Southwest Region
A dry week allowed most producers complete seeding. However several cool days and nights put stress on emerged crops.
South of number 1
Seeding is complete with only some greenfeed fields to be planted. Early seeded cereal crops are in the 3-4 leaf stage. Canola and flax are emerging with some of the early canola in the 1-2 leaf stage. Winter wheat and fall rye are progressing with some fall rye fields starting to head.
North of Number 1
Seeding is pretty much complete with only some late fields of feed grains and some wet areas to be planted. Early seeded cereals are in the 3-4 leaf stage. Canola and flax are emerging.
Some reseeding of canola crops happened this past week with a combination of freezing temperatures, dry conditions and flea beetle pressure causing the problem.
Very little in crop spraying has been done. Once the weather clears this week producers will be under pressure to get crops sprayed.
Pastures are in poor condition as a rain and warm weather is needed to get them growing.
Overall issue for this week is rain and warm weather. Several areas in the southwest are reporting rain today.

Northwest Region
With frost across the region some canola acres are being reseeded. Dauphin area had 5-15 mm of rain. Toonie size hail was reported in Ste. Rose on Monday with pea size hail in surrounding areas. Rorketon and Alonsa also received hail on Thursday. Rain would be welcomed in the Swan Valley and Roblin areas.
Seeding is wrapping up across the region with the exception of McCreary, Alonsa, Sifton, Keld and Ethelbert areas because of excess moisture.
Herbicide applications are being delayed because of cool, windy weather.
Low numbers of diamond back moths have been caught in traps.
While only 5-35% of the crops have emerged around The Pas, Dauphin and Ste. Rose, 85% have emerged in Swan River and Roblin with the early seeded wheat crops beginning to tiller.
Warmer temperatures are required for crop development.

Central Region
Frost on June 6 will result in reseeding for a number of producers in the area. Frost was -1°C in the south and -5°C in the northern part of the region.
A small amount of rain in the past week kept farmers out of the fields for a short time; they were able to start seeding again once the sun appeared.
Because of the wet conditions and water on fields, there is a large variation in crop seeded and crop development.
Seeding of edible beans is still taking place with approximately 20% to be completed. The frost will cause a number of acres to be reseeded and the majority could be seeded into canola.
Early seeded cereals are being sprayed for weeds. Cutworms are causing a concern on sunflower fields in the Holland/Treherne area. Flea beetles are chewing on canola with some fields sustaining more damage than others.
Potato germination is slow and some seed pieces are starting to decay in the early-seeded fields because of wet cool conditions.
Alfalfa fields are 25-30 cm tall and lush with growth. Pasture is still behind because of cooler temperatures.

Eastern Region
While there was intermittent rainfall last week, significant progress was made on seeding in all districts of the region. The southern districts of the region still remain the farthest behind in seeding progress. Soil moisture conditions were rated as
full across the region. Rainfall consisted of sporadic, localized showers which varied in total accumulation from less than 1 mm to 16 mm over the week. Frost over the weekend was most severe Red River valley districts around St. Pierre and areas west and north of that location. Some reseeding will occur. Other districts within the region appear to have escaped and significant frost damage.

Across the region, 70 to 90% of wheat and barley and oats acres were seeded although wheat was only 50% complete in southern districts. Oats seeding ranged from 80 to 100% complete. Early seeded cereals are in the 2 to 3 leaf stage with some herbicides are being applied. Canola was 70 to 100% seeded with most emerged fields in the cotyledon stage although some early seeded crops entering the 2 leaf stage were noted. Spraying for flea beetles has occurred in some early seeded fields. Soybean seeding was completed as were field peas. Except for acres intend for silage, corn seeding was completed. Corn emergence was also noted. Sunflower planting was 65 to 90% complete while flax was 70 to 90% seeded. More flax and oats may be seeded this week as producers starting switching to crops felt more suited for late planting. Overall crop development has been slow in these cool temperatures.

Winter wheat condition for the fields that remain was rated as fair to good across the region. Herbicide applications are being done but there is concern over product performance in these cold temperatures. Wild oats and dandelions are very prevalent so far. A number of winter wheat fields will need to be sprayed for wild oats as well as broadleaf weeds. Hay field condition was rated as fair to good with growth continuing to be slow. Producers are concerned that significant hay yield has been lost even if conditions improve and alternative annual forages are being planted to supplement feed supplies. Pastureland condition was rated as fair to good with pastures demonstrating slow growth.

Client concerns from last week focused on getting as much done as possible and then modifying seeding plans to deal with the upcoming week. Fields left to be seeded are the wettest ones and even the seeding done last week usually went into less than ideal soil conditions. Tillage to dry out fields and smooth out lumps is widespread and there are unseeded low spots in many fields. Yield losses due to delayed seeding and slow plant growth will occur. Some clients know now that will not finish and have unseeded acres.

**Interlake Region**

Scattered showers ranging between 5 and 17 mm of rain fell throughout the Interlake during the past week. Cool temperatures prevailed for most of the week with frost occurring on Saturday morning. The lowest temperatures recorded ranged from -2 to -4 C. At one site, temperatures remained below zero C from 1 a.m. until 7 a.m. on Saturday.

Most grain producers in the south Interlake have finished or are almost finished seeding the 2009 crop. Seeding continues to be delayed due to wet soil conditions in low lying areas. The north Interlake saw good progress late in the week and through the weekend. Field conditions in the north are barely suitable for seeding, with many fields still too wet for field travel. The northwest Interlake is 50-70% complete while the rest of the north ranges from just starting to 25% complete.

Crop development continues to be slow under the cool growing conditions. The earlier planted cereal crops are in the 3 leaf stage with later planted cereal crops in the one to 2 leaf stage. Emerged canola crops were generally in the cotyledon leaf stage last week with earlier planted fields in the one leaf stage. Frost damage on canola crops on Saturday morning is a big concern with fields being monitored for signs of regrowth from the growing point. Canola fields experiencing -4 C are being reseeded with strips being left for crop insurance assessment. Crop Insurance is receiving many claims on frost damaged canola. Soybean crops started to emerge last week.

Herbicides application has started on winter wheat and fall rye crops. Hay and pasture growth remain slow due to cool weather. This delay in growth will cause early overgrazing and poor regrowth further into the grazing season. It is expected that forage shortages will occur if cool weather persists.
Canola

Staging of the canola crop ranges from just seeded to 3 leaf stage, where most plants in fields are at the 1 – 2 leaf stage. Development of crop has been slow due to the cold weather and problems have been reported such as flea beetle feeding on early seeded canola, as the seed treatment had come to the end of its lifespan. The latest set-back to the 2009 canola crop has been the widespread frost damage which occurred in the early morning of June 6. Most of the province was with affected with sub-zero temperatures except for pockets in the southwest corner and in the Interlake. Fields showing the greatest frost damage also had previous issues such as heavy trash cover, flea beetle feeding, seedlings sitting in too dry soil or emerging from deeper soil depths which left the canola more vulnerable.

Canola seedlings will usually recover from a light spring frost that does not damage the growing point of the plant. A light frost that wilts the leaves, but does not cause any browning, will not injure the plants. Canola at the cotyledon stage is more susceptible to frost damage than plants at the three- to four-leaf stage. The extent of injury can only be determined by waiting several days following a frost. Time is required to determine the extent of the damage and whether or not the growing point has been killed. If there is any green colour at the growing point or the center stem is still firm, erect and does not appear pinched off, the plant will recover. If finding plants where frost has blackened the cotyledons and/or leaves, no action should be taken for at least four days. Under good growing conditions, green re-growth from the growing point should occur in four to five days. Under poor growing conditions; cold and/or dry, this can take up to 10 days.

When evaluating frost damaged seedling fields, growers should consider the percentage of plants killed, the percentage recovered, and the weed population. Weed control in canola field with lower plant populations is crucial to maintaining yields. Canola can compensate for lower plant populations because surviving plants can take advantage of reduced competition for light, moisture and nutrients. Plants will grow larger, producing more branches, pods and seeds per pod. While the surviving plants will require longer to mature, a re-seeded crop would require an even longer frost-free period and have a greater risk of fall frost damage. A minimal plant stand of 4 plants per square foot throughout the majority of the field is sustainable for a crop, as long as weeds are controlled. For example, if 80% of the field has a minimum of 2 to 4 per square foot and a light and/or easily controlled weed population, while the remainder of the field has fewer plants, then this field probably still has a higher yield potential than one that is reseeded. That’s because only the 20 percent with less than 2 to 4 plants per square foot likely will benefit significantly from reseeding.

Flax

The flax crop in Manitoba ranges from just seeded to 3 inches tall, where the majority of flax fields have a pair of true leaved emerged. To date, flax has been relatively problem free. In regards to the frost received on June 6, the crop may be affected, depending of the growth stage. When flax is first emerging, it is quite susceptible to spring frosts, but after the 2 leaf stage, when the plant has hardened off, it can withstand temperatures below freezing. One thing to look for with flax is frost canker – affected plants are girdled at or near the soil surface, which may cause the plant to fall over.

Sunflowers

Staging of sunflower crop ranges from just seeded to 4 true leaves, with the majority of the crop at the cotyledon stage. Development has been slowed by the prolonged cool weather. In the Austin-MacGregor south to the Holland-Treherne area, cutworms have been observed and found to be at higher than threshold levels, warranting insecticide treatment for control. Feeding damage has been observed as notched leaves, leaves clipped off from stem and lying on the ground and rows of missing plants, on further inspection stems are above ground, but leaves have been clipped off. Scouting for cutworms in all sunflower fields should be conducted until the end of June and missing plants should not be assumed as skips, look closer to see if it has been susceptible to cutworm feeding.

On the morning of June 6, most of the province was affected by frost.
Sunflowers are fairly frost tolerant up to the true four leaf stage and no damage due to frost has been reported yet. Cotyledons just emerging are most frost tolerant, with risk of injury increasing as the plant adds leaves. If sunflowers become brown or black and the terminal bud is severely damaged, plants will not recover. Tolerance to frost in sunflowers can be influenced by the hardening off process. If it is cool or cold for several days previous to the frost, seedlings may have better tolerance to lower temperatures.

Cereals

Spring Cereals

Early seeded spring cereal crops are tillering with the majority of seeded acres in the 2 to 3 leaf stage. Now is the time for weed control. For optimum weed control and crop safety, always refer to the product labels for proper crop and weed staging and any other application notes. With the cooler conditions, producers will likely observe slower herbicide activity. Additionally growers may consider delaying applications (as long as staging and competition conditions allow) following this weekend’s frost event to permit weed and crop plants to recover from this stress.

In reference to the frost event that occurred June 6, spring cereals such as wheat, barley and oats are very tolerant to temperatures as low as -6°C since the growing point is below the soil surface until the 5 leaf stage to jointing. Frost damaged spring cereals will have wilted, dark green and discolored leaves and will become necrotic at the leaf tips within 1 or 2 days after freezing. However, new leaf growth (normal green color) from the growing point should follow within 2-3 days.

Winter Wheat

Most of the winter wheat claim assessments have been completed and the majority of acres will be reseeded. Most of the claims are in the Eastern and Interlake regions of the province. For the fields that remain in production, producers should be scouting their fields for disease pressure.

In reference to the frost event that occurred June 6th, winter wheat can be impacted by frost damage depending on how low the temperature goes and the growth stage. Winter wheat at the tiller stage can withstand very low temperatures for a period of time (-11°C for less than 2 hours). Frost damaged winter wheat at this stage will have leaf chlorosis and necrotic leaf tips. However, the effect on yield will be slight.

Winter wheat entering the jointing stage is more sensitive to frost damage. Even if there isn’t extensive leaf damage, check the health of the growing point because the growing point is more susceptible to damage than leaf tissue. A healthy growing point should be bright white to yellow-green in color and turgid. However, a damaged growing point will appear brownish or water soaked. Other symptoms may include a dead leaf appearing in the whorl if the growing point was damaged, leaf yellowing or burning, and lesions, splitting or bending of the lower stem. Frost at jointing will have a moderate to severe effect on yield potential.

Corn

The majority of corn is now planted with emerged corn in the 1 to 3 leaf stage. Emergence has been slow to date due to the cool conditions.

In reference to the frost event that occurred June 6, corn in the V5 stage (5 leaves with collars showing) or less will recover from light frosts because the growing point is still below the soil surface. Frost will often kill young corn leaves but plants, even with extensive leaf damage, will likely recover if the growing point was not injured. The death of leaf tissue above the growing point has only a small effect on corn growth and yield at early stages of development. While extremely rare, if air temperatures drop to temperatures of -2°C or less for more than a few hours, the growing point region of a young corn plant can be injured or killed even if it is still below the soil surface.

The best way to assess the impact of frost damage to young corn is to leave the field alone for three to five days, then evaluate the degree of plant recovery. Be aware however that cool days following a frost event may slow the plant’s recovery and delay the ability to assess their health.

To assess corn seedling viability, look at the growing point approximately 3-5 days after the frost occurred. The growing point can be found by pulling up the entire corn plant, including roots, and splitting the entire plant lengthwise. If the growing point is white or creamy in appearance injury didn’t occur. By this time, surviving corn plants should be showing new leaf
tissue expanding from the whorls. Damaged tissue in the growing point region will be discolored and soft or “water-soaked”.

Forage Seed

The weather has been a major factor in this year’s crop progress and we are currently at 45-70% of the normal for growing-degree days as of May 31, 2009.

Alfalfa regrowth is now at field heights ranging from 6-9”, timothy at the 9” and perennial ryegrass at 6”. There have been reports of overwinter damage in Eastern Manitoba and in alfalfa and in the Red River Valley for perennial ryegrass.

Some Velpar injury was seen earlier however the alfalfa has grown out of it. Perennial and biennial weeds are actively growing, mostly ahead of the crop and seedlings are beginning to emerge. Most weed seedlings are at the first true leaf (leaves) stage.

No major infestations have been noted to date.

Diseases: Timothy: Purple eyespot; Alfalfa: Stemphylium leaf spot and spring black stem and leafspot.

Bee incubation has been put on hold as the development of alfalfa has been slow.

Fruit Crops

Most strawberry, raspberry and saskatoon transplanting is near completion for most growers.

Fruit orchards in the south-central region and Dauphin region experienced extensive frost (-3 to -4°C for 3 plus hours). Most strawberry fields were at 10% or less flowering stage, expect frost damage on those flowers. Most saskatoon orchards are at balloon or full flower phase, so they were at risk. Saskatoon flowers and newly-set fruit are susceptible to damage with frosts at -2.2°C or lower. Below this temperature actively growing plant tissues (e.g. flower buds) are killed or damaged. This damage may be visible within one hour to couple days after the frost. Symptoms of frost damage are not always visible, but look for slight browning of internal flower tissue and slight browning of flower petals.

All fruit growers expect late harvest this year with the cool spring temperatures.

Saskatoon growers have been or in the process of spraying fungicide for protection against Entomosporium leaf and berry sport disease.

Hay

Alfalfa and alfalfa/grass stands are in poor condition this spring. Excessive moisture and uncharacteristic fall and spring temperatures have damaged numerous fields across Manitoba, especially those in the Eastern/Interlake and Westlake regions. Fields in the Southwest were less severely affected; however do require moisture to meet average yields. Wet fall conditions combined with a late killing frost kept many alfalfa fields out of dormancy (even if they weren't actively growing) until late October and early November. This compromised the root reserves of many plants as they entered the winter. The most severe cases are on those stands where a late-fall harvest was taken. Additionally, February rains left many low areas in the fields with ice capped ponds. All perennial plants continue to respiring even while dormant, thus the plants in ice covered ponds suffocated and winter killed. Current estimates are that 10-30% of the alfalfa stands have experienced significant winter injury due to either of the factors listed above. This is approximately 2-3 times normal winter injury levels. The growth on surviving stands is 2-3 weeks behind normal; alfalfa heights range from 10-15 inches in the eastern half of the province, to 4-8 inches in the west and north. There is some discussion regarding a possible hay shortage for the 2009/2010 feeding season; many producers are assessing new seeding options to produce storage forage.

Pastures

Pasture conditions are generally rated as average to below average throughout the province. Excessive moisture last season, combined with spring precipitation and runoff has caused mild to moderate injury on tame and native pastures this spring. Of particular concern are pastures with depressions and are prone to ponding. The native pastures in the Interlake and Westlake areas are significantly affected. Pastures in the Southwest will require a significant amount of moisture to produce average yields. The extent of the damage will be quantified over the next few weeks.

Potatoes

It is estimated that over 90% of the potato acres in Manitoba have been planted as of June 5. Potato
producers in the western production areas of the province have completed planting while some producers in the Portage la Prairie and Winkler areas are still planting. Seed rot has been reported in some fields. The generally cool/wet soil conditions so far this year have been conducive to seed piece decay. The timing of burn off weed control applications prior to potato sprouts emerging from the ground have been a challenge in some fields this year due to the wet conditions. Hilling and top dressing of fertilizer is underway on some fields.

**Vegetables**

The number one issue is the frost that occurred on the morning of June 6. Reports of damage to emerged plants and transplants range from no damage to severe damage. Growers in the Portage areas report little damage to vegetable crops but not all fields have been inspected. Growers in the Red River Valley south and east of Portage la Prairie are reporting severe damage to unprotected transplants or newly emerged seedlings. The level of damage varies with the field location and natural protection. Many growers and market gardeners took measures to protect their young plants from the frost. The extent of the damage to local crops is still being evaluated. Even young plants touched by the frost may revive if the growing point was not damaged. Young Sweet Corn can tolerate frost more readily than a tomato plant since the growing point is not as exposed. More developed plants that were flowering at the time of the frost may not develop fruit from the first flush of flowers if the flowers were damaged by the frost. Best estimates are that the season has been delayed by two to three weeks prior to the frost, the frost may add to that delay from 3 days to yet another two weeks depending on the crop.