Fallow fields of summer

The old rules for summer-fallow have changed with the new reduced tillage technology that allows farmers to maintain high levels of crop residue in their fields. Gone is the need for tillage-intensive, erosion-prone, bare-soil fallow, replaced now by standing stubble and a protective mulch layer retained with chem-fallow.

“Pretty much province-wide, there has been a noticeable switch from tillage to herbicides for weed control in fallow fields, with the spin-off being lower costs, less time spent in the field, and better soil conservation,” explains extension agronomist Ron Heller with Alberta Reduced Tillage LINKAGES (RTL), Vermilion. “The system is commonly referred to as chem-fallow, short for commercial chemical herbicides that growers can spray to control weeds and volunteer crop during a fallow rotation.”

However, there is more to summer fallow than killing weeds. Traditionally, a no-crop year is a time to rest the land, build moisture reserves during drought, bank fertility and reduce costs for cropping inputs. “There just wasn’t time, money and equipment to seed all of the acres, all of the time with conventional systems. In areas with sufficient precipitation, summer fallow was a convenience more than a necessity,” suggests Heller. He points out the challenge faced by many growers in northeast Alberta this spring, with fields too wet for early seeding of peas, canola, wheat and malt barley. “It’s not easy to adjust a continuous cropping rotation based on these high-value crops, agronomically as well as from a cash flow position. Rather than risking later seeding, a suitable alternative may be chem-fallow.”

Late-seeded crops are potentially low-quality risks, often only good for livestock use. A personal favourite for Heller is direct seeding perennial forage into standing stubble as late as mid-August (depending on conditions and crop choice).

“Converting annual cropland into short-term forage works well with reduced tillage on chem-fallow,” he states.

Another example of salvage that Heller thinks most growers should consider and prepare for is fall-seeding a winter cereal, such as the newer varieties of winter wheat or triticale. As well, herbicide tolerant canola crops have been successfully dormant-seeded just before winter sets in. Chem-fallow may also clear the way for cleaner land to grow pulse crops such as field peas, which often have unique perennial weed concerns.
“Timeliness is the issue, direct seeding the key,” Heller says. “Fallow can be an occasion to get ready for something new, better or different.”

Making fallow work:

1. **Reduce tillage and spray weeds** – unlike cultivation that just knocks down, replants, or chops up roots, non-selective glyphosate® will kill weeds more efficiently, especially when soil is moist and growing conditions are good. Rising fuel prices and relatively cheaper herbicide costs favour the economics of chem-fallow over tillage as a weed control strategy.

2. **Reduce tillage and retain mulch** – straw and chaff decomposition rates differ by species and quantity. Leaving crop residues on the soil surface will reduce summer evaporation and erosion while increasing the soils capillary capacity or infiltration. Tillage destroys the natural soil biology and physical characteristics that make it quality soil (i.e. not just dirt or mud).

3. **Reduce tillage and enjoy life** – just think: no dust, less rocks to pick, lower machinery costs, renewed organic matter, to name a few additional benefits. And there’s time to take the family on a picnic or go fishing!

For more information about chem-fallow contact Ron Heller at (780) 853-8262.

Contact: Ron Heller
(780) 853-8262

---

**Poultry should be kept indoors or penned**

“Keeping domestic birds away from wild birds makes sense,” says Gerald Hauer, Assistant Chief Provincial Veterinarian with Agriculture, Food and Rural Development. “Housing them inside, or at least in a pen, is probably the easiest and most effective way to keep them safe.”

While some countries have reacted to the spread of avian influenza with legislation that requires birds to be kept indoors, Alberta has not. “Every jurisdiction is different,” says Hauer. “We examined the situation here in Alberta, and decided that is not necessary to create legislation at this time. That said, we want every owner of chickens, ducks and geese to know how to keep their birds safe. It has never been a good idea to let birds wander around in the yard. Diseases such as avian influenza have been around for decades and can be contracted by allowing birds near ponds, dugouts or anywhere that wild waterfowl are or have been.”

The current worry that the highly pathogenic strain of bird flu known as H5N1 will come to Canada has inspired people to think more about their birds’ health. “Most people keep their birds controlled anyway,” says Hauer. “Commercial producers usually keep their birds indoors, and most backyard owners have had enough experience with predators and diseases to know that birds are safer indoors or in a pen.”

Hauer stresses that the danger from avian influenza in Alberta is likely no greater now than it has been in the past. “Mild forms of avian influenza have been in wild ducks for decades – for as long as we have been testing for it. We want people to realize that these viruses might pose a risk for their birds; however, if good biosecurity is practiced, there is very minimal risk.”

For more information on biosecurity, visit the biosecurity webpage on Alberta Agriculture’s website at www.agric.gov.ab.ca/biosecurity.

Contact: Dr. Gerald Hauer, DVM
(780) 427-3448

---

**Blade named Managing Director of AARI**

Former director of the Crop Diversification Division of Alberta Agriculture, Food and Rural Development, Dr. Stan Blade, is back in Alberta after two years based in Nigeria, West Africa. Blade took a leave of absence to serve as research director of the International Institute of Tropical Agriculture (IITA). IITA is part of the Consultative Group on International Agricultural Research that works with an annual budget of $440 million and is comprised of 15 research centres across the globe (www.cgiar.org).

“It was interesting to see just how similar many of the issues in Africa are to what we deal with in Western Canada,” says Blade. “The institute was very much about food security, but we also talked almost in equal terms about finding additional value, enhancing processing rather than growing only commodities… all the kinds of things that I hear about not only in Western Canada, but in other parts of the world that are engaged in agriculture production.”

IITA has 150 internationally recruited scientists working in 20 African countries. Blade was able to create new collaborations among the institute, African governments and agricultural organizations, as well as build partnerships with advanced research institutions around the world. Projects included development of crops with enhanced nutrient levels (such as increased beta-carotene in sweet potatoes for Mozambique), innovative integrated plant health management technologies (including management strategies for a serious new banana disease in Kenya and Uganda) and value-addition research (new product development across West Africa using starch crops and grain legumes).
“One of the great benefits in having the opportunity to work as a research director within a global organization that is supported by the United Nations, is travelling throughout the world,” says Blade. “No matter where I was, there were the same kinds of issues being developed. There are numerous opportunities to network, and gain advantages by talking to each other about anticipated areas of opportunity, problems and how to solve them, and the innovations being worked on, even with our competitors. The more we stretch out and test our ideas in the global setting, the better off we’ll be.”

Blade has accepted the role as managing director of the Alberta Agricultural Research Institute (AARI) with responsibility for agriculture and bioproducts, with Alberta Innovation and Science. He is looking forward to working with the agricultural sector and beyond to deliver on the AARI mandate to provide strategic leadership for agricultural research in Alberta.

“I think that Alberta is in an ideal place to be a global leader in many of the areas that agriculture is moving into,” says Blade. “At AARI, we are looking at a wide array of opportunities. In the past, AARI has funded small, discrete projects across the province with great success. But, to prepare for the future, we will have to concentrate our investments. We are developing a great capability to test opportunities in the carbohydrate economy, whether that is biofuels, better use of biomass for fibre or chemical products or how we create stronger links between agriculture and health. There is no doubt that these are challenging days in production agriculture, but we know that we also have to think about how to position the sector for new opportunities in the future.”

Contact: Dr. Stan Blade
(780) 427-0367

Anthrax outbreak in Saskatchewan

The environmental conditions in Saskatchewan in spring and early summer were just right for bringing the anthrax spores to the surface in puddles of water. As the puddles dried out – the spores were concentrated in smaller areas, and exposure to animals precipitated the problem.

“Concerns are not heightened any more than normally for this time of year in Alberta,” says Dr. Gerald Ollis, Chief Provincial Veterinarian with Alberta Agriculture, Food and Rural Development, Edmonton. “Alberta has had outbreaks of anthrax before, but usually much smaller than is being experienced in Saskatchewan.”

While there has never been an outbreak of anthrax in Canada that has involved this many farms and this number of cattle, vaccination of cattle for anthrax is not recommended. The disease is very sporadic and it is not a disease that needs to be included in routine vaccinations.

“It is recommend that producers keep an eye on their pastured cattle, and if they find a dead animal for unexplained reasons, they should contact their veterinarian. Anthrax is a reportable disease and the veterinarian will then contact the nearest Canadian Food Inspection Agency (CFIA) Animal Health District Office to have a post-mortem done,” says Ollis. “With anthrax, you rarely see a sick animal because animals die quickly once infected. A post-mortem is an important step to ensure that this is not the beginning of an outbreak.”

Anthrax can infect people, but exposure is usually manifested as skin lesions on the hands of people handling infected animals. This form of anthrax is not the same as the anthrax that is used by terrorists. This strain of anthrax does not pose a public health concern; however, producers are advised not to handle or move a carcass if anthrax is suspected, but to call a veterinarian who will see that proper procedures are followed.

A factsheet on anthrax that provides additional information, can be found by searching for Anthrax on the CFIA website at www.inspection.gc.ca.

Contact: Dr. Gerald Ollis, DVM
(780) 427-3448

Failure to Launch? Not in 4-H

From July 3 to 7, 2006, sixty-eight excited 4-H delegates arrived at the Alberta 4-H Centre, bursting with anticipation and enthusiasm for what the next five days would hold.

Delegates were trained in activity planning and group organizing, and learned about facilitating, orchestrating, recovering and adapting – basically the skill set necessary for up-and-coming leaders. Many of the Leadership Through Counselling Seminar (LTCS) delegates will be counsellors for summer camps held throughout the province this year.

“The campfires and group games were a blast,” says Kayla Tollefson’s, a delegate from Camrose. “This program has totally taught me how to be a more effective counsellor so that when I work at camp, I can be confident in what I am doing.”

Between skill sessions that ranged from dance to archery, and the small group planning sessions, delegates came ‘ready to launch’. Cyrena Quinn, a member of this year’s 4-H summer staff was thrilil with the group of delegates who attended the program. “They were such an enthusiastic bunch—they were willing to participate in every activity and back one another up 100 per cent. No matter what the summer staff threw at them or challenged them with, they took it in stride and adapted to it. They were an amazing group.”

Cont’d on page 4
This year’s LTCS theme was A 4-Hers Guide to the Galaxy, and every activity, while being fun, also imparted lessons regarding the importance of camper safety and the necessity of listening to campers’ concerns and needs. Each delegate left the program equipped with a newly acquired ‘guide’ to help them cope with situations encountered both in life and at future 4-H programs, activities and camps.

The week was a success. Delegates showed obvious zeal for the leadership positions they will soon acquire, and strengthened the camaraderie that already existed among LTCS attendees. The generous sponsorship from Agrium, Alberta Agriculture, AltaLink, Peavey Mart and the Wetaskiwin Co-operative Association Limited was greatly appreciated.

For more information on 4-H summer programs and camps, contact 4-H specialist Mark Shand at (403) 948-8508, Airdrie, or visit the 4-H website at www.4h.ab.ca.

Contact:  Mark Shand  
(403) 948-8508

Silver carp research in Alberta

2006 marks the end of a three-year on-farm demo trial project testing triploid (sterile) silver carp that are meant for biological algae control in ponds and dugouts. Fourteen ponds in Alberta, from Medicine Hat to Falher, were used for this trial.

“Overall, silver carp project is meant as a follow-up to the successful research that led to the commercialization of triploid grass carp for use in aquatic vegetation control,” says Dan Watson with agriculture research – aquaculture, Alberta Agriculture, Food and Rural Development, Lethbridge. “Since the completion of the grass carp research in 1997, thousands of Alberta ponds have been stocked with this beneficial fish and they are now available from a number of Alberta’s fingerling fish suppliers.”

Unfortunately, overall the survival of silver carp has been less successful than for grass carp, with only a 20 per cent average over-winter survival. But the final testing of water quality and an algae analysis will be carried out this fall/winter of all ponds is still to be completed. Based on that data, decisions will be made as to the future of silver carp in Alberta.

“Currently for algae control in ponds and dugouts, owners have the option of using barley straw, pond dye or registered chemical control,” says Watson. “Good preventative algae control methods that are also recommended include using year-round aeration and not allowing nutrients to enter the water.”

Alberta Agriculture researchers would like to thank the owners of all the silver carp test sites as well as the many agencies that assisted on the project, Alberta Sustainable Resource Development, Alberta Environment, PFRA, various counties, Municipal Districts and Special Areas, Smoky Applied Research and Demonstration Association (SARDA), Lethbridge College Aquaculture Centre of Excellence, Alberta Aquaculture Association and the Diversified Livestock Fund of Alberta.

Further information on Alberta aquaculture, including how and where to get grass carp, algae control methods and fingerling suppliers is available on Alberta Agriculture’s website at www.agric.gov.ab.ca by searching Aquaculture.

Information is also available on the SARDA website at www.areca.ab.ca/sarda/about.shtml.

Contact:  Dan Watson  
(403) 381-5850
Pork industry conducts study into greenhouse gas reduction

In answer to concerns over greenhouse gas emissions from swine confined feeding operations, the Canadian Pork Council funded a Best Management Practices for Greenhouse Gas Reduction study. The study was completed by DGH Engineering. The study was conducted to identify, implement and demonstrate best management practices that reduce emissions. Study results show that best management practices translate into savings in energy, water and nutrients and into a total reduction in emissions of 2.92 tonnes of CO2 per 800 pigs. The study demonstrated best management practices to reduce greenhouse gas emissions and provides practical direction to farmers on how they can incorporate best management practices into their operations. Study results have been posted on the DGH website at www.dghengineering.com, and on the Canadian Pork Council website at www.cpc-ccp.com.

2006 Lacombe Field Day

The Field Crop Development Centre and Lacombe Research Centre are hosting a field day on August 3, 2006. Topics under discussion will include:

- disease resistance screening in cereals and pulses
- the latest breeding efforts in barley, spring and winter triticale and pulses
- recap and results from agronomic trials – winter wheat/nitrogen trials; weed/insect interaction in barley and canola; canola agronomy trials.

Registration for the one-day event is $20 per person, which includes lunch, tour and refreshments. For Certified Crop Advisors, CEU credits will be applied for. For further information, contact Loree Verquin at (403) 782-8114 or e-mail verquinl@agr.gc.ca.

Info for greenhouse operators

Greenhouse Business is a bi-monthly newsletter about the Alberta greenhouse industry with information about industry issues, crop reports and crop management advice. It also includes news articles on what’s happening around the world, new products, new technologies and research findings. Greenhouse Business is posted to Alberta Agriculture, Food and Rural Development’s website, www.agric.gov.ab.ca, and searching ‘greenhouse business’. The latest issue of Greenhouse Business was recently posted to the webpage.