



registration, provide farmers with more flexibility and application efficiency, and recognize the fact that some unlabelled tank mixes were being used anyway," says MacLeod.

Johnson says that another benefit of the new policy is that it will help farmers manage pest resistance more easily. For example, AAFC research has found that using a tank mix with several modes of action will help delay herbicide resistance.

The new policy is also valuable given the number of new generic products on the market. While these products have the same active ingredient, some equivalent products do not have the same labels when it comes to tank mixes.

Growers should know their chemistries

A downside is that farmers and agronomists are going to have to be more aware of herbicide chemistries, formulations and rotations. While some generics have the same formulation, others are different, and compatibility may be an issue with tank mixes.

Johnson also cautions that farmers will need to watch recropping restrictions and herbicide rotations to ensure they do not get boxed into a corner with crop rotations or stacked herbicide residues. He also cautions that farmers should not get carried away in trying to invent new application timings. "If you look at a herbicide-fungicide tank mix, just because you can mix the two products together doesn't mean it is a good idea. The timing of application will likely be wrong for one of the products; either too early for fungicide application or too late for herbicide application," explains Johnson.

Johnson says that farmers will also have to be careful to observe preharvest intervals. Glyphosate is the only registered herbicide for weed control at preharvest (Reglone is registered as a desiccant). A grower cannot just throw something else in with glyphosate preharvest. There will be preharvest interval problems, which may result in pesticide residue in the grain. This would have an impact on selling the grain. "It is not a free-for-all, but the policy provides more opportunities for farmers to improve spraying efficiencies," explains Johnson. "And I think it would be a benefit to the companies if they provide information to farmers so that farmers won't have to figure out tank mixes on their own." ■

Ontario's new CHU system fires some discussion

by Blair Andrews



Growers today are pushing their hybrids earlier in the spring, and an update on the original map, now 45 years old, was long overdue.

PHOTO BY RALPH PEARCE.

The 2010 hybrid corn seed sales are the first to use the new map.

As farmers check the new Crop Heat Unit (CHU) maps for Ontario, they may notice that their region appears warmer than previous maps indicated. Although global warming has emerged as a hot topic in recent years, the increase in heat units actually represents modifications to farming practices, rather than climate change.

The goal of the revised CHU index is to more accurately reflect today's earlier planting dates, giving growers a more consistent method of comparing the performance of corn hybrids across the province. More than five years in the making, the new system and maps debuted in the March 2009 Agronomy Guide, with 2010 being the first hybrid corn seed sales season to use the new CHU map. The revised index is based on two key changes. It uses weather records from 1971 to 2000 as opposed to 1961 to 1990, and it standardizes the

starting or planting dates for all areas of the province to May 1.

Ian Nichols, business manager of Weather INnovations Incorporated (WIN) in Chatham, Ontario, says the previous index was created more than 45 years ago, when farmers would generally wait for the ground to warm up before they would plant. The starting date for accumulating heat units was triggered by two components. For the first threshold, the normal average temperature for a location had to reach 10 degrees C. The second rule called for three consecutive days of average temperatures of 12.8 degrees C before one could begin counting heat units.

While the system may have been agronomically sound, Nichols says it became an inconsistent tool for analysis because not everyone was employing both components of the rule. "It just didn't seem to fit because people tend to plant when the ground is in good condition from a soil moisture standpoint, rather than from a temperature standpoint," says Nichols.

As WIN received more requests for year-over-year comparisons of growing conditions and other situations, Nichols says the previous system tended to provide information that was slightly confusing and erroneous.

Heat unit shift altered by standardized planting date

The new system is designed to reflect more accurately the actual accumulation of CHUs for the crop, which may be planted earlier than the traditional start date. "I loosely suggested that we come up with a standard start date across the province and see what happens to the CHU values," says Nichols, recalling his recommendation for the revision in 2002. "Everybody starts on May 1, and we get rid of some comparisons where the rules weren't consistently applied. It's more focused on cropping habits and it gives them an opportunity to have a really good measuring stick, which has some standardization."

With the changes, regions across the province gained heat units. The increases were lowest in the warmest regions of Ontario, including Kent and Essex counties and most of the Niagara Peninsula. The largest increases of about 200 to 220 units tended to be along the colder lakes, specifically, the north shore of Lake Ontario, and along Lake Huron and Georgian Bay. Higher elevations and higher latitudes also gained many CHUs from the earlier start date. "It's not completely off the wall in the sense that the old map was relatively conservative," says Greg Stewart, Ontario Ministry of Agriculture, Food and Rural Affairs corn specialist. "If you were in a 2900 heat unit area, you were probably growing hybrids that were rated 3000 or 3100, if you were planting early. So we're in a bit of a process of getting farmers used to the new map and new system."

Stewart agrees with the assessment that the older system was losing its value as a tool for comparing corn hybrid data. "It was slightly problematic in the sense that the people in Ridgeway started counting heat units long before the people in Barrie did," explains Stewart. "But over time, as we have had more seed vigour and better seed treatments, the guys in Barrie are just as prone to plant on May 1, if the soil is fit, as the people in Ridgeway."

Stewart says the new system also reflects the growers' acceptance of the concept that planting early can boost yield potential. "And that's true in Ridgeway and in Barrie. Farmers across the province have come to an increased realization that early planting is critical."

From a seed industry perspective, Shawn Winter, product development manager at Maizex Seeds, expects growers will quickly adapt to the new CHU index. He notes that the system confirms how most growers have been selecting their varieties for the past five years. "If you exclude Southwestern Ontario, farmers are pushing heat units. They do see the advantage of growing longer heat unit varieties," says Winter, adding that a minimal number of hybrid ratings would need to change as a result of the new CHU index.

As growers continue to seek information about hybrid performance, Nichols says the new system will help them track and analyze the data from the day they plant. "For clarity of communicating with producers as to how areas differ and how years differ, it is important to have a standard reference starting date."

The standard also makes it easier for growers to use a CHU tool on the WIN website to track and calculate CHUs for individual fields. Over time, Nichols hopes that a grower will be able to use the more accurate information to judge better which corn hybrid is most suitable for his or her farm. ■



For weed control in wheat, timing continues to be everything

by Treena Hein

Smart growers make sure time is on their side in weed management.

When a person's timing is off on the dance floor, they may fail to impress their partner. When a grower's timing is off with weed management, the consequences can be far more serious.

For example, some growers ignore the first seasonal flush of weeds, in the hope of catching the first and early second flush with the same herbicide application. Not only can this result in lower yields, but allowing the first flush to harden makes it much more difficult to control later on.

Peter Johnson, cereal specialist with the Ontario Ministry of Agriculture, Food and Rural Affairs (OMAFRA), observes another common weed management timing problem in winter wheat, one that occurs before the first flush of weeds even appears. "There's the concept out there that 'I'm not going to spray until the weeds are there,' and that's a mistake," he says. "If it's the 25th of April, yes, there's a very good chance you may see no ragweed, but it's there under the surface of the soil, at what is called the white stage. If you spray at that point, you'll kill the weeds before they emerge, and you don't need a lot of soil activity in your herbicide to do the job."

Growers can easily investigate their pre-first flush weed situation at around April 20th to 25th by using a hand trowel to remove layers of soil. "You will see the white stage plainly," Johnson says. "I've noticed that some growers who've sprayed for chickweed or shepherd's purse at roughly this point in time don't have ragweed issues, even though they expected to, because they've unknowingly killed it before it emerged."

Ragweed is easier for a winter wheat crop to compete with than dandelions, notes Johnson. Winter wheat shows growth in early April or late March, which gives it a whole month of head-start growth on ragweed. However, dandelions (that begin to grow during the previous fall) get a head-start of three to four days' growth. "In terms of wheat and other cereals, I'd far rather see a weed like ragweed in May than dandelions in March or April," Johnson notes. "Dandelions in the early spring will compete with a developing crop in terms of yield more than ragweed will with a maturing crop."

The situation is different with spring wheat, however. "It's more affected by weeds, so you can't ignore them to the same extent as you can in winter wheat," says Johnson. "In addition, planting date has a large effect on how to control weeds in spring wheat."

Other timing issues

Some growers believe a late flush of weeds must be dealt with to prevent impact on harvestability. That can certainly be true,