

Summarized Question posed To Huron County Farmers (Email / Phone discussions):

I am a public representative on the Municipality of South Huron climate change committee. I am reaching out to you to see if you are willing to offer some input related to things that you are doing on your operations, or information that you have come across that you feel has helped, or might help to mitigate the impacts of climate change such as:

- Prolonged dry periods
- Intense rain events
- Lack of snow cover in the winter
- Soil erosion
- Pest control
- Nutrient management

Huron County Farmers

Response 1:

Here are some of the things I try to do on our farm.

We mainly use minimum tillage for our corn, soys and white beans. I also no-till wheat.

After our wheat is harvested I plant a cover crop of wheat which I spray off in the fall. I leave the cover crop for the winter and do not work it in the fall. I find this really helps soil erosion. Also we do not do any fall tillage on our farm. My goal is to keep some cover on the ground all year. I'm not sure these practices really help with climate change but I feel they do help with soil health which I feel is really important for our future.

I am definitely suspect of any government initiatives dealing with climate change. Canada is not the largest polluter and unless we have change from China and India we will just be causing a unfair disadvantage on our farmers.

Your other interests and the bottom if your email are good. Controlled drainage has a lot of merit I think. Only problem for me is a lot of my farms are too hilly!

Response 2:

Few things we have done over the past year agronomy wise.

- soil sampling based off yield maps
- variable rate fertilizer
- variable rate planting
- strip till corn
- no till wheat followed by red clover or oats
- analyzing manure ground and making sure P and K levels aren't too high not applying in areas where P is too high (generally lighter sandy soils).
- split Nitrogen application on corn.

- limit tillage passes only ground that is worked is edible beans ground.
- keeping waterways in place anywhere where the water might erode the soil.
- 2 solar projects on our farm a 110kw and 10 kw would be nice if could use what a person produces. (Great debate if wind and solar is beneficial to the environment).
- interested in manure sensing that collects manure analysis as your applying and controls the rate automatic based off soil tests.

From the elevator side we collect the heat from the natural gas generator and circulate it back into the dryer to reclaim the heat.

This pretty general if you want more information on any topics I am sure I could dig something up.

Response 3:

What we have adopted at the farm to combat climate change is Strip Till, Mintill or No-till farming practices. We try to leave the soil undisturbed as much as possible and leave and as much residue on the soil surface as possible at all times of the year.

We have used some cover crops applications but not to a great extend. Cost, labour, machinery are the biggest reason why I have been slow to adapt to cover crops.

I have been farming with these practices to close to 30 years and feel I have protected our soil from extreme weather events better than the old conventional methods.

The weather extremes whether it is intense rain events or prolonged periods of dry weather, severe temperature fluctuations are definitely creating havoc on our soils in general. I feel that my adopted practices have help decrease soil erosion tremendously and aid the crop to get through longer drought periods with better soil water retention and also seems to take heavy rainfall events with less water runoff. We have seen more worm activity and better soil structure under the Strip Till practices.

The winter months are showing less wind erosion as our soil have not been disturbed as in a conventional farming practice.

Adopting farming practices to aid in combating climate change is not cheap since farm machinery has become very expensive. With that being said government funding is essential to more forward in providing farmers with support to adopt new farming practices to help with climate change.

Committee Member Response:

We farm 500 acres. 100 acres on sandy soil, and 400 acres on Huron-Clay Loam. My father farms full time, I only help on weekends, at nights, or by taking an occasional day off work.

We have been using no-till methods on the sandy soil since the mid-90's, with the purchase of no-till coulters for a conventional planter. We now have a planter that is ok for no-tilled and tilled fields.

We stopped cultivating before planting wheat in 2004 with the purchase of a no-till drill. Red clover is broadcasted into the wheat in the spring and left as long as possible before plowing in the fall.

We used to use a 5-crop rotation, but it has been reduced to 4 since the canners (Nabisco/Kraft) closed in Exeter – we no longer grow peas or sweet corn, but now grow field corn.

We stopped plowing soybean stubble in 2012 and tried cultivating the ground in the spring. We used a vertical till unit for bean stubble in 2020 due to problems we had trying to cultivate soybean stubble during wet springs the last two years.

I am personally interested in:

- Controlled drainage – I think it could be manageable for us since we don't farm a lot of land. I have had a terrible time finding information.
- Wind breaks, and plantings along rivers
- Grass ways for water runs.
- A second application of fertilizer for field corn, instead of applying it all ahead of / with planting
- Single 30" soybean and white bean rows – we aren't able to plant twin rows with our planter, we grow 15" single rows.

Additional Question related to Response 1:

Thank-you for taking the time to provide the notes below, as well as all of the other input you have offered me over the past number of years.

If it is not too much trouble, I would benefit from your opinion regarding the differences in land stewardship on rented, share cropped vs. owned land. If someone just wants as much rent as possible, I picture it could be hard to offer anything extra to help conserve their land.

Response 1:

Most of the farms I work are some sort of share crop arrangement which I try to treat the same way as I would treat my own and I don't manage them any different. That is also the reason I am not paying extreme cash rents because my guess is that those farmers are cutting back on P and K fert. But if you are in it for the long term I think you have to feed the soil otherwise you will lose at some point. It's easier to maintain than build soils.

It's a philosophy that has cost me some rented ground I'm sure because if you run the numbers it's really hard to make some of these high rent/acre rumours pencil.

Summarized Question posed to Ausable Bayfield Conservation Authority:

I am a member of the South Huron Climate Change Committee with Tim. I thought I would reach out to see if there is anything that you would be willing to offer related to ideas for agricultural operations to help them adapt to climate change. I was hoping that you might have some information related to (but not limited to):

- Prolonged dry periods
- Intense rain events
- Lack of snow cover in the winter
- Soil erosion
- Pest control
- Nutrient management

I am also interested to know if you could help by updating me on grant funding that is available. Farmers that I have spoken to have indicated that this is very important.

I am personally interested in;

- Controlled drainage. I have had a terrible time finding information.
- Wind breaks, and plantings along rivers
- Grass ways for water runs.

Summarized Response 1:

Certainly as there are predictions that climate change is likely to result in more intense or severe rainfall events and less snow cover, mitigating the impacts of runoff and wind erosion events will be important for ag operations to maintain topsoil and soil health. Equally important will be reducing runoff and sedimentation in streams in order to maintain healthy watercourses and healthy Lake Huron.

Huron County provides assistance for projects such as grassed waterways, erosion control berms, winter cover crops, windbreaks and watercourse buffers through the Huron Clean Water Project. Ausable Bayfield CA and Maitland CA provide technical assistance and administer the funding program for the county. I've attached the program guidelines and there is information online via the ABCA website

https://link.edgepilot.com/s/f75185e1/vvBDy-sOaE_76t6zOBTzKw?u=https://www.abca.ca/forestry/huroncountypoint/

or the Huron County website:

<https://link.edgepilot.com/s/31ec6cac/uqiKW3wzj0apU-bGcOUVwQ?u=https://www.huroncounty.ca/plandev/county-wide-projects/water-protection/>

The grassed waterways and erosion control guidelines are on page 20 or the second attachment. Tree Planting for windbreaks or along watercourses is on page 14 or third attachment.

Attachments:

Huron Clean Water Project 2020 Project Requirements – Erosion Control
Huron Clean Water Project Grant Application Form

Huron Clean Water Project 2020 Project Requirements – Erosion Control

Summarized Response 2

Thanks for connecting.

Here are some links to Agriculture and Climate Change on a federal level:

[Climate change and agriculture - Canada.ca](#)

[Climate change and agriculture - Agriculture and Agri-Food Canada \(AAFC\)](#)

[Climate scenarios for agriculture - Agriculture and Agri-Food Canada \(AAFC\)](#)

I've attached the agenda for the November 13, 2020 Water Protection Steering Committee which had a focus on climate change.

Darrin Qualman is the director of climate change crisis policy with National Farmers Union had a good presentation. [What to know about climate change | National Farmers Union \(nfu.ca\)](#)

I realize these reports and links are broad scale; I'm not sure if you're looking for local level information.

There's not a lot of local information on controlled drainage. It's more popular in the extreme southwest of the province. Here is a link to a report from Ontario Soil and Crop Improvement Association.

<https://link.edgepilot.com/s/9ea4840c/Sf2JD13e7UWy7WL0To9VOw?u=https://www.ontariosoilcrop.org/research-resources/research-projects/controlled-tile-drainage/>

Suggested sources of Information from Climate Change Officer

Topic	Resources
Agriculture	<ul style="list-style-type: none">• <u>Green Agriculture Practices in Huron County - Jacqui Empson Laporte, Environmental Specialist, OMAFRA</u>• <u>Huronview Demo Farm (Clinton ON)</u>• <u>Teresa Van Raay, Director, OFA Board of Directors</u>• <u>ABCA - Soil Cover Crop initiative</u>• <u>Rick Kootstra, Huron County Farmer</u>• <u>Strang Family Farms – tech innovation/soil health and cover crops</u>• <u>Darrin Qualman, Director of Climate Change Crisis Policy and Action, National Farmers Union</u>