2019: Can we Please Just Forget About it? Presented by Scott Gillespie. www.scottcgillespie.com
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Good morning everyone and I'm glad to see so many of you here. Being here means that you have optimism for the coming year. It was a terrible harvest season. We all want to forget about it and move on to the 2020 crop. But before we do, we need to look back for some lessons from the year.

Have you all heard the quote from Einstein that goes something like "The definition of insanity is repeating the same actions over and over and expecting different results"? It's a great quote but unfortunately it can't be traced to Einstein. People have scoured papers, speeches, and books by Einstein, and no one has been able to find it yet.

The earliest traced history of the quote is in an Alcoholics Anonymous pamphlet from 1980. How it became so often attributed to Einstein is unknown. But once it's created into a meme and spread through the internet, often by reliable sources, it becomes accepted as truth.

Regardless of who said it first, its good advice to follow. Forgetting about 2019 and just moving right along to 2020 is insanity. Dwelling on everything that made 2019 a bad year could also be considered insanity. But reflecting on the year, learning some lessons, and making changes for 2020 is a very sane thing to do.

Looking back on the previous year usually means looking at a bunch of charts and graphs of temperature trends, growing degree days, and precipitation. But I'm not going to do that. In decades past, when all that information was hard to find, it made sense to do the work and present at a conference like this. However, today, all the data is available for anyone to look at.

If you have your own weather stations throughout your farm you may have already did this. If you don't, search out the Alberta Climate Information Service (ACIS) on Google and you'll be able to look at data from any weather station in Alberta. If you get enough charts up, you can convince yourself that this year was very abnormal, or you can believe it wasn't far off normal. I'm serious. Try it out. Pull up a few years that you can remember well, plot them against normal, and see what you come up with. I did this and was surprised to see that the year wasn't too far off normal. I was looking for a chart that would show us all how strange the year was. But, by the numbers, it wasn't too different than most.

There area few points worth highlighting though:

Summer heat accumulation, as in heat unit or degree day models, was slightly below normal. It may have felt a lot cooler this year but that was because recent years have been hotter. In 2019, there were not many days above 30C. Most days were 24-28C and most nights were 10-14C. Even though corn and soybeans struggled to mature this year the normal amount of Corn Heat Units were recorded. Corn Heat Units were developed in Ontario, but with our longer daylight hours and cooler nights, it may not fully capture a growing season for us.

Even through the summer was close to normal, the spring wasn't near normal. It was a cool start to the year. Early seeded crops started to germinate but then were left motionless for a week at the end of April buried under snow and freezing temperature. Warm season crops like corn and soybeans struggled as well because it still didn't warm up after this event and they also had to deal with cool temperatures.

Do you remember the spring of 2018? We were dealing with flooding from a very late melt that spring. When spring came, it came fast, and it was warm right from the start. That's one of the key differences between 2018 & 2019

What was abnormal in 2019 was the abrupt end to the year. Two feet of snow at the end of September followed by temperatures below -10C was bad. A Chinook to melt the snow and then a dip below -10C was devastating.

You can never cover all the risks, but you can work on ways to minimize them. Hailstorms come most years. This year had one of the largest and most sustained ones in recent memory cut a path through southern Alberta and cross into Montana. Like a freight train, there's nothing you can do to stop a hailstorm. But for most of the other weather risks, you can do something.

Given the year we had and not knowing what the coming year will bring, what should you do differently? From what I can see the most important limiting factor is time. You're probably thinking, well, yes, of course I wish I had more time, but there's nothing I can do about it. I think there is. Time saved is cumulative. Time saved at planting can mean a more even crop which in turn can mean a more timely harvest. Were you short weeks in harvest or did it come down to days? It all adds up.

My top three ways that you can save on time are:

1. Field operations
2. Crop mix
3. Water Management

Looking at the agenda – the conference ahead has many topics on all three of those! So, lets look at them a little deeper.

On the field operations side are there passes that you can combine or skip all together? As you listen to the fertilizer management talks think about whether there ways you can get nutrients to the crop in a timely manner. If your soil test phosphorus and potassium are high, it may be possible to skip the application on the planter and allow for a faster planting process. Farming Smarter is doing work on deep banding of nutrients using strip-till. Perhaps you can shift the application timing of immobile nutrients to the fall.

While not talked about here there are plants that many farmers are finding that can help scavenge and unlock nutrients in the shoulder seasons. Putting these plants to work in the fall and late winter may give you the nutrient supply needed for your crop come springtime.

Fertigation may be a time saver, or it may be a time waster. If you have the equipment and the people that can run it efficiently, it may help you to concentrate on timely seeding and worry about nutrient application closer to crop demand. On the other hand, a wet spring or summer may mean the crop is short and you're not able to apply the nutrients due to saturated fields.

Growth regulators take careful timing and may or may not result in more yield. However, the advantage may be in a timelier harvest. The start of the harvest may not be impacted but the speed of the harvest may be. A standing crop is quicker to harvest than a lodged one.

Moving on to your crop mixes, pay attention later today to new crops you may be interested in trying. Hemp has been around for a while but with the CBD market opening up there may be opportunities. It may fit into your rotation by being harvested at a different time that the rest of your crops.

Forage crops are often overlooked into annual crop rotations. They can have many benefits for weed control and building of the soil in addition to shifting harvest operations to times when you are not trying to harvest other crops.

When looking at all new crop opportunities make sure to look at a time budget. Will it fit in with current time demands for machinery and labour? As an example, soybeans can fit in well because everything about them is later than most other crops. They are planted in May, sprayed for weed control in June, and not harvested until September. In addition, their water demand is more in the late summer when other crops (such as peas and cereals) are tapering off.

Finally, lets look at water management as a way to save time. There are many tools available to help you determine when to water your crop and when not to. Some of these will be profiled tomorrow in the talks. Other tools to help you to measure the amount that is in the soil quicker and easier than walking around with a soil probe or Dutch auger.

How many of you can control or at least monitor your pivots with a phone or tablet? Raise your hands – lets see how many can now? Keep your hand up if you have found that this takes more time than it did in the past? What have you done with that saved time? If you don't know, then you've let whatever is more urgent to take its place and not what is more important. So, when you are implementing something that saves time, make sure you use that time in the best possible way.

An often-overlooked time saver in water management is the cost of too many passes of the pivot. Not only is there the labour for watering, there is the delay in getting into the field. When there is room in the lower profile to take in a fall rain, it doesn't delay harvest so long. Using some of these new tools may help with this.

A long-term strategy is to get more of your soil profile working for you. Imagine if the top 5' or more could quickly take in and hold water? A 2" rain wouldn't hold you back nearly as long. Tillage implements can't go this deep, but plant roots can. Plants working in the off season can open these soils for you. Some nutrients will get taken down in big rain events, but these can be recovered by the same plants, working in the off season for you, pulling them back up to the crop rooting zone.

Right now, I've talked for about 12 minutes and I have 20 minutes allotted to me. After a quick summary I'd like to open for questions. If you don't have questions, then I'll go into some questions that I think you should have asked me. You could think of this as bonus material.

So, to summarize, can we just forget about 2019? Yes, we can. But we must learn some lessons from it before moving on to the 2020 crop. Dwelling on the failures or just forgetting about them is insanity. The key lesson that I see for 2020 is to look for ways to save time. And when you do save that time, put it to work on important tasks, not the most urgent tasks. Throughout the rest of the conference, think through what the presenters are saying and ask yourself if this will save time and will it lead to a timelier harvest.

Thank-you for your attention and I look forward to any questions you have.

How do we deal with sugar beets and potatoes left in the ground?

The best management for both crops is to get them frozen this winter. From what I've been able to find, -2C to -3C for 24hrs is enough to freeze both crops. If they are left in the ground the soil needs to freeze to at least this temperature to the depth they are at to freeze them.

If you tilled the field in the fall breaking them up and damaging them may help because the frost will move into the smaller pieces better. It also may allow for microbial breakdown quicker.

Tillage may not be helpful if the pieces are buried too deep for effective freezing. The Chinook winds will help exposed pieces dry up as well, making for easier planting in the spring.

In terms of what crop to follow it seems that wheat is one of the safest crops. If there happen to be volunteer potatoes or sugar beets that are not controlled by spring tillage the herbicides should be effective in stunting or killing them

I'd look for a variety that stands well and can handle high amounts of nitrogen. There will be areas of high and low nitrogen across the field. If there was a high yield potential in your sugar beet or potato crop and you fertilized well there may be enough nitrogen leftover for the wheat crop. In essence, you have a full season green manure crop out there. There are some factsheets and guidelines available from government and industry associations that can help you to estimate the amount of nutrients that remain.

Fall or spring soil testing may help but it could be hard to get an accurate value until the wheat is at the 3-4 leaf stage. By then most of the beets or potatoes will be broken down. However – there will be areas around the pieces that are very high nitrogen and areas without last years crop that may be very low.

I saw this one year where plants in one row were green and lush and ones 6" away were stunted. Tissue tests showed nitrogen deficiency.

Thinking along the lines of time saving I'd suggest going with prior years tests for P & K and either spreading in advance or adding with the planter. A small amount of N could be applied as well. Once the wheat is established, evaluate it. If you see pockets of high and low growth that are too small to manage with variable rate application, then just do a broadcast blend and maybe look at fertigation later. If drones or satellite can pick out the high and low areas accurately consider creating a prescription map.

Were the events of this year a sign of human cause climate change?
Or just a normal part of our climate?

There was a newspaper clipping circulating Twitter this past fall which stated:

“September 1926, should go into the records as one of the most unfavorable months ever experienced in Western Canada. Rain, hail and snow put a stop to harvesting and threshing. Thousands of acres of grain had not been cut the last week of the month. So far as getting ahead with farm work was concerned the month was all but a complete loss. While it is no doubt true, as meteorologists assure us that the climate is not changing, the average man might be pardoned for regarding the past summer as an unusual one and the present autumn about the worst that has been experienced in this country.”

So, isn’t that fascinating? Scientists were saying there was no climate change and farmers were saying it was.

I asked the person who posted this clipping for the source, but they didn’t know because it had been passed onto them. Without knowing the source it’s hard to know if this was a sensationalist newspaper or reporting on the facts. Without verified records to back up the claim you can’t even know if this was an actual newspaper clipping or something that someone fabricated and sent out on the internet. Remember the mis-attributed Einstein quote that I spoke about earlier? Information can take on a life of its own once released into the wild.

I grew up in the 1980’s and 1990’s and remember the unfolding debate on CFC’s and their effect on the ozone layer. It seemed impossible early in the debate that aerosol cans, refrigerators, and air conditioners could have such global impact. However, in time, it was shown to be the case. Perhaps the same is true of the current change of the climate?

Regardless of your opinion on the subject there is still a good business case for making your farm able to handle tough years like 2019. Getting a crop off pays better than insurance and is a whole lot more satisfying. Consumers are demanding food that is produced with the climate in mind. There will also be business opportunities for farming in a way that captures carbon and reduces emissions. Instead of debating causes I’d look to the realities of today and look for the opportunities.