

Over the Fenceline

Battle River
Research Group



Spring 2017

WE WISH YOU ALL A SUCCESSFUL PLANTING SEASON!



IN THIS ISSUE

pg: 2 Spring Harvest Salvaging

pg: 3 Century Farm and Ranch Award Application Process Streamlined

pg: 4 Hightened Risk for Pea Leaf Weevil in 2017

pg: 5 Cropping Plan Considerations

pg: 6 Selecting an Appropriate Cattle Turn out Date is Critical Any Year

pg: 7 Spring Management Options for Unharvested Crops

pg: 8 Up Coming Events

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Spring Harvest Salvaging

The harvest of 2016 will long be remembered as one of the most difficult in recent history. The problems resulted in significant crop still left out in the field to be harvested or dealt with this spring. We've heard from some processors they will not be accepting any spring harvested crop. On the other hand, some crop harvested mid-winter surprised producers in that the quality was better than expected. The big question this spring is what to do with this un-harvested crop?

First and foremost, contact crop insurance to see where you stand. You need to let them know what plans you have to deal with the remaining crop. Then they can let you know what is allowable without jeopardizing any benefits that may be due to you from that crop. They need to be a partner in this decision to minimize financial loss to yourself.

Once you are clear what they need you can then assess your options for the crop. There are a number of alternatives available to deal with this crop that remains to be harvested. Before rushing off to



write the whole crop off, check the crop quality. It would be a wise idea to try and get a sample of crop to determine how badly the winter has affected quality. If wheat is still a number 3 or canola is a #2, it may be worth it to take the time and harvest it.

Other factors needing to be considered includes the acreage that is affected. If you have a great many acres left to be harvested, the time it takes to harvest the 2016 crop might severely limit cropping choices for 2017. How wet are the fields? If they

are still sodden, it will take time for fields to dry sufficiently to get machinery on field. Also, do you have to deal with field damage from harvesting last fall in wet soils. Deep ruts will have to be repaired.

Decide the best timing to get on the field to remove the 2016 crop. Ideally, you could harvest an almost dry crop while the soil is still frozen. If necessary, use grain drying for safe storage if crop quality warrants it. If you have livestock or a market for feed, baling the swath can get the field cleared quickly. Keep in mind the quality of the crop being harvested, harvesting costs and the chance to recoup some value from the crop.

If you have the right machinery, it might be possible to seed this year's crop into last year's standing crop. However, crop establishment will be an issue and volunteer plants from last year's crop will have to be dealt with.

Other, more extreme options include plowing or cultivating the crop back into the soil. This might be an alternative if the crop is totally unsalvageable. Absolutely flat crop that are germinating could be tilled under to recycle the nutrient for the next crop.

Finally, if no other options are available or realistic, you can burn the crop. However, this option exposes the soil surface to erosion, will require permitting from the county and is a waste of resources.

Whichever option you chose, you have to weigh the costs and benefits and look at the economics. Just because the crop overwintered is no measure of its worth. Sample the crop and get a quality reading on it before you decide which option to choose.

Harry Brook
Crop Specialist
Alberta Ag Info Center (310-Farm)

Century Farm and Ranch Award Application Process Streamlined

The application process for Alberta Agriculture and Forestry (AF)'s Century Farm

and Ranch Award is being streamlined.

"The Alberta Century Farm & Ranch Award recognizes farm families that have continuously owned and actively operated the same land for 100 years or more," says Colin Gosselin, senior project coordinator, AF. "Successful applicants receive a custom-made 10" x 14" cast bronze plaque to mark this significant milestone."

Gosselin says new changes to the application process make it easier and more inexpensive to apply.

"We can now, in most cases, find the supporting documentation on people's behalf, so they don't need to find their own homestead record or current land title. All we need the applicant to do is fill out the form and we can take it from there."

In order to qualify for the award, a family has to have continuously owned and actively operated the same land for 100 years or more. "As well, a family member has to be still actively farming the land at the time of application, and the quarter section you're applying for can't have been subdivided or cash rented to a non-family member during its 100 year history."

Gosselin adds that as it takes about six to eight weeks to produce the plaque, interested families should get their application in well before any celebrations or family gatherings they might be planning for receiving the award.

For more information on the Century Farm and Ranch Award, contact **Susan Lacombe** at **780-968-6557**, or go to www.agriculture.alberta.ca/centuryfarm.



Heightened Risk from Pea Leaf Weevil in 2017

Research shows that treating pea seed with a systemic insecticide product is the most effective control measure to prevent pea leaf weevil damage.

“Properly inoculated annual legume crops, like field pea and faba bean, produce most of the nitrogen they require for growth through the growing season via nitrogen fixation carried out by nodules on plant roots,” says Neil Whatley, crop specialist, Alberta Agriculture and Forestry. “Hence, field pea and faba bean are generally grown on nitrogen deficient soil without much, if any, additional synthetic nitrogen fertilizer. When the pea leaf weevil insect pest feeds on the nodules of pea and faba bean seedlings, this natural nitrogen source is greatly compromised, inhibiting optimal pea and faba bean growth throughout the remainder of the growing season as well as decreasing crop yield.”

The pea leaf weevil was reported in southern Alberta in 1997 and remained for several years south of highway 1. Since 2013, this insect’s geographic range has greatly expanded into central Alberta, extending as far north as Sturgeon County, north of Edmonton, with lower levels of feeding reported in east central Alberta.

“Given that 2016 survey levels were high in the aforementioned areas, there’s a high risk of infestation in the same areas if winter and spring conditions are favourable. A potential predictor of population increase is precipitation in August. As many areas with high weevil populations in 2016 experienced August precipitation, pea and faba bean producers in these areas are advised to plan control strategies for the 2017 crop year.”

After spending the winter as an adult beetle in perennial legumes, adults are attracted to annual and perennial legume crops in spring, including field pea, faba bean, lentil, alfalfa, and bean. “However, egg laying only takes place in soil near field pea or faba bean seedlings, so root nodules of lentil and alfalfa, for example, are not affected. Just prior to egg laying, adult pea leaf weevil insects feed on the margins of seedling leaves resulting in a notched or scalloped leaf appearance, which is not expected to reduce yield. After hatching from eggs,

the worm-like larvae proceed downward into the soil where they primarily feed on root nodules resulting in decreased nitrogen fixation by pea and faba bean plants.”

Spring weather conditions can alter the timing and severity of pea leaf weevil damage, says Whatley.

“Weevils arrive early to pea and faba bean fields if warm temperatures above 20 degrees C persist for more than a few days in late April or early May, potentially corresponding with higher yield losses. Alternatively, if cool weather occurs during the same period, yield is generally not as compromised especially when the crop advances past the 6th node stage before the weevils arrive. In either case, field scouting is required to make control decisions on a field by field basis. It’s also advised not to seed into cold soil.”



Yield losses may occur when there are more than 30 per cent of seedlings (3 out of 10 plants along a seed row; assess groups of 10 plants in multiple rows) with feeding damage on the clam leaf before the 6th node stage in peas. The clam leaf is the most recently emerged leaf.

“Most research hasn’t shown that control of weevils using foliar insecticide prevents yield loss. The ineffectiveness of foliar spraying probably arises because weevils have already laid enough eggs to significantly damage root nodules when sprays are applied or because healthy weevils immigrate after spraying. According to research on the Prairies, nodule protection is more effective when pea seed is treated with a systemic insecticide product prior to seeding. Faba bean may be similarly protected, but this requires investigation.”

If feeding damage is only apparent on the older, lower leaves and not on the newer clam leaf, says Whatley, the weevil has probably already laid eggs and spraying would be of no value. "As such, producers should scout for damage on the clam leaf and not on lower leaves. Since pea leaf weevils migrate into field pea and faba bean fields, foliar damage is initially observed along field edges. Foliar insecticides applied early in an infestation to field edges may be a sound economic decision; however, additional on-farm research will provide more clarity. Limited spraying would also reduce the risk of affecting beneficial species, such as ground beetles, that may help manage pea leaf weevil populations via predation."

Neil Whatley
Ag-Info Center

Cropping Plan Considerations

An Alberta Agriculture and Forestry (AF) specialist says there are a few points producers should consider before committing acreage to some of the less common cropping alternatives such as flax, camelina and hemp.

"First off, at the beginning of crop planning, determine the various costs of production," says Harry Brook, crop specialist, AF, Stettler. "By knowing your total production costs, you can find out where the combination of crop yield and price becomes profitable."

Brook says it's extremely important to select crops that are profitable and acceptable to both the producer and their banker.

"Why grow something that guarantees a loss? Anyone can make money at \$14/bushel canola, but what about at \$10 with a less than average yield? Once the production costs are all known, you can then use them as a tool to find cost savings without foregoing too much yield."

With any new crop you try, start small. "Use the first year as a chance to learn the agronomics and particulars of the new crop. Being a new crop it is imperative

to get a contract first before you grow it. You need to know there is a home for the crop. When there was significant acreage of borage in 2005, contracts only accounted for a small part of the crop. It took a long time to find a home for the majority of it. With hemp, there is paperwork required from Health Canada required before you can grow it. There is also a requirement for inspection of the crop and all harvest seed must be sold to the company you bought your seed from."

Pulse crops are valuable to grow for their reduced fertilizer requirements and the benefits following crops extract from the crop residue, says Brook. "Peas, lentils and fababeans all provide the nitrogen benefit and have established markets. Peas grow throughout the province but there are issues related to standability. Lentils grow best in the brown and dark brown soil zones. Fababeans will grow well in the black and grey wooded soil zones but they take a long time to mature and should be seeded early."

Brook notes that there are two distinct and separate markets for fababeans. "The low tannin fababeans are almost totally marketed to the hog industry as a soybean replacement. There's also a human consumption market for fababeans but they use the high tannin varieties. Insect pests can be a problem with quality as sucking insects mark the seed. Markets are up and down and you need to assure yourself there is profit from growing fababeans".

Above all, Brook advises caution. "Become informed on issues related to any new crop, both for growing and marketing it. Talk to people who already produce it. Crunch the numbers on anticipated costs and returns to make sure the experiment doesn't end up costing too much. Learn from other's mistakes.

"By taking care of the details when planning cropping changes, you can do everything you can to make ensure a profitable outcome, and not just a bill for the education."

Harry Brook
Ag Info Center

Selecting an Appropriate Cattle Turn-out Date is Critical Any Year

Pasture production can only be sustained at relatively high levels if grass plants retain adequate leaf area and are given suitable recovery time. Heavy grazing that repeatedly removes a great proportion of the leaf area reduces production. Late summer and fall grazing of short regrowth affects grass tillers ability to overwinter and become next springs early growth. Also, early spring grazing before the plants are ready deprives grass plants of needed leaf area and results in reduced production and economic returns.

Levels of production and economic returns vary with grazing starting date and season long grazing strategies. The amount of growth decreases when plants are defoliated before the third-leaf stage. The earlier defoliation is started, the greater the decrease in production. Starting grazing after the third-leaf stage results in minimal damage to plants and can improve annual production of forage.

Early spring growth depends both on carbohydrate reserves and on photosynthetic products produced from the active leaf area of the tiller. Before the third-leaf stage, the plant has little leaf area and low carbohydrate levels. Defoliation of the plant at this time results in reduced rates of production. The plant with very small leaf areas left produces little photosynthetic product. It must depend upon stored carbohydrates which are already depleted from overwinter survival.

In continuous grazing, starting grazing before or after the third-leaf stage causes a 45% reduction in production which causes reductions of 29% in stocking rate, 14% in calf average daily gain and 40% calf gain per acre compared to starting after the third-leaf stage. This reduction in pasture and animal performance causes a decrease in net returns both per cow-calf pair and per acre compared to starting after the third-leaf stage. Twice-over rotational grazing starting after the third-leaf stage can have grazing periods designed to coordinate with the biological requirements of growing plants and grazing animals and offers increased stocking rates, calf average daily gain, calf gain per acre, net returns per cow-calf pair

and net returns per acre compared to season long grazing starting before and after the third-leaf stage.

In order to protect grasslands before the plants have reached the 3.0 or 3.5-leaf stage, it is important to feed another type of forage. Specifically planning for this by selecting a paddock with an early growing perennial species mix (eg. crested wheatgrass mix), using winter annuals, or planning to winter feed longer pays dividends on any year. This type of grazing management is absolutely crucial for pastures that have been stressed from previous grazing. The more stressed they are the less carbohydrate reserves they contain. They may green up but do not grow or are very slow to grow in spring. The future yields of these pastures are harmed greatly by grazing before the 3.5 leaf stage.

Paddocks that contain carry-over forage that was grazed after freeze up will be slightly slower to grow in spring. Stockpiled paddocks specifically held over from the previous year for early spring grazing will have their early shoots grazed off before the plants have any chance of recovering from winter dormancy. Both these paddocks need extra recovery time before being grazed again during the growing season.

These points have been taken from "Grazing Before Grass Is Ready" by Llewellyn Manske PhD, Dickinson Research Extension Center, North Dakota, USA

The information shared in this article is based on well managed rotational grazing systems. If continuous grazing is used grazing turn out should start later so that more pasture leaf area is present. Greater leaf area is needed to allow for more leaf residual to be left after being grazed. Since continuous grazing will have repeated removal of leaf area over the grazing season, this helps better balance plants photosynthetic production and carbohydrate needs.

**By Ken Ziegler (Former AAF Staff) and Grant Lastiwka
Forage/Livestock Business Specialists
Ag Info Center**

Spring Management Options for Unharvested Crops

Deciding on how best to manage un-harvested crop can be difficult. The question is how best to capture the highest value from the un-harvested crop, while managing cost and risk. Retaining as much residue as possible is beneficial for soil health, subsequent crops and conservation; however, the un-harvested crop must be managed to enable the best seeding practices and crop establishment in the following season.

To make a decision on how to proceed with managing the un-harvested crop there are several things that must be considered: the potential value of the crop, field conditions, whether the crop is still standing or in swaths, number of acres to be harvested and availability of time and equipment. Depending on when and how un-harvested crop is managed, cropping plans for the upcoming season may need to be adjusted; shorter season crops and/or early maturing varieties may need to be considered.

Before you take action, contact your crop insurance provider to ensure that your plans are not contrary to your insurance policies' recommendations or restrictions, and determine what is required in order for them to assess loss and make a claim.

Decide if the crop is worth harvesting, what additional steps you will have to take, and how you can use or market the crop (i.e. overwintered crops maybe downgraded, moldy, rodent damaged or sprouted).

If any un-harvested areas are involved in land-use or conservation programs such as carbon off-sets, check with the program facilitators first, to determine if there are any residue management practices that may not be allowed while participating in their program.

Decide which management option is best, based on the condition of the crop, current soil conditions, what the field conditions were last fall, impacts on spring field access, and ensure the solution will leave the field surface in good condition for subsequent equipment operations and for crop establishment.

Decide on the best timing. If snow cover is minimal, it

might be better to get onto the field to manage that crop while the soil is still frozen and the crop is not wet. The plant material will be dead and possibly drier than last fall, so you may be able to harvest the crop and dry the grain if it is wet. The swaths could be baled and removed before the ground thaws, this will help with drying of the soil.

Assess costs. There is a cost associated with any harvesting or residue management practices and those costs will vary with the type of practice and amount of residue, and will be dependent on equipment ownership or if rental or custom contracting is required.

Consider plans for the next crop. It may be possible to seed into an un-swathed crop, but can affect crop establishment and equipment performance, and cause volunteer plants and weeds from the last year's crop, so crop selection will be key.

One of the last options you can consider is burning the crop. Check with your county or municipal district, most will require permits before burning your crop. There may also be fire bans or restrictions in place, especially early in the spring and remember to contact your crop insurance agency.

Burning un-harvested crop will not provide any value to you from the crop, will have little or no impact on crop disease and may negatively impact the soil. Smoke generated from burning can have air quality as well as visibility impacts that can result in health issues and even traffic disruptions.

If you decide to burn:

- Consider baling the un-harvested crop, removing it from the field and later burning the bales away from your field. Burning the bales in a smaller controlled area is easier to monitor and manage than burning swaths in a field. This option will also help preserve the ground cover, residue and organic matter in the field.
- Burn small areas at a time and avoid lighting the entire field on fire at once.
- Have a water truck and other equipment on hand.

Ag-Info Centre

Up Coming Events

Day 1

- Lakeland College Tour
- GrowSafe Project
- Plant Identification
- Judging Workshop
- Steak Supper

Day 2

- Outlining Important Benchmarks in your operation
- AUM's and Pasture Health
- Emergency Live stock Plan
- Producer Marketing Plan

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