is rich in omega 3 and 6 fatty acids. These fatty acids have been shown to have major cardiovascular health benefits. The oil is also high in tocopherols, which is an antioxidant that provides natural stability to the oil preventing oxidation or rancidity. And the antioxidants also have a positive effect on our health. The Camelina oil is also being developed as a line of food products by a multinational food company in Europe which is a known leader in functional foods.

Camelina sativa is a very interesting crop with mutiple uses which so far looks suited to Yukon conditions. The Agriculture Branch will continue to test Camelina and it's suitability as an oilseed crop for North of 60°. Year one of the research has shown that it can be grown with significant yields although there were still limitations because the crop did require irrigation. We look forward to year two. Information on the oilseed production in the Yukon, can be found in the 2006 Research Report.

If you have any questions about the research or whether *Camelina sativa* is an option for you please call Brad Barton at 867-667-3417.

Tips & Tricks

Pasture Raised Poultry

Pastured poultry are raised in moveable pens that allow them to move about freely and have access to fresh pasture on a daily basis. Fresh grass can (depending on quality and composition) make up from 20 to 25 per cent of their diet.

Other specialty poultry include free range and organic chickens. Free range are raised in a confinement facility, but are given the opportunity for free ranging. There's no industry standard for the number of square feet per chicken, so the meaning of the term free range varies from operation to operation. Organic chickens are raised on feed that contains no added chemicals or medication and on certified organic feed and land.

The distinguishing feature of pasture raised chickens is that fresh grass makes up a significant portion of their diet. It's claimed that the meat from pasture raised chickens has a higher nutritional value through lower fat content, as well as higher vitamin and mineral content. A pasture operation provides a non-medicated and natural feed along with fresh air and exercise while the birds forage for plants and insects. Chickens can also be used to help control some weeds (for example chick weed) and also provide valuable nutrients to the land via manure.

The moveable pens allow the birds to be moved daily to fresh pasture, provide protection from predatory animals, and allow the farmer to manage the forage field to ensure fresh feed, reduce over grazing, and even distribution of the manure. The moveable pens can be built of wood or metal. New producers need to choose between the longer life and easier handling of metal cages versus the lower cost of wooden cages. Caution must be taken while moving the pens as birds can become injured during this process.

Pasture poultry operations can be established with seasonal markets and limited capital. The production season for pasture raised poultry is limited to the warmer months of late May through early September. Within this period, producers can operate either an all in - all out production process or a continuous flow process. An all in - all out production process has market birds ready for market at one or two times during the season. This process works for providing birds to customers, family and friends once or twice a season. A continuous flow production process has market birds available every week. This type of production process is needed to meet the needs of restaurants and retailers that are seeking a regular supply of table birds. Therefore, birds will need to be frozen and stored creating an additional step and cost to the process.

The site requirements for a pasture poultry operation varies with the number of cages, size of cages and the grass cover. Generally, cages are 10 feet by 10 feet in size. An eight-week production cycle requires 3,500 square feet. That equates to approximately 10 per cent of an acre for each pen. Pasture poultry consume most palatable forages available to them. Accordingly, birds do best when they have access to legumes, rather than coarse mature grasses.
A brooder house is necessary when chicks are purchased at one day of age. An area of approximately 10 sq. ft. is required for each 100 chicks. A brooder house can be developed from existing outbuildings with wooden floors. A brooder house also requires a source of heat (brooder lamps or gas heater) and possibly partitions to confine chicks in a small space. The brooder stage lasts approximately three weeks. During that time, operators must ensure the chicks are kept warm, clean and dry. The chicks can be moved to pasture cages at three weeks. As a precaution against cold weather, chicks shouldn't be put on pasture too early. Brooding and brooder house conditions are critical to a good start and to flock health and productivity later on in the production cycle. Key factors to manage in the brooder house include: temperature, ventilation, litter quality and equipment. Between cycles, the type of cleaning and disinfecting is important to prevent the carry-over of disease agents from cycle to cycle. Pasture poultry producers also need to decide what type of bird to use in their production process. Birds developed for the commercial poultry (indoor) industry tend to be high performance birds with good carcass quality. However, these types of birds haven't been bred for outdoor operations. As a result, mortality rates for these birds tend to be high in pasture based operations. Cornish crosses are recommended for pasture operations because of their hardiness and lower mortality levels when raised outdoors.

Feeds and feeding are important issues in the performance of pasture raised poultry. Producers need to be familiar with both the natural supply of pasture and the supplemental feeding programs needed to support their growing birds.

Individuals investigating a pasture poultry operation must consider the following factors before investing in production:
- Can pasture poultry producers achieve higher prices or higher returns from this specialty poultry product?
- There's limited experience in producing and marketing pasture raised poultry product. New producers have to gain their experience by growing and marketing the product themselves.
- Mortality losses are a significant factor in poultry management. Disease, cold, rain and predatory animals can affect mortality levels. Start small to reduce the risk of loss while learning about poultry production.
- New entrants must be prepared to perform a large number of marketing activities, including knocking on doors to introduce their product.
- Production information for pasture poultry production is limited. However, a widely used reference is Pastured Poultry Profits by Joel Salatin.

Adapted from Alberta Government Agriculture and Food Ropin the Web

Tips & Tricks

Integrated Weed Management

One of the best ways to reduce spraying for weeds is physical weed management. Physical control refers to mechanical or hand controls where the weed or pest is actually attacked and destroyed. Tillage, fire, removal by hand, grazing and mowing are all used to destroy weeds and prevent reproduction. Some insects may also be destroyed by tillage, which destroys their eggs or overwinter stages of growth. It is important to keep in mind that weeds are seldom controlled through a single operation.

Practices such as seedbed preparation, post-seeding tillage, post-harvest tillage and summer fallow are effective in combination against weed seedlings and perennial weeds. The choices will vary with the region, crop, degree of infestation, soil condition and availability of equipment.

Soil factors influence the selection of machinery. For example, stones may prevent mowing and moisture conservation may prevent the use of repeated tillage. Consider all factors before you develop an integrated control program.

Mowing
Repeated mowing controls perennial weeds by depleting root reserves. It will also prevent seed production of annual and biennial weeds. Root reserves in perennial weeds are lowest when plants are in bud. If only one mowing is planned, it should be at this stage. Mowing is not effective for prostrate weeds such as field bindweed.

Hand pulling
Although small patches of perennial weeds can be pulled up repeatedly, hand pulling is most effective for annual and biennial weeds. Pulling of annual weeds prevents seed production. If weeds are in flower, bag and burn them to prevent seed spread. Hand pulling is most feasible when you are trying to prevent the establishment of new invasive species.

Tillage & Summer Fallow
Tillage was one of the first methods of weed control. It is fundamental to integrated weed control. Annual weeds, biennial weeds without extensive tap roots, and perennial seedlings are readily destroyed by tillage. The younger the weed, the easier it is to control. Tillage effectiveness relates directly to the amount of soil disturbance. The greater the disturbance, the greater the effect of tillage is on weed control.

The choice of implement depends on residue cover, soil type, soil moisture, growing conditions and weed growth. Blade implements, such as the Noble or Victory blade cultivators, conserve trash but are not very effective under cool wet conditions. Implements that bury plant residues are effective in wet conditions but increase erosion potential. Reduced tillage is desirable on sandier soil and following dry years that produce little residue cover. Field cultivators and rod weeders are a good compromise.

Summer fallow is used to control weeds, conserve moisture and nutrients, and retain crop residue to protect against soil erosion. Summer fallow is most effective against perennial weeds. However, it also helps deplete the supply of weed seeds in the soil because tillage promotes germination of weed seeds.

As flushes of weeds appear, they are controlled by tillage or with herbicides. Use herbicides when tillage is not effective or where soils are susceptible to erosion. Summer fallow contributes to erosion, salinity and organic matter loss and therefore should be used with care. Field cultivators with wide sweeps sever roots of annual and perennial weeds. After the soil has been loosened, a rod weeder will penetrate and provide good annual weed control with minimum moisture loss. Blade cultivators can be used in dry areas where minimal soil disturbance is desirable. Till during hot, dry but calm weather.

One year of summer fallow will reduce weed problems, but not eliminate them. Dormant weed seeds will remain to germinate and emerge in subsequent years.

Pre-seeding tillage
Shallow tillage (less than 7.5 cm) in early spring encourages germination of most weed seeds. A second shallow tillage will destroy the seedlings and prepare a seedbed. Use a disc-type implement if crop residue is heavy. A rod weeder or cultivator will work when less residue is present. This practice is most effective for weeds that germinate in cool soils.

Post-seeding tillage
This practice will control weeds that emerge with or shortly after cereal crops and potatoes. In some instances post-seeding tillage can cause severe crop injury and should be done with caution. For example, inter-row cultivation of corn and vegetables is a less injurious form of post-seeding tillage than a blanket cultivation. However, rod weeding of a cereal crop to destroy early emergent weeds when the crop sprouts are still below the depth of the rod weeder is a relatively safe

practice. Well-established cereals, and potatoes will survive cultivation with a harrow that kills delicate, shallow-rooted weed seedlings. Crop damage will vary with soil type, weather at the time of tillage, the kind of crop and the depth of seeding. Tillage will be most successful on moderately deep, firm soil where deeper seeding occurred.

With post-seeding tillage, some crop loss is inevitable and should be accepted by the producer if this practice is followed.

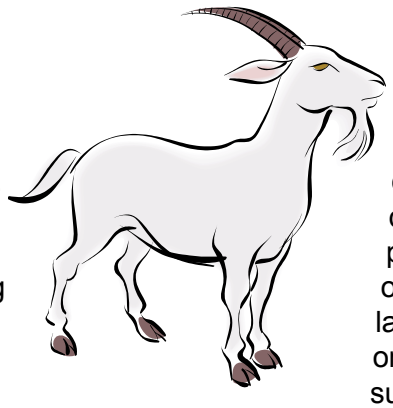
Post-emergence tillage
Wheat and barley seeded 8 to 10 cm deep and up to 25 per cent heavier than normal can be harrowed after emergence. Till at the 1 to 4 leaf stage before tillers form. Light harrows can be pulled slowly and parallel to the seed rows. Post-emergent tillage with a harrow may delay crop maturity by a minimum two or three days. Check crop plants during tillage. Irreparable damage will occur if crop roots are loosened, broken or damaged. Avoid tillage if the crop is under stress. In a dry spring, this operation will cause more damage than the potential damage caused by the weeds. Generally, barley is more susceptible to damage than wheat. Post-emergent harrowing in fields with heavy trash cover is not recommended because straw will clog the harrows and damage the crops excessively. Herbicides are a better alternative in most instances.

Inter-row tillage
Tillage can reduce weed populations in row crops such as potatoes. The first tillage should be early and shallow. Subsequent passes can be made if required. Take care to avoid crop injury.

Fall tillage
Seedlings of winter annuals and some perennial weeds can be controlled with early fall tillage. If stubble is sparse, avoid fall tillage and till early in the following spring. The time of fall tillage varies with the weed species. In general, fall tillage is done between crop harvest and soil freeze-up. Both fall tillage and a fall application of herbicide are very effective on winter annuals and should be part of most weed control programs.

Grazing & Grazing System

Grazing serves the same purpose as mowing in weed control. The main reason for mowing weeds is to prevent seed production. To be effective, grazing must also prevent seed production. Therefore, the age of the target weed is an important consideration in a grazing program. Weeds are most palatable when they are young and become less palatable with age. Grazing should be initiated when weeds are still palatable and before seed formation.



There are few situations where grazing will accomplish as much as mowing. This will depend on the target weed, the grazing system and the grazing animal. Many grazing schemes do not provide effective weed control because grazing animals are not available at the appropriate time, and fencing and management are inadequate or inappropriate to ensure that top growth and seed production are curtailed.

The grazing system should reduce the grazing animal's choice as much as possible. Systems that employ herded goats and short-duration grazing with cattle have been used successfully. Short duration means a high number of animals per unit area for a short time.

Selectivity is governed by the palatability of weeds to the grazing animal. Palatability decreases with the age of the plant. Therefore, you should start to graze early in the season when weeds are most palatable.

Grazing animal
When choosing a grazing animal, consider the species of weed, the maturity of the weed, the availability of animals for grazing and the nutritional requirements of the animal. Each animal species tends to have a characteristic, preferred diet.

Generally, cattle and horses are grazers and select a diet dominated by grass and grass like plants. As an example, cattle and horses are ideal when the target weed is quackgrass.

Goats are browsers and select a high percentage of woody material in their diet. Goats select 40 to 80 per cent shrubs in their diet on North American range lands. Goats have been used on tame pasture to reduce sucker growth of aspen.

Adapted from Alberta Government Agriculture and Food Ropin the Web

Calendar of Events

Fireweed Community Market

Shipyards Park, 3 to 8 p.m., every Thursday
"*It's about more than good food*"

Come down to the market for dinner from falafels to halibut or game farmed meats, while you there pick up locally grown veggies, bedding plants, meats, cheese, jams and jellies, and handicrafts as well.

6th Circumpolar Agriculture Conference

Happy Valley-Goose Bay, Labrador, Canada
September 30 - October 3, 2007.
Theme: "Northern Agriculture - Evolving with a Changing World."
Topics include: Harvesting, utilizing and marketing of northern wildlife and boreal floral, reclamation of industry development sites in northern areas, creating northern agricultural awareness, adopting emerging technologies in northern agriculture, and supporting agriculture growth through rural development initiatives in circumpolar regions.

If you are interested in attending or presenting papers or posters please see the website: http://www.caa-cac.org/Conference.html

For travel funding please contact the Agriculture Branch at 667-5838 or toll free at 1-800-661-0408 local 5838.

InFARMation is...
A Government of Yukon 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 feel free to contact us.

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Call Matt Ball at (867) 667-5838, toll-free outside of Whitehorse at 1-800-661-0408 local 5838, or stop by the Agriculture Branch on the third floor of the Elijah Smith Building in Whitehorse.

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

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 867-633-4342.

Pheasants For Sale
A variety of young and mature very colourful exotics. Easy to raise and winter hardy. Call Claude Dulac at 867-634-2512 in Haines Junction for more information.

Cattle For Sale
For sale 2x2nd calf heifer-bred, 2x1st calf heifer bred, 5 last years calves steers and heifers, 1 pure bred 2 year old South Devon Bull. $0.95 per pound. Call Jerry Kruse, McCabe Creek Farm 867-537-3458.

Tractor wanted with front end loader
Please phone Dirk Konen 867-335-2345

Stock Rack for pickup truck,
paid $1800 will sell for $750,
call Marc and Lina Tremblay
867-456-4299 after 6pm

Microchip Reader - Riley Identification System Mini, portable reader/scanner with 10 injectible transponders $150
call Marc and Lina Tremblay
867-456-4299 after 6pm.

Great Green Growers Cooperative
There's a new concept in farming coming to the Yukon. A community, cooperative based farming project has begun using privately held farm land to contribute to local food security and to make an affordable land option for farmers looking for land in the Yukon. For more information look check out the website http://www.greatgreengrowers.com.

Answers to Crossword

Across		Down	
4.	FORAGE	1.	WEED
5.	BUDS	2.	PLOUGH
6.	MULCH	3.	REAR
9.	GERMINATION	5.	BIOFUEL
10.	SOIL	7.	LAWNMOWER
11.	POLLEN	8.	IRRIGATION
12.	VEGGIE	13.	GDD
14.	ROOTS	15.	TRACTOR
16.	OILSEED	17.	FRUIT
19.	AGRICULTURE	18.	FARM