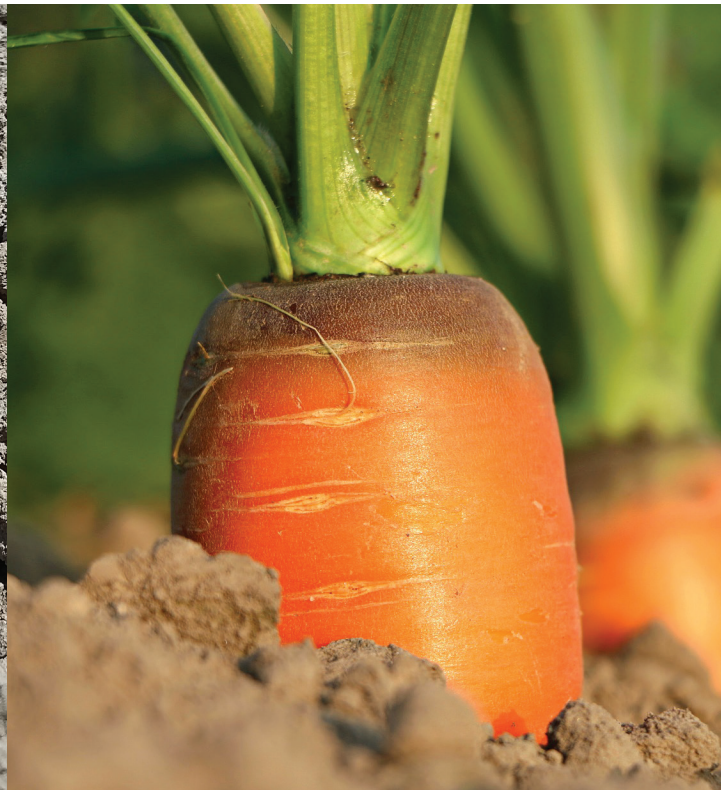
CANADA
4-H Ontario

www.4-hontario.ca

4-H ONTARIO PROJECT



Real Dirt on Farming

REFERENCE MANUAL

CREDITS

THE 4-H PLEDGE

I pledge my Head to clearer thinking,
my Heart to greater loyalty,
my Hands to larger service,
my Health to better living,
for my club, my community and my country.

THE 4-H MOTTO

Learn To Do By Doing

CANADA
4-H Ontario

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PROJECT RESOURCE INFORMATION

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Date: March, 2019

Thank you to the 4-H Real Dirt on Farming Advisory Committee members who assisted with the creation of this resource:

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Leah Richardson Dean, 4-H volunteer, Carleton
Jean Sullivan, 4-H volunteer, Carleton
Nadine Sisk, Croplife Canada
Christine Wilkinson, Farm & Food Care Ontario

Thank you also to the Carleton 4-H Association and Jean Sullivan and Leah Richardson Dean who submitted the original Real Dirt on Farming locally submitted 4-H project.

4-H Ontario is pleased to be able to provide project resource reference manuals for use by volunteers in clubs. 4-H Ontario screens and trains volunteers to equip them with the tools to

serve as positive role models for youth. With so many topics to choose from, 4-H volunteers are trusted to use these resources to provide safe and quality programming while using their judgement to assess the appropriateness of activities for their particular group of youth. By downloading any 4-H resource, you agree to use if for 4-H purposes and give credit to the original creators. Your provincial 4-H organization may have restrictions on the types of 4-H projects or activities which can be completed in your region.

The development of this project resource was made possible through the support of **Farm & Food Care Ontario** in Partnership with **CropLife Canada** with Co-Sponsor **Ontario Mutuals**.

CANADA
4-H Ontario

4-H Inclusion Statement

4-H in Canada is open to all* without discrimination based on race, national or ethnic origin, colour, religion, sex, age or, mental or physical disability.**

4-H is dedicated to providing a safe and inclusive environment that allows for universal access and participation. Where barriers to participation are identified, 4-H will, with reasonable accommodation, adapt programs, rules, policies, or expectations to reduce or remove the barriers.

Any accommodations, changes or exceptions will be assessed on an individual basis, taking into account the individual experience of the member and their family. The physical safety and emotional well-being of members, leaders, staff and volunteers is 4-H's highest priority, and is the ultimate consideration in final decisions.

4-H Canada and local 4-H organizations consider inclusion a priority. Leaders are encouraged to work with individuals and their families to identify and discuss accommodations as required, and to reach out to provincial or national office staff for help with unresolved concerns.

**This applies to youth members (ages 6 to 21), volunteers, leaders, staff and professionals.*
***Definition of discrimination as per Canadian Charter of Rights and Freedoms.*

Déclaration sur l'inclusion des 4-H

L'adhésion aux 4-H au Canada est ouverte à tous les jeunes* sans discrimination fondée sur la race, l'origine nationale ou ethnique, la couleur de la peau, la religion, le sexe, l'âge ou le handicap mental ou physique. **

Les 4-H ont pour mission d'offrir un environnement sécuritaire et inclusif qui permet l'accès et la participation de tous. Lorsque des obstacles à la participation sont décelés, les 4-H adapteront, à l'aide de mesures d'adaptation raisonnables, les programmes, les règles, les politiques ou les attentes afin de réduire ou d'éliminer ces obstacles.

Toute mesure d'adaptation, modification ou exception sera évaluée au cas par cas, en tenant compte de l'expérience personnelle du membre et de sa famille. La sécurité physique et le bien-être émotionnel des membres, des animateurs et des animatrices, des membres du personnel et des bénévoles sont la priorité absolue des 4-H et constituent le facteur ultime à considérer lors de la prise des décisions définitives.

Les 4-H du Canada et les organisations locales des 4-H considèrent l'inclusion comme étant une priorité. Les animateurs et les animatrices sont encouragés à collaborer avec les personnes et leurs familles afin de définir et d'examiner les mesures d'adaptation, selon les besoins, et de communiquer avec le personnel du bureau provincial ou national pour obtenir de l'aide en cas de préoccupations non résolues.

**Ceci s'applique aux jeunes membres (âgés de 6 à 21 ans), aux bénévoles, aux animateurs, aux membres du personnel et aux professionnels.*
***Selon la définition de discrimination en vertu de la Charte canadienne des droits et libertés*

Welcome to 4-H Ontario's Real Dirt on Farming project!

Canadian farming has an impressive story to tell and all Canadians deserve the opportunity to make informed choices about their food and to be part of Canada's farm story. That opportunity though requires credible information based on sound science. In the Real Dirt on Farming project you will learn how to introduce yourself to the consumer - who you are, what you do and why you do it. This project is designed to help you address concerns, answer questions, debunk myths about food and farming and to learn how to tell your own agriculture story.

HOW TO USE THIS MANUAL

4-H Ontario's Real Dirt on Farming project is made up of 2 parts:

1. **The Reference Book**

The reference book is laid out into 6 meetings.

Meeting 1 – Real Dirt on Farming - Why Speak Up
Meeting 2 – Livestock Care
Meeting 3 – Poultry Care
Meeting 4 – Crop Production (Agricultural & Horticultural)
Meeting 5 – Exploring Your Own Beliefs
Meeting 6 – Meeting the Consumer Half Way

Each meeting has been broken down into an Introduction with Sample Meeting agendas, References and Resources, Topic Information and Activities.

Sample Meeting Agendas: are at the beginning of each meeting. The agendas give suggestions for topic information, activities and judging and/or communications activities along with suggested times for each section. These are only suggestions – you will know your group best and will know the skill and attention level of your members. There is more topic information and activities than what can be completed in a two hour meeting. Be creative!
Activities: should be used in combination with the discussion of topic information to teach members in a hands-on, interactive learning environment.

2. **The Record Book**

This booklet is designed to make it easier for members to record information throughout the club. Members are to record their expectations and goals for the project in addition to contact information, meeting dates and roll calls. Print or photocopy pages from the Reference Book that you think will benefit the members either as a resource or an activity. The Record Book

should be given to each member at the beginning of the first meeting. Ask members to keep it in a binder or duotang so they can add to it easily.

Go through the Record Book with the members and explain the charts and forms. Encourage them to use their Record Books at every meeting and record as much information as possible. As an added incentive, a prize could be given at the end of the project for the best Record Book.

INCLUDING STEM IN THE 4-H REAL DIRT ON FARMING PROJECT

WHAT IS STEM AND WHY IS IT IMPORTANT?

Since 1915, 4-H in Ontario has engaged youth in science, technology, engineering, and math (STEM). This has traditionally meant a solid focus on agricultural science, mechanics, entrepreneurship, natural sciences and household science. Today, 4-H has grown to include rocketry, robotics, computer science, environmental sciences, and more. 4-H provides hands-on learning experiences to encourage learning about the world around us. Our lives are completely immersed in science and technology.
Understanding how science, engineering, and technology impact our lives, solve problems and create new ones makes it easier to navigate our modern world.

In school, science classes need to cover a broad range of topics in a limited amount of time while STEM in 4-H allows members and leaders time to dig deeper into ideas and concepts and to spend as much time as desired to work on projects based on personal interests, questions, and skills.

STEM in 4-H allows a person to work on their own questions, design their own tests, create their own models, build their understanding, and share their work with others – learn to do by doing. That's what science and engineering are, trying to understand the natural universe and develop solutions to the problems faced in our world today. Science is inquiry that uses a specific approaches and skills. But all learning is an inquiry process so working with science helps develop your learning muscles.

Within 4-H, the STEM process can go even further to include the Arts, thus changing the acronym to STEAM – Science, Technology, Engineering, Art & Math.

STEAM IN 4-H ONTARIO PROJECTS

As you work through the Real Dirt on Farming Project, you will see STEAM integrated throughout the project within almost all of the activities that members will be completing.

STEAM can be challenging but it can also be fun! Be sure to try out the activities. Observe what works and what doesn't and how activities can be changed slightly to get different results. It's all a part of the STEAM learning process!

PLANNING A MEETING

Plan your meetings well. Review all the information well in advance so you are prepared and ready!

BEFORE EACH MEETING

- Read the topic information and activities and photocopy any relevant resources for the members' Record Books.
- Be familiar with the topic information for each meeting. Think of imaginative ways to present the information to the members. Do not rely on just reading the information out loud. Review available resources, plan the meetings and choose activities and themes that complement the ages and interests of your members.
- Gather any equipment and/or resources that will be needed to complete the meeting.
- At least 12 hours of club meeting time is required for every project; including club business, specific project information and social recreation. The delivery format for that material is left to the discretion of the leaders. Before each meeting, create a timeline to ensure that you are providing an adequate amount of instructional time for club completion. **Note:** the best practice recommendation is that a club have multiple meeting times for each project.

Included on the following page is a Leader's Planning Chart to help with the planning of meetings. In addition to the chart, keep track of what went well and what should be changed next time. That way, each time this project is run, the content of the meetings can be different!

When planning each meeting, a typical 4-H meeting agenda should include the following:

- Welcome & Call to Order
- 4-H Pledge
- Roll Call
- Parliamentary Procedure:
- Secretary's Report
- Treasurer's Report (if any)
- Press Report
- New Business: local and provincial 4-H activities/opportunities, upcoming club activities
- Meeting content and activities
- Clean-up
- Social Recreation and/or refreshments
- Adjournment

JUDGING AND COMMUNICATIONS

Each meeting must include either a judging or public speaking activity.

- Judging gives the members an opportunity to use judging techniques as part of the learning process. Through judging, members learn to evaluate, make decisions and communicate with others. They also develop critical thinking skills, confidence and self-esteem. Many examples are used in this reference book but use your imagination! As long as members are setting criteria and critically thinking about where items fit within that set of criteria, they are learning the basic skills of judging!
- A communications activity has been provided for each meeting but can be included in the Roll Call or social recreation time. These activities do not need to involve the topic of farming as the outcome is more about understanding the concepts of effective communication.

LEADER'S PLANNING CHART

Meeting #	Date/Place/ Time	Topics Covered	Activities	Materials Needed

AS A CLUB VOLUNTEER YOUR RESPONSIBILITIES ARE TO:

- Complete the volunteer screening process and attend a volunteer training session.
- Notify the local association of the club, arrange a meeting schedule and participate in club meetings, activities and the Achievement program.
- Review the project material in the Reference and Record books to familiarize yourself with the information and adapt it to fit your group. Be well organized and teach the material based on your group's age, interest and experience level.
- Organize the club so members gain parliamentary procedure, judging and communication skills.
- Have membership lists completed and submitted along with fee collected (if applicable) by the end of the second meeting.
- Have members fill out a Participant Agreement Form and identify any health concerns. Ensure that all members, leaders and parent helpers know the appropriate actions during any emergency. Check with members for any food allergies or dietary restrictions and plan snacks accordingly.

AS A CLUB MEMBER YOUR RESPONSIBILITIES ARE TO:

- Participate in at least 2/3 of his/her own club meeting time. Clubs must have a minimum of 12 hours of meeting time.
- Complete the project requirement to the satisfaction of the club leaders.
- Take part in the project Achievement Program.
- Fill in and complete the Record Book.
- Complete any other project as required by the club leaders.

ACHIEVEMENT PROGRAM IDEAS/SUGGESTIONS

- Participate at an event such as Farm & Food Care's Breakfast on the Farm events or a community event, helping to promote agriculture and 4-H
- Make a display about the Real Dirt on Farming 4-H project and display it at a local fair, in the mall, in a store front, etc.
- Have members make a presentation at school telling their story about agriculture
- Create a skit about some aspect of farming and perform it at school, at a senior's home, at another organization's meeting, etc.

SPECIAL PROJECTS

These projects are done outside of meeting time and are for members interested in doing more – often senior members. It's up to you as the leader to decide if you will require members to complete a Special Project for club completion. Some ideas include:

- Write a press release about farming in your area.
- Interview someone who owns an operates a farm and write a press release for the newspaper about them and their farming operation.
- Create a social media post highlighting your involvement in agriculture.
- Create a video about any aspect of Real Dirt on Farming found in the project. Post on YouTube.

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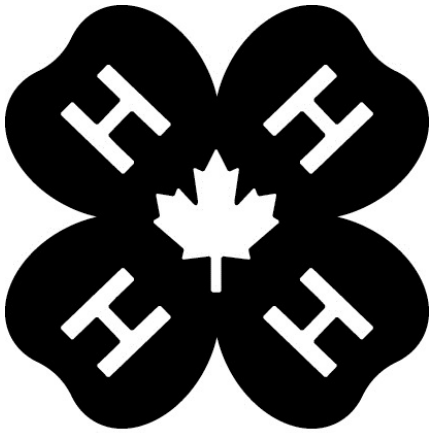


CANADA
4-H Ontario

REAL DIRT ON FARMING RESOURCES

Agriculture More Than Ever https://www.agriculturemorethanever.ca/
Agriculture and Agri-Food Canada http://www.agr.gc.ca/
Agriculture in the Classroom Canada https://aitc-canada.ca/
AgScape https://agscape.ca/
Bayer Cropscience https://www.cropscience.bayer.us/our-commitment/agvocate
Beef Farmers of Ontario http://www.ontariobeef.com/
Canada Beef https://canadabeef.ca/
Canada's Food Guide https://food-guide.canada.ca/en/
Canadian Animal Health Institute https://www.cahi-icsa.ca/
Canadian Dairy Information Centre http://www.dairyinfo.gc.ca/
Canadian Cattlemen's Association http://www.cattle.ca
Canada Safety Council https://canadasafetycouncil.org/children-farm/
Canadian Horticultural Council https://www.hortcouncil.ca/en/
Canadian Centre for Food Integrity http://www.foodintegrity.ca/
Chicken Farmers of Canada https://www.chickenfarmers.ca/
Chicken Farmers of Ontario https://www.ontariochicken.ca/
CropLife Canada https://croplife.ca/
Dairy Farmers of Canada https://dairyfarmersofcanada.ca/
Dairy Farmers of Ontario https://www.milk.org/
Egg Farmers of Ontario https://www.getcracking.ca
Farm and Food Care Ontario https://www.farmfoodcare.org/
Fisheries and Oceans Canada http://www.dfo-mpo.gc.ca
Holstein Canada https://www.holstein.ca/
Let's Talk Chicken https://letstalkchicken.ca/
Ontario Goat https://ontariogoat.ca/
Ontario Pork http://www.ontariopork.on.ca/
Ontario Sheep Farmers https://www.ontariosheep.org/
Real Dirt on Farming magazine http://www.realdirtonfarming.ca/
Statistics Canada http://www.statcan.gc.ca/
Turkey Farmers of Canada https://www.turkeyfarmersofcanada.ca/
Veal Farmers of Ontario https://ontarioveal.on.ca/
Workplace Safety & Prevention Services http://www.wsps.ca/

Meeting 1 – Real Dirt on Farming – Why Speak Up

SETTING OBJECTIVES

An understanding of the basics of agriculture production in Canada and why it's important to be prepared to speak about agriculture in any situation.

Suggested Lesson Outcomes

- To have an understanding of why it's important to speak up and promote agriculture
- To gain an understanding of the depth of agriculture production in Canada
- To appreciate the safety and biosecurity issues associated with farms and farming practices

ROLL CALLS

- Have you had an experience talking to someone who had misconceptions about agriculture production in Canada?
- Name a crop that is grown in abundance in Canada.
- Why is it important to understand agriculture production in Canada?

SAMPLE MEETING AGENDA TIME: 2 HOURS 20 MINUTES

Welcome, Call to Order & Pledge		10 min
Roll call		5 min
Parliamentary Procedure	Election of Officers	30 min
Topic Information, Discussion & Activities	Topic Information – Why Speak Up? – Why Should Canadian Agriculture Be Celebrated? – Safety & Biosecurity on the Farm Activity #1 Agricultural Media Scan Activity #2 Agricultural Career Charades	30 min 30 min 20 min
At Home Activity	Safety on the Farm	5 min
Wrap up, Adjournment & Social Time		10 min

WHY SPEAK UP?

Have you ever overheard conversations that made you wonder if more people today think their food comes from the grocery store rather than the farm? Or have you had someone tell you that your favorite food is not okay to eat because of the chemicals or antibiotics they've been "contaminated" with? Misconceptions about food and farming can be dangerous, as they spread quickly and threaten the reputation and well-being of the agricultural industry.

It's easy to get worked up about negative portrayals of agriculture, the industry we know and love, but it's harder to effectively advocate for it. It might be intimidating to speak up, or it may be difficult to get involved without anger.

CANADIAN FOOD HAS A STORY

Our food has a story and it starts with Canadian farms.

One hundred years ago, over half of all Canadians worked on farms. Now that number is less than two percent of the population. With so few connected to food production, it's understandable that questions about food and agriculture abound.

Canadian farming has an impressive story to tell. Advances in technology are helping Canadian farmers better manage the environment, while taking better care of animals and their businesses. Tried-and-true farming practices, in conjunction with a willingness to embrace science, means that there have never been so many ways to farm and eat sustainably.

All Canadians deserve the opportunity to make informed choices about their food and to be part of Canada's farm story. That opportunity though requires credible information based on sound science. By introducing yourself to consumers – who you are, what you do and why you do it – this project is designed to help you address concerns, answer questions and debunk myths about food and farming.

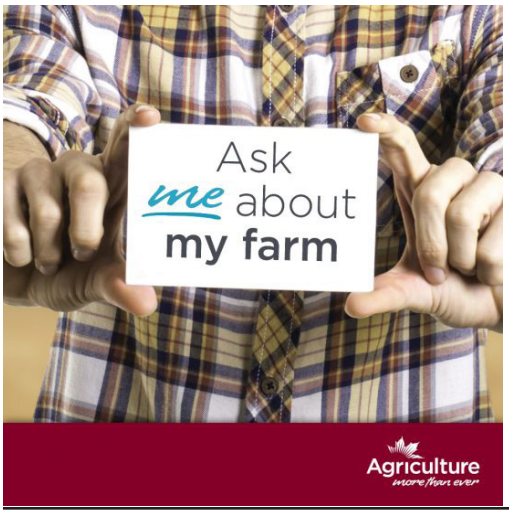


Image Credit: Ag More Than Ever https://www.agriculturemorethanever.ca/resources/

Farming remains a career and a lifestyle founded on the same values held by previous generations. It's a commitment to the land, to animals and to good food.

Excerpts taken from the Real Dirt on Farming publication, 2017

Discuss It!

How much has agriculture changed in the last 100 years?
In the early to mid-1900's, inventions such as automobiles, steam power and the telephone were just coming into use. Early Canadian farmers dealt with drought, two world wars and the Cold War all without the modern technology we take for granted today.

A farmer in 1900 produced enough food for 10 people. Today's farmer feeds over 120 people and Canadian farmers now supply 150 other countries with food.

What do you think were the most important advances made in agriculture in the last century?

What predictions do you have for the 2100's? How will agriculture evolve? What type of foods will people be eating? Where will they eat it?

Know Your Facts!

It's easy to second guess yourself when you're talking about agriculture and sharing facts about the Canadian industry. Just that fact that you're in agriculture will make people assume you know everything about the industry and we know that's impossible. In Ontario, we grow over 50 different types of fruits and vegetables alone.

The following is a great resource for finding out more about Canadian agriculture.
http://www.realdirtonfarming.ca/assets/docs/flipbook2017eng/mobile/index.html

WHY SHOULD CANADIAN AGRICULTURE BE CELEBRATED?

1. Farmers love what they do. Agriculture isn't just their business, it's their passion and way of life. So, let's be proud to share our Canadian agriculture story, explain where food comes from and how it's produced, and reach out to those not in the agriculture industry.
2. Canadian agriculture is a trusted industry. A recent Canadian Centre for Food Integrity survey shows that consumers trust farmers more than any other group and 60% want to know more about farming practices.
3. Canadian farmers believe in quality. Canada ranks number one in global food safety.
4. Agriculture is innovative. Thanks to modern farming practices, the average household saves more than $4,000 on food annually – that's about $60 billion across Canada.
5. Canadian farmers love and care for their animals. They believe in responsible animal care and follow nationally recognized codes of practice for the care and handling of their animals.
6. Canadian farmers are proud environmentalists. Ike Skelton once said, "Because of their connections to the land, farmers do more to protect and preserve our environment than almost anyone else
7. Agriculture plays a major role in our economy. It contributes over $100 billion to Canada's GDP (gross domestic product) each year
8. Family matters. Canadian farmers love agriculture for the life it gives their kids now and the opportunities it will give them in the future. It's not just their livelihood, it's their legacy – 97% of farms are family farms.
9. Canadian agriculture is a trading powerhouse. Canada is the world's fifth largest agriculture exporter with over $50 billion in annual sales.
10. The agriculture industry is a major employer. Agriculture employs over two million Canadians – that's one in eight jobs.

Source: Ag More Than Ever *https://www.agriculturemorethanever.ca/from-the-team/top-10-reasons-to-celebrate-canadian-agriculture-2018/#.XDJ7Ak2trsI*

WHO IS CANADA'S TYPICAL FARMER?

Images of a farmer wearing overalls and carrying a pitchfork are what many people think of when they picture a farmer. The reality is a lot different.

There's no such thing as a typical Canadian farm or ranch, or farmer or rancher. Canada is a big country with many different types of farms and each one is unique. What Canadian farms do have in common is their commitment and dedication needed to care for land and livestock.

- According to the 2016 Canadian census, the average age of a Canadian farmer is 55. Just over half of all Canadian farmers are aged 55 and older but for the first time since 1991, the number of young farmers, those under 35 years old, has increased.
- 28.7 percent of Canadian farmers are female
- Just over half of all farmers have some form of post-secondary education as of 2011
- About 45 percent of Canada's farmers also work off-farm to supplement their income. Farming is an expensive business with many risk factors which makes additional sources of income an important means to security.

In Canada, farming is still about family. Many farms are handed down from generation to generation and it's not uncommon to see parents and even grandparents working together with sons, daughters and grandchildren on their family farm.

The big difference from previous generations is that today, farms have become bigger and there are more tools and technologies available to help farmers do their job better.

Talk About It!

Meet Andrew Campbell. Andrew is a dairy farmer in southern Ontario alongside his parents, his wife and their two children. He also specializes in helping farmers learn about social media and advocacy. After studying journalism, Andrew was a radio broadcaster for 3 years and is now farming full time. He uses social media to share the farm's story with non-farming Ontarians through initiatives such as #farm365, where Andrew posted a picture a day for a year and his videos, which he posted one video a week for a year, highlighting various segments of the agriculture industry. He has had speaking engagements across Canada speaking on agriculture and rural issues, especially around consumer perception, storytelling and advocacy. Andrew is the owner of Fresh Air Media. Go online to find out what Andrew's latest social media project is and how he is changing the food conversation with consumers.

LOOKING AT CANADIAN AGRICULTURE BY PROVINCES AND TERRITORIES

Newfoundland and Labrador

- has the highest proportion of farms involved in direct marketing, with just over one-third of farms selling at least one agricultural commodity directly to consumers. Vegetable and melon type operations were the most likely to direct market their products to consumers.
- had the fewest number of farms among the provinces in 2016

Prince Edward Island

- potatoes are the largest crop in Prince Edward Island with barley accounting for the second largest field crop area in the province
- over 40 percent of the land in Prince Edward Island is used for growing crops and raising animals

Nova Scotia

- has the largest mink breeding stock in Canada
- grows more apples and corn than any other Atlantic province in Canada

New Brunswick

- potatoes, oats and barley are the three largest field crops in New Brunswick
- blueberries account for 95% of the total fruit, berries and nuts grown in the province

Quebec

- leads Canada in dairy, maple syrup, pork, fruits, berry and nut production
- has the youngest farmers, on average, in Canada

Ontario

- accounts for over one-quarter of all of Canada's farms
- accounts for over two-thirds of greenhouse vegetable area in Canada
- ranks first in Canada for poultry (broilers, roasters and Cornish fowl) with just over one-third of the total national inventory
- has the largest areas of both soybeans and corn for grain in Canada

Manitoba

- canola is the largest field crop area in Manitoba
- has the largest proportion of farm operators under 35 years of age and the second youngest population, on average, of farm operators in Canada

Saskatchewan

- ranks first among the provinces in terms of total field crop area, accounting for almost

half of Canada's total field crop area – as such, Saskatchewan is the largest producer in Canada of crops such as canola, wheat and lentils
- has the second largest cattle herd in the country

Alberta
- has the largest cattle herd in Canada in 2016, accounting for just over two-fifths of the national total
- has the second largest number of farms in Canada and also ranked second in terms of both total farm area and field crop area

British Columbia
- has the highest percentage of female farm operators in Canada
- has the largest number of small farms (those with less than $10,000 in gross income)

Yukon and the Northwest Territories
- hay accounted for three-quarters of the cropland in the North, while oats was the largest field crop
- poultry and egg farms make up 44 percent of all gross farm receipts

Source: Statistics Canada – Farm and Farm Operator Data *https://www150.statcan.gc.ca/n1/pub/95-640-x/2016001/article/14800-eng.htm*

Check It Out!

Discover Canadian agriculture by taking a virtual farm tour (video) produced by Farm & Food Care at: http://www.farmfood360.ca/ These videos highlight Canadian farms, Canadian farmers and the many facets of agriculture in Canada as they show the story of agriculture production of numerous different commodities.

SAFETY AND BIOSECURITY ON THE FARM

As part of the Real Dirt on Farming 4-H project, you will be touring various farms and agricultural businesses in person. Even though you might live or have worked on a farm, safety and biosecurity protocols should always be reviewed to make sure your experience is educational, enjoyable and safe for both you and the farm/business you are visiting.

SAFETY

As mentioned before, farming is a way of life for many Canadian families. It is also one of the most dangerous industries in Canada. Hazards encountered on a farm are extremely varied. They range from runovers, to poisoning, to bad tempered livestock. The hazards also change. For example, a field may be a good, safe place to walk one day. But, a few days earlier during harvesting, the same field could have been an unsafe place for a person to be.

There are many dangers on farms causing bodily harm and in some cases death including, but not limited to, entanglement in machinery, encounters with livestock, machinery runovers, drowning, pesticides and other chemicals, flowing grain and electrocution.

Experience It!

Invite a guest to your meeting that is involved with your local Farm Safety Association or someone in the agriculture industry who has been injured in a farming accident and is comfortable with speaking to a group.

Judge it!

There are many items of PPE (personal protective equipment) that are worn in various barns and facilities depending on the type of work being done. Choose 4 of the same items (e.g. steel-toed workboots, hearing protection, etc.) and judge the items based on effectiveness, suitability for the job and the level of safety they provide.

BIOSECURITY

Putting preventive measures in place to keep animals healthy has been a long-standing and successful practice on Canadian farms. Biosecurity planning helps to ensure that practices routinely carried out on farms are beneficial to animal and plant health. Examples of biosecurity measures are footbaths, showering in and out, wearing clothing washed onsite and restrictions on food being brought into the facility.

Research it!

Choose one type of farm or facility that houses animals or plants and find out what their biosecurity protocol is and why they have that protocol in place. Be prepared to share your findings with the rest of your 4-H club.

If biosecurity measures are not followed disease transmission can happen, thus jeopardizing the health of animal and plants and ultimately the safety of Canada's food supply.

Before visiting or touring any farm or facility, be sure to find out what their biosecurity protocol is and what the expectations are for you being in that premise. Biosecurity protocols vary depending on the type of farm or facility.

Do It!

Remember, with any tour, that you are a guest. Be polite, respectful and grateful to the host(s) that have opened up their facility for your 4-H club to tour.

AT HOME ACTIVITY

SAFETY ON THE FARM

There are many dangers on the farm, some of which have been named in this project. Think about some of the farms you would like to visit during this project. Name and list any dangers you can think of that might be present on those farms. Keep the list with you and add to it once you have visited various farms and discuss your list again at a future meeting.

DIGGING DEEPER

For Senior Members

CANADA'S FOOD GUIDE

Released in early 2019, Health Canada issued an updated Canada's Food Guide that has a number of changes compared to the previous guide. Compare the updated guide to the nutritional recommendations from nutritionists working with commodity specific organizations such as Canada Beef, Dairy Farmers of Canada and Canadian Pork, amongst others. Does Canada's Food Guide align with these recommendations or are there some discrepancies? Be prepared to talk about Canada's Food Guide at upcoming meetings and how it relates to the topics at each meeting.

To find the latest version of Canada's Food Guide visit: https://food-guide.canada.ca/en/

ACTIVITY 1: AGRICULTURAL MEDIA SCAN

DO	Time: 30 minutes Materials Needed: – Agricultural print publications such as the Ontario Farmer, Country Guide, Better Farming, etc. – Non-agricultural print publications including local publications – Access to the Internet – Paper and writing utensil Instructions: – Have members work in small groups of 2 to 3 people. – Have members do a scan of agricultural print media to look for stories celebrating Canadian agriculture. Have them do the same with non-agricultural print publications. – Have members scan the internet for success stories about Canadian agriculture. – Each group should then share their findings with everyone else.
REFLECT	Learning Outcomes: To allow members to discover what the agriculture industry and the general public see/read about Canadian agriculture.
APPLY	Processing Prompts: – Were the agriculture success stories different depending if the publication was geared towards the agriculture industry or the general public? – Was it easy or hard to find success stories celebrating Canadian agriculture? – Did you find anything that surprised you? – Can you think of a Canadian agriculture story that would be media worthy? – Did you find stories that were critical of agriculture?

ACTIVITY 2: AGRICULTURAL CAREERS CHARADES

DO	Time: 20 minutes Materials Needed: – Various careers related to agriculture written on small individual pieces of paper Instructions: – Have a member volunteer to go first. Have this member choose a piece of paper, have them read what is on the paper and then have them act out the career written on the paper with the rest of the group having to guess what that career is – Once the group has guessed the career, write it on a piece of Bristol board, flip chart paper, etc. – Continue this until everyone has had a chance to have a least one turn at acting out an agricultural career – Review the various careers on the list and add to it. – Potential careers to be written on the paper include: o Feed nutritionist o Agricultural account bank manager o Dairy farmer o Farm machinery mechanic o Veterinarian o Swine truck driver o Agronomy specialist o Laboratory technician o Dairy robotics salesperson o Custom combine operator o keep adding to the list!
REFLECT	Learning Outcomes: To allow members to identify and understand the vast array of careers available within the agricultural industry.

APPLY	Processing Prompts: – Why is it important to know and understand the vast array of available careers in agriculture? – How many more careers in agriculture can you think of that weren't a part of this activity? – Is a career in agriculture something you have though of? If so, what type of career would you like to pursue?

Meeting 2 – Livestock Care

SETTING OBJECTIVES

To have an understanding of the livestock industry in Canada and some of the issues that are associated with this industry.

Suggested Lesson Outcomes

- To be able to identify which types of livestock are raised in Ontario
- To have an understanding of the statistics of each type of livestock
- To have an understanding of why it is important to know some of the issues facing the livestock industry

ROLL CALLS

- Name one type of animal raised in Ontario for food production.
- Name one issue facing the livestock industry in Ontario.
- If money was not an issue, which type of livestock farmer would you choose to be?

SAMPLE MEETING AGENDA TIME: 2 HOURS 15 MINUTES

Welcome, Call to Order & Pledge		10 min
Roll call		5 min
Parliamentary Procedure	Minutes & Business	10 min
Topic Information, Discussion & Activities	Topic Information – Codes of Practice – Livestock Basics – Ruminants and Non-Ruminants – Hormone Use in Livestock – Livestock Vaccinations – Antibiotic use in Livestock – Top Tips for Talking About Agriculture Activity #1 Think on Your Hooves! Activity #2 Role Playing – Animal Agriculture Issues	45 min 20 min 30 min
At Home Activity	Animal Agriculture Industry Educational Videos	5 min
Wrap up, Adjournment & Social Time		10 min

LIVESTOCK BASICS

CODE OF PRACTICE

Canada has developed a Code of Practice, through the National Farm Animal Care Council, for most species of livestock. The most up-to-date Codes of Practice for the Care and Handling of Farm Animals can be found at: http://www.nfacc.ca/codes-of-practice

RUMINANTS

Ruminant animals include cattle, sheep, goats, buffalo, deer, elk, giraffes and camels. Instead of one compartment for a stomach they have four. Of the four compartments, the rumen is the largest section and the main digestive centre. The rumen is filled with billions of tiny microorganisms that are able to break down grass and other coarse vegetation that animals with one stomach, including humans, chickens and pigs, cannot digest.

Ruminant animals do not completely chew the grass or vegetation they eat. The partially chewed grass goes into the large rumen where it is stored and broken down into balls of "cud". When the animal has eaten and feels full, it will rest and "chew its cud". This occurs by the animal regurgitating the ball of cud back into the mouth for chewing. The cud is then swallowed once again where it will pass into the next three compartments—the reticulum, the omasum and the true stomach, the abomasum.

BEEF CATTLE

Beef cattle are ruminant animals capable of digesting fibrous material that cannot be used by people and converting it into wholesome, high-protein food suitable for human consumption. Canada's 13 million cattle spend most of their lives grazing on land unsuitable for crop production, or on land that is part of an integrated and sustainable cropping system.

In the winter, cows are kept on rangeland (pasture), in woodlots or in loose housing. During this season they are provided with hay and other forages which have been cut and stored. Cattle have a thick coat of hair meaning that they can live comfortably outdoors year-round as long as they have a good supply of feed and water, and adequate shelter. There are three segments in the Canadian beef industry – cow-calf, backgrounders and feedlot.

Photo Credit: Elizabeth Johnston

Beef cows and calves typically live on pasture during spring, summer and fall with a diet composed mostly of grasses. During the winter months, calves that are not being kept for breeding stock are 'background' fed a diet of hay and forages with a small amount of grain. When they reach a weight of approximately 360 to 460 kilograms (about 800 to 1000 pounds), they are usually moved to penned yards or barns called feedlots. Once in the feedlot, cattle are gradually transitioned from a diet of mainly forages to a higher-energy diet of grains like barley or corn, hay or corn silage (chopped and naturally fermented plants), minerals and hay. This diet contributes to marbled, higher quality grades of beef.

Research It!

What is marbling in beef and why is it important?

Discuss it!

What other factors, other than the type of nutrition a beef animal receives (grains fed vs. grass fed), can make a difference in how the beef on your plate tastes?
Hint: factors could include the type of beef cut, cooking method and breed of cattle.

Some beef is marketed as grass fed beef. The means that the animal lived on a pasture for some or all of its life until it reached market weight. Generally speaking, beef from grass fed animals can be leaner by comparison with grain fed beef but in terms of nutritional value, research has shown the difference between grass and grain fed beef is small and makes little to no difference in the health benefits of one's overall diet.

Canada's major beef cattle breeds include Aberdeen Angus, Charolais, Hereford, Simmental, Limousin, Maine-Anjou, Salers, Gelbvieh and Shorthorn.

All beef cattle in Canada must have an RFID (Radio Frequent Identification) tag in their ear for traceability. Led by the Canadian Cattle Identification Agency (CCIA) Canada's traceability program is designed and developed for the containment and eradication of animal disease. The Canadian Cattle Identification Program is the only national cattle identification program in North America.

Canada is one of the largest exporters of red meat and livestock in the world, exporting around 45 per cent of Canadian beef and cattle production each year. The Canadian beef industry ships to 56 countries but is reliant on the U.S. for 75 per cent of all beef exports. The next largest export markets are mainland China & Hong Kong (8%), Japan (6%), Mexico (4%) and South Korea 2%, accounting for 96 per cent of total export volumes. All other markets together represent the remaining 4 per cent of Canadian beef exports.

Canada's beef consumption averaged around 880,000 tonnes in 2015 and 2016. Canadian consumers purchase about 18 kilograms (39.6 pounds) (retail weight) of beef per person per year.

Check It Out!

Take a virtual tour of an Ontario Beef farm by visiting: www.FarmFood360.ca

Statistical source: Canadian Cattlemen's Association *http://www.cattle.ca/cca-resources/industry-stats/*

Experience the Beef Industry - Farm Tour

Find out the answers to the following!

- Why did you choose to be a beef farmer?
- Why have you chosen this type of housing?
- Do you use growth hormones in your cattle? Why or why not?
- Think of your own questions!

DAIRY CATTLE

The Canadian dairy industry is a strong and viable industry in Canada. In Canada, 98% of dairy farms across Canada are family-owned and operated. Dairy farms can be found in each province across Canada with a large concentration (81%) located in Ontario and Quebec, 13% in the Western provinces and 6% in the Atlantic provinces. The average Canadian dairy farm milks 73 cows.

Statistics Source: Holstein Canada *https://www.holstein.ca/*.

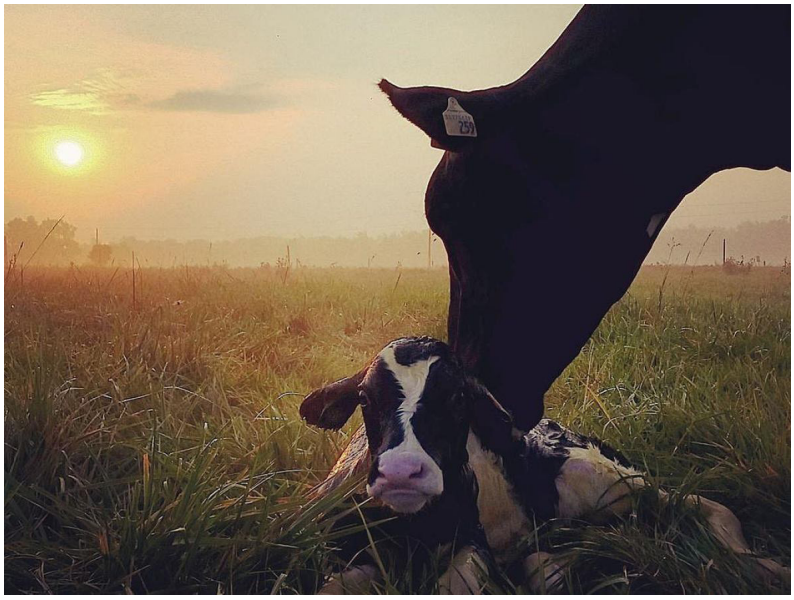


Photo credit: Andrew Campbell

The dairy industry in Canada is represented by the Dairy Farmers of Canada (DFC), a national lobbying organization. Founded in 1934, DFC has now come to be responsible for the policy, marketing (supply management), nutrition, and market research activities relating to milk production in Canada.

In 2018, there were 10,593 farms that had milk shipments. Of this number, 3534 farms were in Ontario. *Source: Canadian Dairy Information Centre* *http://www.dairyinfo.gc.ca*

Research it & Discuss It!

Today, the average dairy cow produces 8,830 litres of milk each year. Find out how much a dairy cow produced in 1970 and compare the numbers. If there's a difference in numbers, discuss what factors have caused this change in production.

Dairy breeds, cows raised to produce milk, are leaner with less muscling than beef breeds as they put their energy into making milk. The six most common dairy breeds in Canada are:

- Holstein
- Jersey
- Ayrshire
- Brown Swiss
- Guernsey
- Milking Shorthorn

Holsteins are the most popular breed of dairy cow in Canada.

Canadian dairy cows live in one of three types of barns:

- **Tie Stall** – in these barns, there is an individual stall for each cow with bedding and free access to food and water. The cows are milked by machines in their stalls. Milk flows through a pipeline in the barn directly into a milk tank.
- **Free Stall** – in these barns, the housing is more open and cows can move around freely with free access to food and water. Cows go to a central milking area two or three times a day to be milked. The central milking area is called a parlour and can be a stationary or rotary parlour.

– **Robotic Barn** – in these barns, the cows typically have free stall housing. But, instead of being milked at the same times each day, the cows can go any time at will to a station where they are milked and fed automatically. The station (also called a robot) tracks how many times a day each cow has been milked and how much feed it has eaten.

What do dairy cattle eat?

Dairy cattle eat a variety of feed stuffs including haylage (chopped wet hay), silage (chopped wet corn), grains (including corn, barley and wheat) and dry hay. The combination of these feeds is typically formulated by a feed nutritionist in consultation with the farmer.

Some dairy farmers will pasture their cattle in spring, summer and fall. When it rains or is too hot though, cows generally prefer the comfort of a cool, well-ventilated barn.

Calf Hutches

These are used by dairy farmers to individual house dairy heifer calves. They allow farmers to be able to monitor and care for calves when they are young and their immune systems are not fully developed. Hutches help to keep calves comfortable and protected with farmers providing extra milk, feed and bedding in cold weather. As the calves grow to become older and stronger, they move from the hutches to live in groups with other calves. Once they are old enough, these calves become members of the farm's milking herd.

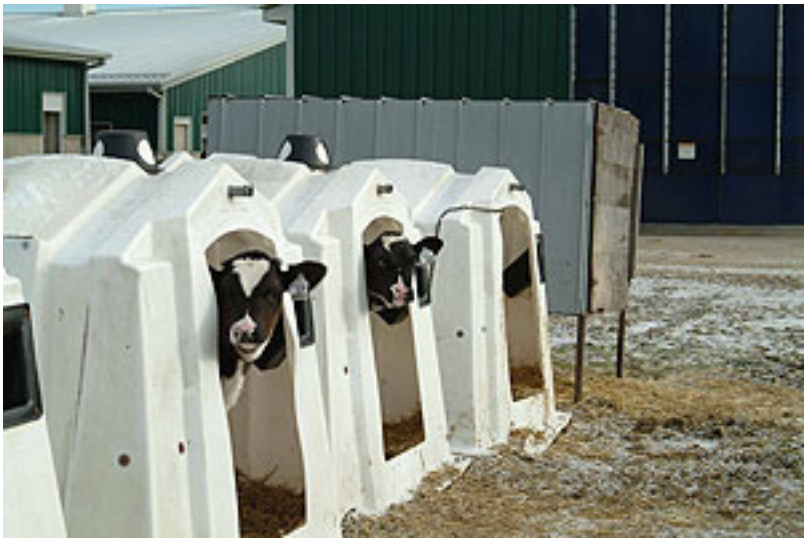


Photo Credit: http://calfcare.ca/calf-housing/

Quota System (Supply Management) for the Dairy Industry in Canada

Total Quota is the national milk production target for Canada. The Canadian Dairy Commission (CDC) calculates Total Quota monthly on behalf of the industry, according to the methodology determined by the Canadian Milk Supply Management Committee. This target is expressed in kg of butterfat and is constantly monitored and adjusted when necessary to reflect changes in demand and supply. National quota is allocated each month to regional pools (in Ontario national quota is allocated

Check It Out!

Take a virtual tour of an Ontario Dairy farm by visiting: www.FarmFood360.ca

to Dairy Farmers of Ontario). Each regional pool then issues its share of the Total Quota to producers according to its own policies and pooling agreements.

Source: Canadian Dairy Commission *http://www.cdc-ccl.gc.ca/*

Each dairy producer in Canada must have quota in order to sell and ship milk from their farm. Each farm needs to have enough quota (kg) to cover the amount of milk being produced by the cows on that farm.

Experience the Dairy Industry - Farm Tour

Find out the answers to the following!

- Why did you choose to be a dairy farmer?
- Why have you chosen this type of barn and method of milking?
- Why are dairy calves taken away from their mother soon after birth?
- Think of your own questions!

VEAL CALVES

Veal calves (typically bulls) are the male offspring of dairy cows. They are raised for meat since they cannot produce milk. There are two types of veal production in Canada:

- Grain-fed veal cattle eat a milk-based diet when they are young before being switched to grain and fibre. Grain-fed veal cattle are brought to market once they reach a weight of approximately 296 to 318kg (650 to 700 pounds)
- Milk-fed veal cattle are raised primarily on a milk-based diet although some grain and fibre is also included. Milk-fed veal cattle are brought to market once they reach a weight of 205 to 227kg (450 to 500 pounds).

Photo credit: Veal Farmers of Ontario https://ontarioveal.on.ca/

To prevent sickness and to promote health, some veal cattle are raised in an individual stall (for example, hutches) during the first weeks of their life. Then, they move into group housing.

Health and welfare of veal animals are a top priority for farmers, with on-going research taking place to continue to help farmers. The national Code of Practice for the Care and Handling of Veal Cattle was recently updated and can be found at: https://www.nfacc.ca/codes-of-practice/veal-cattle.

Ontario and Quebec are the largest Canadian producers of veal because they also have the greatest number of dairy farms. Combined, Ontario and Quebec account for approximately 97% of Canada's veal production. Ontario veal production represents approximately 45% of this total and Quebec the other 52%.

Experience It!

To take a virtual tour of two Canadian veal farms, visit www.FarmFood360.ca

Check It Out!

The Veal Farmers of Ontario has a series of videos on various aspects of Veal cattle welfare. The videos can be found at: https://ontarioveal.on.ca/calf-welfare-videos/

Experience the Veal Industry - Farm Tour

Find out the answers to the following!

- Why did you choose to be a veal farmer?
- Why have you chosen this type of veal farming (milk fed or grain fed)?
- Why have you chosen this type of housing?
- Think of your own questions!

GOATS

Similar to cattle, goats can be raised for meat or for milk production. Dairy goats live in barns and have a regular milking routine, just like dairy cows. One goat produces about 3 litres of milk per day. A dairy cow produces about 30 litres a day. This means it takes ten goats to produce the same amount of milk as one dairy cow.

For people with allergies or intolerances to cow's milk, goat milk can provide a great alternative. The variety and availability of goat milk products continues to grow from milk to cheese to ice cream.

Goats raised for meat live on pasture fields but still need protections from extreme temperatures and predators.

Photo Credit: Ontario Goat https://ontariogoat.ca/

Research It & Discuss It!

The pupil of a goat's eye is rectangular, unlike that of humans and almost all other animals who have round pupils. Does this change how a goat sees the world? Do some research to find out how a goat visually sees things. Discuss how this could affect goat management such as housing and handling goats.

According to Statistics Canada, there are approximately 230,000 goats on almost 5627 farms in Canada. Ontario has the most goat farms in Canada, followed by British Columbia and Alberta.

Check It Out!

Take a virtual tour of a Dairy Goat farm by visiting Ontario Goat at: https://ontariogoat.ca/

Experience the Goat Industry - Farm Tour

Find out the answers to the following!

- Why did you choose to be a goat farmer?
- Why have you chosen this type of housing?
- What is the biggest challenge with goat farming?
- Think of your own questions!

SHEEP

Sheep can be raised either indoors or outside. Some are kept on pasture year-round with farmers supplying them with hay and grain during the winter. Other sheep farmers (also called shepherds) prefer to keep flocks in the barn so they can pay close attention to lambs and to keep predators at bay. Most farms use a mix of both systems.

The majority of a sheep's diet is forages - pasture and hay that can include grasses, alfalfa, and clover. Sheep often graze on land that can't be cultivated for human food production.

There are many different production systems for sheep and for each unique production system, farmers select different kinds of sheep that will match their farming conditions. Some of the most popular breeds in Canada include Suffolk, Dorset, and Rideau Arcott.

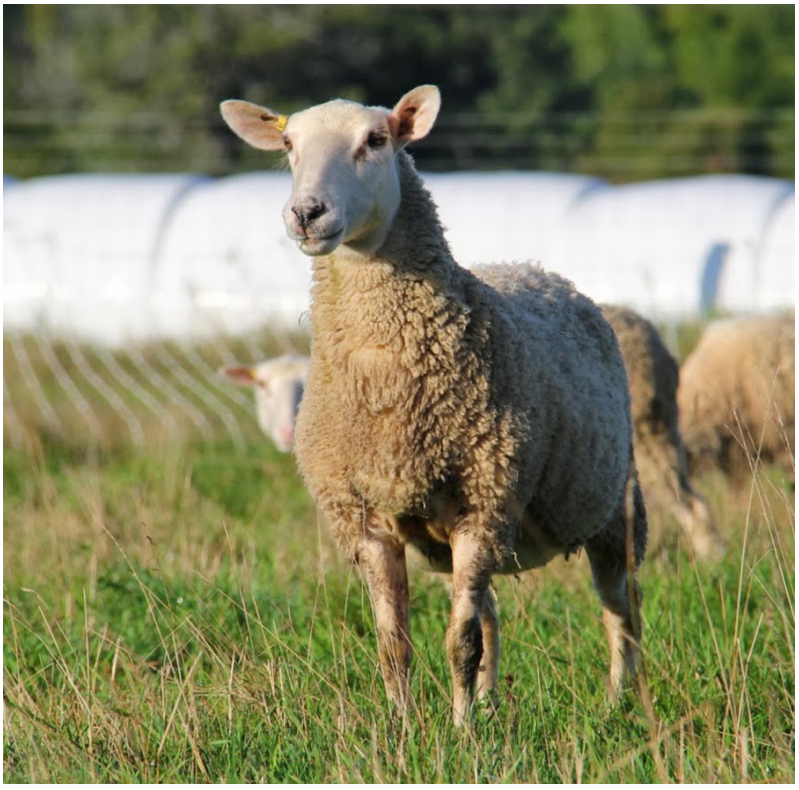


Photo credit: Ontario Sheep Farmers https://www.ontariosheep.org/

Similar to cattle and goats, sheep can be raised for milk or meat production but where sheep differ is that they are also raised for fibre (wool) production. A sheep may give up to two litres of milk per day, which is mostly used to make specialty cheeses. The sheep milk industry is relatively new in Canada compared to other parts of the world.

Check It Out!

Take a virtual tour of an Ontario Sheep Farm at: www.FarmFood360.ca

Sheep are usually shorn in the spring to keep them cool for the summer. For most farmers, selling the wool of sheep makes just enough money to cover the cost of shearing. Farmers wanting to make a profit from it have specialty sheep breeds or process wool and sell products from it such as yarn.

The majority of lambs in Ontario are raised for meat. A full-grown sheep weighs between 70 and 125kg (154 to 275 pounds). Mutton comes from sheep greater than one year of age.

In 2018, there were 324,000 sheep and lambs on farms in Ontario. Grey County led the way with the most (31,027) followed by Huron and Bruce counties.

Experience the Sheep Industry - Farm Tour

Find out the answers to the following!

- Why did you choose to be a sheep farmer?
- Why have you chosen this type of housing?
- What is the biggest challenge with being a sheep farmer?
- Think of your own questions!

NON-RUMINANTS

PIGS

Pigs are omnivores (they eat a diet of animal and plant origin) and they were originally kept on the farm to make good use of the feed scraps from the household, barnyard and fields.

Today's commercially raised pigs are fed grain-based, nutritionally balanced rations that are often in a pelleted form, similar to dog kibble. These complete rations are typically based on

corn, soybean and barley with vitamins and minerals added to balance dietary requirements for each stage of growth and reproduction.

Photo credit: W-S Feed & Supplies Ltd. http://www.wsfeeds.ca/

In general, pigs in Canada live in specifically-designed barns with fans or curtains that can be opened to help control temperature and humidity. To keep pigs healthy, pig farmers typically have strict biosecurity rules in place so that diseases are not brought into the barn (sickness spreads more easily through pigs and poultry than with certain other farm animals). Farmers keep track of who is coming to their farm and what they might be bringing with them – for example, vehicles or equipment. Anyone entering the barn may be asked to put on protective footwear and clean overalls. At some farms, people are asked to shower in when entering the barn and shower out when leaving the barn.

Check It Out!

Take a virtual tour of an Ontario swine (pig) farm by visiting: www.FarmFood360.ca

For more videos check out Ontario Pork's videos at: http://www.ontariopork.on.ca/Communications/Videos

There are typically three types of pig barns:

- **Sow/Farrowing barns** – sows are female pigs that usually give birth to eight to twelve piglets in a litter. Sows give birth (called farrowing) twice a year. Sows are put in special farrowing pens just before giving birth and remain there while they nurse their piglets to about three weeks of age.
- **Weaner barns** - from three to twelve weeks of age, young (weanling) pigs still require warmer facilities than the older pigs. They are kept in small groups, in barns or pens, at warm temperatures designed for weanling pigs as they grow from 7 to 37 kg (15 to 81 pounds).

– **Finishing barns** - from 12 weeks of age to six months old, barrows (neutered males) and gilts (young females) are sorted to pens according to their size, gender and temperament, where they will grow to reach a market weight of 100-110 kg (220 to 484 pounds).

Pig housing types vary, with group housing barns becoming more popular. Pigs can be raised indoors or outside but since most breeds don't have fur or wool coats to keep them warm, Canada's cold winter weather makes it difficult for them to live outdoors all year long.

The most popular commercially raised pigs in Ontario are crossbred (incorporate two or more purebred lines) mainly descended from Landrace & Yorkshire lines. They are usually pink but they do come in other colours, for example, black and white pigs descend from such breeds as Hampshire and red pigs come from Duroc lines.

In 2018 there were 3,574, 900 pigs in Ontario. Huron County had the highest number of pigs with 687,556 pigs followed by Perth and Oxford Counties.

Experience the Pork Industry - Farm Tour

Find out the answers to the following!

- Why did you choose to be a pig farmer?
- Why are farrowing crates used?
- Why have you chosen this type of housing?
- Why do you have biosecurity protocols in place?
- Think of your own questions!

NON-TRADITIONAL FARM ANIMALS

Canada's growing ethnic communities and a desire by consumers for more diverse food means that some farmers are raising less traditional livestock such as bison, elk and deer, especially in Western Canada where the majority of these animals live. These animals are mainly raised for meat but antler velvet from elk and deer is an ingredient in holistic medicines which are produced in North America for export to Asian countries.

Llamas and alpacas are raised for their wool which is prized for its cashmere-like softness.

Experience the Non-Traditional Farm Animal Industry - Farm Tour

Find out the answers to the following!

- Why did you choose to raise this type of animal?
- Why have you chosen this type of housing?
- What type of market is available for your product?
- Think of your own questions!

AQUACULTURE

Also known as fish farming, aquaculture is the aquatic form of agriculture. Since Canada has the world's largest coastline, the world's largest fresh water system and the world's largest tidal range, aquaculture is a natural fit in Canada.
Most farmed fish are raised in natural water areas but some are also grown in large tanks on inland fish farms. The water in those tanks is recycled and fish manure and unused nutrients can be collected and used in compost as fertilizer.

Photo credit:
Aquaculture Magazine https://aquaculturemag.com/2017/10/24/fish-farming-done-responsibly/

Canadian fish farmers raise more than a dozen types of fish and shellfish. The main three species of finfish raised are salmon, rainbow trout (steelhead) and arctic char. Mussels and oysters are the most common types of shellfish farmed in Canada while clams and scallops are also produced in smaller amounts. Some Canadian farmers have begun raising shrimp.
Not surprisingly, British Columbia leads the way in salmon production.

Experience the Fish Industry - Farm Tour

Find out the answers to the following!

- Why did you choose to be a fish farmer?
- How do you market your fish when they are ready for market?
- What is the biggest challenge of being a fish farmer?
- Think of your own questions!

HORSES

Horses have a special stomach that allows them to thrive on a diet of grasses, hay, oats, corn or barley. They can also exist on drier plants, such as scrub brush and trees if they must.
Most horses in Canada are used for recreational purposes but there are still many working horses on ranches that play a valuable role in helping to move and manage livestock as well as working horses for people of certain religions who use horses for transportation and farm work.

Experience the Horse Industry - Farm Tour

Find out the answers to the following!

- Why did you choose to have horses on your farm?
- Why did you choose this type of housing for your horses?
- What is the biggest challenge with raising/caring for horses?
- Think of your own questions!

Judge It!

Choose 4 of the same animals and judge the animals based on criteria found on a scorecard for that particular animal. If you need to find a scorecard, visit the 4-H Ontario website and check out the 4-H Judging Toolkit.

HORMONE USE IN LIVESTOCK

Hormones are naturally occurring in animals, humans and plants. They are used by the body to regulate bodily functions and behaviour.

In Canada, growth hormones have been safely used in beef cattle since the 1960s to direct growth toward muscle, rather than fat, which means less feed is needed for an animal to gain weight. This in turn means fewer resources like water, and fuel are needed for an animal to grow. Farmers choose to use hormones in beef cattle because they can safely raise their animals using fewer resources, which in turn decreases their environmental footprint and reduces cost. In Canada, growth hormones are only approved for use in beef cattle. Hormones are not used in pork or poultry production. In some countries, like the United States of America, growth hormone (bovine somatotropin (BST)) is used in dairy cattle to increase milk production. It is illegal to use it in Canada for dairy cattle.

No documented harmful or negative effects have ever been reported in people after consuming meat from animals treated with any hormone or hormone-like substances, when used according to the product label.

The use of added hormones in livestock production is considered safe by a number of independent, scientific organizations including Health Canada.

Source: Canadian Animal Health Institute *https://www.cahi-icsa.ca/hormones*

Research It!

Find out if growth hormones help a beef animal to convert feed to pounds more efficiently than a beef animal that hasn't received any growth hormones. If possible, look for research that also proves or denies claims that growth hormones cause the meat to be tougher in texture.

LIVESTOCK VACCINATIONS

Vaccinating animals to prevent common diseases is a practice used by both pet owners and livestock producers. They are the safest and most effective way to prevent disease. Planning ahead gives maximum protection. A vaccination program should be completed a week or two before exposure.

For livestock, vaccines should be used within a veterinarian-client-patient relationship and may be given by the veterinarian or the farmer depending on the situation.

Vaccines are developed to help provide immunity against a specific disease. Depending on the needs of your animal, a veterinarian may prescribe one or more vaccines which may be given together or following a schedule. Sometimes a booster, or second dose, is needed to increase immunity to the level needed to protect against disease.

Veterinarians are able to select from a broad range of vaccines developed to help prevent or reduce the severity of specific diseases that threaten animals. All vaccines offered for sale in Canada must be registered with the Canadian Centre for Veterinary Biologics at the Canadian Food Inspection Agency.

Source: Canadian Animal Health Institute *https://www.cahi-icsa.ca/vaccination*

Debate It!

There is quite a debate in the general public about the use of vaccinations. Divide your group into two – one that is for using vacations and one that is against using vaccinations. Each group needs to provide an argument to defend their stance and be ready to answer questions from the group that thinks the opposite of their group.

ANTIBIOTIC USE IN LIVESTOCK

Antimicrobials are a class of drugs that veterinarians and farmers use to prevent and treat bacterial disease. The terms “antimicrobial” and “antibiotic” are often used interchangeably, but there is a difference. Antibiotics, along with antifungals, biostatics, antiseptics and disinfectants are all subtypes of antimicrobials.

WHY ARE ANTIMICROBIALS NECESSARY?

Antimicrobials are used in one of four ways:

1. **To treat disease**
   This can range from an outbreak of diarrhea in a new group of young calves to treating an abscess on a cat’s tooth.
2. **To control disease**
   This involves the use of antimicrobials to reduce the spread of a specific disease to others after an animal in the herd or flocks has been infected.
3. **To prevent disease**
   This approach, when used under veterinary oversight, can be a responsible and safe way to promote animal health and welfare. Regardless of the type of livestock farming (e.g. conventional, extensive, grass fed, free run), farm animals are usually housed in groups. Within groups of animals, or people, there is usually a certain number that will have some form of illness - whether they are showing symptoms yet or not. Typically, for a short duration such as during times of high stress for an animal (e.g. following transportation, weaning), an antimicrobial is provided.
4. **To promote growth**
   In 2014 members of the Canadian Animal Health Institute agreed to approach Health Canada’s Veterinary Drugs Directorate to voluntarily remove production enhancement or growth promotion claims from all medically important antimicrobials used in human medicine. This policy went into effect on December 1, 2018.

Source: Canadian Animal Health Institute *https://www.cahi-icsa.ca/antibiotics*

ANTIBIOTIC WITHDRAWAL TIMES

This is defined as the recommended minimum time between the last use of an animal health product (antimicrobial) and the slaughter of an animal for food or the harvesting of milk or eggs from treated animals or birds for human consumption.

Failure to follow antibiotic withdrawal times can result in drug residues in meat, milk, eggs, honey or other products of animal origin. Farm products are routinely tested for drug residues and farmers must strictly adhere to the recommended withdrawal times and keep accurate records of all antibiotic treatments of animals. Failure to do so can result in fines to the farmer but even more serious, can jeopardize the safety of the food system.

Check It Out!

Where can a farmer purchase antibiotics for their farm? The rules have changed in Ontario. Find out what those rules are and where antibiotics are available in your community.

TOP TIPS FOR TALKING ABOUT AGRICULTURE

SPEAK URBAN

Most people you will meet, whether media or politicians, consumers attending your local fair or children in the classroom, will have little or no knowledge of agriculture and will not understand industry jargon. It is important to always talk in their language not ours. This may mean substituting words they'll understand (ie. birthing instead of farrowing) or as it sounds. You will have to make a conscious effort to use words and phrases which are familiar and understandable to non-farmers.

BRING IT HOME

Many people cannot relate very well to farming animals, so it helps to make things personal. Show people what it means for them, in terms of their food, or jobs, or our environment. Use "every day" comparisons that non-farmers can relate to and are familiar with.

CATCH THEIR INTEREST

Because people limit their attention to what is interesting or important, packaging and presentation are crucial. Make it fun with trivia games or "hands-on" activities; make it interesting with props (i.e. animals, feed samples, by products displays or farm tools) or interesting facts and figures; make it important with catchy slogans or eye appealing graphics and photos.

KEEP IT SHORT AND SIMPLE

Avoid technical detailed explanations. Keep your presentations/explanations short and simple. People who want to know more will keep the questions coming.

BE SPECIFIC

It is important to point out every farm or business may do things a little different. Not better or worse, just different. Talk about what YOU do on YOUR farm or business. Whenever possible, leave generalized "industry" statements to industry groups and governments. When making general statements, never talk absolutes and always quote your source. (i.e. "According to xxx, most Canadian farms. . .")

BE YOURSELF

Talk about what you know and stick to the subject matter that you are comfortable with. If someone asks a question that you're unsure or uncomfortable about answering, refer them to someone qualified to answer, or offer to find the answer for them. It's always better to admit that you don't have an answer than to give the wrong information. Be sure that you do follow up on questions you cannot answer.

STICK TO THE FACTS

Agricultural awareness begins at home, so do your homework and stay on top of changing trends in your industry. We all have personal opinions, but it's best to leave yours at home so others can make their opinions based on facts.

BE PREPARED

Keep a record of common and not so common questions. Spend time researching and refining your answers. Farm and Food Care Ontario (www.FarmFoodCareON.org) and Ag More than Ever (www.agmorethanever.ca) are two top sources.

RESIST POINTING FINGERS

Avoid deflecting criticism or criticizing someone else to make you or your sector look good. A negative approach only reflects badly on you and hurts everyone in the industry.

EXPAND ON YOUR EXPLANATIONS

Always explain WHY things are done (or not done), not just HOW. Explain what would/could happen if things were done differently or not done at all.

PUT THINGS INTO PERSPECTIVE

Comparing past and present, alternative methods, costs and benefits (trade-offs), or drawing parallels to everyday life all help people see a more complete picture.

TAP INTO CHILDREN

Children can provide great access to adults. Since children are naturally less inhibited than adults, encourage children to ask questions. Be prepared, children can also ask tougher questions. Provide answers that both they and the adults can understand.

Talk About It!

Meet Tim May. Tim is a passionate dairy farmer in Wellington County in Ontario. Tim has become a social media sensation with over 30,000 followers. Read his story and learn what stories he shares. Why is Tim so successful?
https://www.agriculturemorethanever.ca/from-the-team/agvocate-profile-tim-may/#.W8U_q_YpDIU

AT HOME ACTIVITY

ANIMAL AGRICULTURE INDUSTRY EDUCATIONAL VIDEOS

Videos have the ability to let people have an insight into the agriculture industry, sometimes when in-person access to barns isn't allowed, mainly for biosecurity reasons. Search the Internet for videos other than the ones listed in this meeting from other reputable agricultural livestock organizations (within Canada and abroad) that portray livestock agriculture in a good light.

There are also videos available on the Internet produced by individuals such as the Peterson Brothers that help to educate the general public about everyday agricultural practices using music parodies. Search the Internet to watch one of these videos.

Be sure to keep a list of these videos and be prepared to share one of these videos at a future meeting.

DIGGING DEEPER

For Senior Members

INSECT FARMING

In Canada, some farmers are now raising insects. Crickets and other insect species are a major source of protein in human and animal diets in some parts of the world. Over two billion people eat insect protein every day. Insect-based products, from baking flour to nutrition bars and pasta sauces are starting to appear in Canadian stores and restaurants.

North America's largest cricket farm, Entomo Farms, is located near Peterborough, Ontario where the insects are raised in 'cricket condos.'

There are many reasons, in addition to eating insects as a protein source, that one might choose to include crickets or other types of insects in their diet. Research and find out at least two other reasons.

Find at least one recipe that includes insect-based product(s) in it. Include the recipe in your Record Book.

Additionally, find out if anyone in your area sells insect-based products that can be used for human consumption. If so, prepare a recipe to be shared at the next club meeting.

ACTIVITY 1: THINK ON YOUR HOOVES!

DO	Time: 20 minutes Materials Needed: – No materials required Instructions: – Divide the group in two – Have each group line up so that the first person in group one is facing the first person in group two. The rest of each group should be lined up behind the first person in their group. – Choose a topic/question related to livestock agriculture that can have a long list of answers. Examples include: o Types of farm animals o Anatomy of a farm animal (pick a specific animal, e.g. pig) o Type of feed that a farm animal eats o Breeds of a specific animal (e.g. beef breeds – Hereford, Angus, Charolais) – The first person in group one must say an answer. Once they have answered they go to the back of the line of their group. The first person in group two then says an answer and they go to the back of the line of their group. There is a ten second time limit to answer. This continues until someone cannot come up with an answer. The activity is then over and the other team wins. The idea is to keep moving quickly so that everyone has to keep thinking on their feet (hooves). – If doing this activity with younger members, allow members to be able to get one 'help' from their team if they cannot come up with an answer. A 'help' can only be used once by each team member in a round.
REFLECT	Learning Outcomes: To allow members to practice thinking on their feet while also testing themselves on an aspect of animal agriculture.

APPLY	Processing Prompts: – Why is it important to be able to think on your feet? – Was this activity easy or hard? Why? – Would it have been easier if you were able to work as a team to come up with answers rather than as individuals? – Are there other topics related to animal agriculture that you can think of to add to the list?

ACTIVITY 2: ROLE PLAYING – ANIMAL AGRICULTURE ISSUES

DO	Time: 20 minutes Materials Needed: – Small pieces of paper with controversial animal agriculture statements on them Instructions: – Have members work in pairs (or in groups of three if there is a large group) – Have each pair work with another pair – One pair in the group will read the statement. The other pair have 10 seconds to come up with a rebuttal/ response (depending on the group, this time frame may need to be longer). The first pair can then pose a question or statement to defend the original intent of the topic of their statement to which the second pair can respond with either a rebuttal or question. The conversation/debate is to continue for five minutes with the first pair defending their topic and the second pair questioning it. – Question could include o No hormones should ever be used in beef cattle o It is cruel to take a dairy calf away from its mother the same day it is born o Farrowing crates should continue to be used for years to come o All laying hens should be free-range outdoors o Everyone in the world should switch to veganism o No antibiotics should ever be used in food producing animals o Milking a cow is cruel and should be outlawed – After five minutes, switch up the groups and start again with a new statement. NOTE: the entire club could work in groups on statements all at the same time or, two pairs can role play their question with the rest of the group watching to see the various arguments given to defend the topic.

REFLECT	Learning Outcomes: To allow members to become more comfortable handling difficult conversations when being faced with a controversial statement about animal agriculture
APPLY	Processing Prompts: – Why is it important to practice discussing controversial statements? – Was it hard to keep calm when discussing these statements? Why or why not? – Why is it important to stay calm when discussing these statements? – Do you think it would be harder to handle these conversations if you were alone rather than having a partner to help? – Can you think of other controversial statements related to animal agriculture that could be added to the list?

Meeting 3 – Poultry Care

SETTING OBJECTIVES

The poultry industry is an important sector of agriculture. Understanding how the poultry industry works is essential to being able to discuss how this industry produces poultry products and why recent changes have been made within the industry.

Suggested Lesson Outcomes

- To be able to understand turkey, chicken and egg production
- To be able to talk comfortably about the poultry industry
- To have an understanding of how the poultry industry contributes to agriculture in Canada

ROLL CALLS

- Name one field crop grown in Ontario.
- Name a fruit or vegetable grown in Ontario.
- What do you think is the biggest issue facing crop production in Ontario? in Canada?

SAMPLE MEETING AGENDA TIME: 2 HOURS

Welcome, Call to Order & Pledge		10 min
Roll call		5 min
Parliamentary Procedure	Minutes & Business	10 min
Topic Information, Discussion & Activities	Topic Information – Poultry Production in Canada – Turkey Production – Chicken Production – Being a Good Listener Activity #1 Grocery Store Flyers Search Activity #2 As the Crow Flies	40 min 20 min 20 min
At Home Activity	The Cost of Quota for Poultry	5 min
Wrap up, Adjournment & Social Time		10 min

POULTRY PRODUCTION IN CANADA

Poultry farmers in Canada typically raise either turkeys, chickens raised for meat (called broilers) or laying hens. However, there are also a small number of farms producing various types of birds for food production such as ducks and geese.

Did You Know?

A chicken sneeze is called snicking!

Turkeys and chickens raised for meat always roam freely around the barn. They're housed in modern barns where temperature, humidity, light and ventilation are carefully monitored to ensure that the birds stay healthy. The barn floor is covered with a soft bedding material of straw or wood shavings. Water and pelleted feeds made of grains such as wheat, corn and soybeans are always available so the birds can help themselves any time they want. This feed system is called free choice.

Most poultry farmers put all their new birds into the barn at the same time. This makes sense from both a logistics and disease prevention perspective as the entire flock will be shipped to market on one day. The barns are then cleaned out and all bedding and manure are removed to get ready for the next flock, helping to keep the new birds healthy. Disease prevention is always preferred over disease treatment.

Poultry farmers are expected to meet or exceed the national standards outlined in the National Farm Animal Care Council's Code of Practice for the Care and Handling of Hatching Eggs, Breeders, Chickens, and Turkeys. The Code of Practice promotes sound management and welfare practices through recommendations and requirements for bird health and well being. It can be found at: https://www.nfacc.ca/codes-of-practice/chickens-turkeys-and-breeders

Experience It!

If biosecurity protocol allows, visit a turkey, chicken or laying hen farm in production. Or, visit one of these barns in-between flocks being in the barn when the barn is empty.

TURKEYS

In 2017, there were 542 regulated turkey producers in Canada. Turkey Farmers of Canada (TFC) is a national organization representing Canada's turkey farmers. Created in 1974 under the federal Farm Products Agencies Act, the Agency encourages cooperation throughout the Canadian turkey industry, promotes the consumption of turkey meat, and oversees the supply management system for turkey farms in Canada.

Photo credit: Clair Doan

Day-old turkeys (poults) are placed in climate-controlled barns where they are kept warm and given special care immediately upon their arrival from the hatchery. This first stage of their life, from the time they are placed in the barn to five-six weeks of age, is called brooding.

The next stage, known as the growing cycle, runs until the birds grow to between 11 and 17 weeks of age, when they will reach their desired market weight. Hens (females) are typically grown for the whole bird market, while toms (males) are more likely to be grown for the further processed market (though some are sold as whole birds).

In Canada, turkeys are not given hormones or steroids. These have been prohibited for over 30 years. Scientific advancements such as selective breeding, better feed formulation and on-farm management practices are responsible for the larger, healthier turkeys raised today.

Discuss It!

Added hormones aren't allowed for use in poultry but they are still allowed in the beef industry. Why do you think that is?

CHICKENS

Chickens in Canada are raised either for meat or for egg production. Both types of production are governed by a supply management system. This allows for controlled production of both chicken and eggs based on consumer demand.

In Canada, chickens are not given hormones or steroids.

CHICKEN FOR MEAT PRODUCTION

There are 2800 farmers producing chicken in Canada with 1300 of those farms in Ontario. 61% of the chicken produced in Canada is produced in Ontario and Quebec.

Hatchery

Hatcheries purchase fertilized eggs from hatching egg producers. Hatcheries are registered with the Canadian Food Inspection Agency (CFIA), and they must abide by the Hatchery Regulations. The regulations govern the cleanliness of the hatchery, which is especially important to keep the incubators free of pathogens that might cause the chicks to become ill or result in foodborne illness.

When they arrive from the hatching egg farm, eggs are placed in incubators where they are kept warm and automatically turned gently at regular intervals. Eggs hatch around the 21-day mark. The incubators, or hatchers, are then opened to reveal thousands of chicks who have pecked their way out of their shells. The remainder of the yolk sac, that fed the growing chick during incubation, has now been absorbed into the chick's body and provides it with adequate nourishment for the first 72 hours of life.

Did You Know?

Fertilized eggs are not like the ones you get at the grocery store. The grocery store eggs are unfertilized and come from hens raised specifically to lay eggs for human consumption. Fertilized eggs that hatch into chicks raised for meat production are called broiler hatching eggs.

At the hatchery, the chicks can be vaccinated to protect them from common poultry diseases.

It is really important that the chicks are kept warm and protected from any drafts as they are readied for transport. They are carefully placed in clean and disinfected crates, free of any sharp edges that might injure them. Once in the crate and on the clean, climate-controlled transport truck, they are ready for the journey to their new home.

Photo Credit: Let's Talk Chicken https://letstalkchicken.ca/

CHICKEN BARN

Although a chicken barn is usually fairly large, farmers section off a portion of it for the new chicks. Less than 48 hours old, the young hatchlings must be kept warm and heat lamps placed close to the ground will be used to keep them comfortable. Once the chicks arrive, the crates are gently tipped over, below knee height, and the chicks quickly begin exploring their new surroundings while learning where the feed and nipple drinkers are located.

Experience It!

View a chicken barn in action by visiting: https://letstalkchicken.ca/farm-to-table/chicken-farm/ Video courtesy of the Alberta Chicken Producers

Temperatures are checked several times a day during these delicate first two weeks to make sure these little birds are getting the heat they need to be comfortable and thrive.

Photo credit: Better Farming magazine

After the first two weeks temperatures are gradually brought down because these chickens, now fully feathered, are able to regulate their body heat better than they could as chicks. Even though the chickens are older and stronger, farmers will continue to walk through the barn several times a day to examine the birds' health, check water and feed lines, and ensure the automated, computerized equipment is functioning properly.

On most farms, chickens are ready to be marketed as broilers at about 35 to 36 days of age when they weigh around 2 kilograms (4.4 pounds). Less commonly, birds are marketed as roasters between 45 and 55 days of age when they weigh between 3 and 4 kilograms (6.6 to 8.8 pounds), and smaller birds or Cornish hens may be sold at around 1kg (2.2 pounds).

LAYING HENS

In 2017, there were 1,059 registered egg farms in Canada. Ontario has 36.1% of the federal egg quota allocation in Canada.

In 2017, the average Canadian flock size was 23,225 hens. Canadian egg farms can range from a few hundred to more than 400,000 hens. The average laying hen produces about 340 eggs per year (25.4 dozen). The most popular breed of chicken for egg production in Canada is the White Leghorn. Canadian farmers also raise Rhode Island Reds.

Ventilating Free-run Layer Barn
Photo credit: Canadian Poultry magazine

The egg market is divided into two components, table eggs and processed eggs. In 2017, the table egg market represented approximately 73% of the Canadian market, while the processed egg market accounted for the remaining 27%.

Reach Out!

Invite an egg grader to your meeting to explain what they look for in an egg that is destined for sale in the grocery store.

Canadian laying hens live primarily in five different types of housing systems:

1. **Enriched**
   Hens are housed in smaller, more naturally sized groups with nest boxes, scratch pads and perches to allow them to exhibit natural behaviour. This will be the industry standard in Canada by 2036.
2. **Free run**
   Hens are raised inside barns where they have access to the entire barn floor area but don't go outside. Hens are able to scratch and lay their eggs in nesting boxes.
3. **Free range**
   Hens are raised in barns, with access to outdoor areas when weather conditions allow. Hens are still able to scratch and lay their eggs in nesting boxes.
4. **Aviary**
   Hens are raised inside the barn with several levels on which they perch, feed and drink. They lay their eggs in nest boxes and can access the floor level to scratch and dust bathe.
5. **Conventional**
   Hens live in small groups with equal access to fresh food and water. They have mesh floors that allow the hens' waste to fall away, keeping the birds and eggs clean.

Judge It!

Choose 4 eggs of various shapes and sizes and judge the eggs based on the suitable traits of an egg. Determine those suitable traits by either talking to an egg grader, to an egg farmer or by doing research.

Check It Out!

Visit www.FarmFood360.ca to see videos that showcase the five different types of hen housing and to find out what the labels on the egg cartons mean.

Canadian egg farmers began phasing out conventional housing systems in 2014. Any new barns being constructed, or existing barns being renovated, must follow the new housing standards. In some European countries, where consumer demand led to the end of conventional hen housing, farmers are now trying to address different animal welfare challenges – higher levels of dust and ammonia, cannibalism amount the birds and feather-pecking. Birds can be bullies too, with the stronger birds in a flock dominating the weaker ones by pecking them and controlling access to food and water. This situation is where the expression 'pecking order' originated.

Research is on-going in Canada and around the world to find the best housing solutions for birds, farmers and consumers.

Discuss It!

Some fertile chicken eggs (the eggs we eat are not fertile) are specifically produced to help 'hatch' vaccines in Canadian labs for people and animals. Some vaccine types produced by this method include rabies, influenza, mumps, canine distemper, yellow fever and Eastern equine encephalitis. Discuss how vaccines can be controversial with some people and how you would handle this conversation.

Experience the Poultry Industry - Farm Tour

If you are able to go on a farm tour, find out the answers to the following!

- Why did you choose to be a poultry farmer?
- Why have you chosen this type of housing?
- (if touring a laying hen farm) Do you let your chickens live free-range? Why or why not?
- Do your birds receive medicated feed? If yes, why?
- Think of your own questions!

BEING A GOOD LISTENER

When faced with difficult questions about agriculture, like some of the issues facing the poultry industry such as housing, it can be difficult to be a good listener and it can be difficult to isolate facts in a situation where emotions can override the facts being discussed. Sometimes there can be a temptation to respond with a witty or snarky comment but that response doesn't usually build trust in our food system.

Think about your biggest concern for your family's health or well-being. Imagine if your concerns were simply dismissed. Would that bring you peace of mind? How would people watching the conversation on the sidelines react?

Keep in mind these tips next time you have a potentially heated conversation about agriculture and food:

1. **Listen, listen and listen. Then listen some more.**
   Do you remember the last conversation you had where it felt like the other person truly understood where you were coming from? How did that affect your sense of connection to that person? Building trust matters. Practise active listening by re-framing what you've heard in a respectful way and make sure the other person agrees with your interpretation.
2. **Keep calm.**
   Appreciate someone's concern and genuine interest in food. It's an opportunity for us in the ag industry to listen and connect. Remember that there are often observers evaluating how you handle the situation. In the case of extreme activism or cyber bullying, it's perfectly OK to politely defer or completely exit a conversation.
3. **Dump your assumptions.**
   It's all too easy to lump consumers or "city people" into one category and assume they have certain opinions, experiences and knowledge. Remain curious – you may be surprised what you learn.
4. **Get personal.**
   Connect the topic to your own farm and food story. Why do you do the things you do on your farm, or, in your work in the industry? What are your own concerns as a farmer, a parent, a business owner, a community member? Tie-in your own concerns and experiences to find common points of interest from the listening exercise in the first point.

AT HOME ACTIVITY

THE COST OF QUOTA FOR POULTRY

In order for a farmer in Canada to raise turkeys or chickens (above the minimum number of birds allowed without having to have quota), farmers must have quota to be able to ship their product to market. Find out how much quota costs for laying hens, broilers and turkeys.

Then, based on the average farm size (either in Ontario or in Canada) for farms that have laying hens, broiler chickens or turkeys, figure out how much it would cost for quota for the average size farm.

DIGGING DEEPER

For Senior Members

POULTRY HOUSING

As was mentioned in this meeting, Canadian egg farmers have started phasing out conventional housing systems since 2014. Consider the following questions:

- What are the new standards in place today?
- Why do you think these new standards have been put in place and are they a good thing for the industry?
- Who do you think was the main driver behind initiating this change in the egg industry in Canada?
- Is Canada following what other countries have done or is Canada a leader when it comes to changes in housing for the egg industry?
- Are there other questions that come to mind as you find answers to the above questions?

Be prepared to share your findings with your club and if possible, share this information at school or with a community group not familiar with egg production in Canada.

ACTIVITY 1: GROCERY STORE FLYERS SEARCH

DO	Time: 20 minutes Materials Needed: – Various grocery store flyers Instructions: – Have members work in groups of two or three people. – Give each group at least five flyers to look through. – Have each group look for any poultry on special in the flyers. Find out the country of origin of the chicken. – To expand on this activity, have members look at all types of meat found in the flyer to see if/how much product the store sells that is Canadian.
REFLECT	Learning Outcomes: To create an awareness amongst members to make an effort to look at where their food comes from, to make a conscientious effort to look for Canadian project and to have members think critically about why some of the products may not be Canadian.
APPLY	Processing Prompts: – Were most of the poultry products Canadian? If not, what country were they from? – Was it easy or hard to see/read which country the product was from? – Other than price, what other information did the flyer give about the poultry products on sale? – When looking at the poultry products on sale, would you choose your product you wanted to buy based on price, country of origin, the look of the product, convenience or personal preference? Why did you choose the one you chose? – Why is it important to buy local?

ACTIVITY 2: AS THE CROW FLIES

DO	Time: 20 minutes Materials Needed: – Paper & writing utensil Instructions: This is a variation on the Telephone Game activity. – Have members stand (or sit) in a line. – Have a statement written out on a piece of paper. Depending on the age of the group, the statement should be one to three lines long. – Whisper the statement to the first person in the line. – The first person then whispers the statement to the second person. – This continues on down the line until the statement gets to the last person. – The last person then writes down the statement that they heard. – Have the first person and the last person read the statements written on their pieces of paper.
REFLECT	Learning Outcomes: To allow members to understand how a statement can be changed the more times it is told and why we should not always believe what we hear without researching and asking questions first.
APPLY	Processing Prompts: – Was the statement the last person read close to the statement the first person read? – Do you think the number of people that had to repeat the message made any difference to the final message? – Why is it important not to believe everything you hear? – Do you think this happens in everyday life? Do you have an example of this happening? – What can you do to try to make sure false information isn't spread?

Meeting 4 – Crop Production (Agricultural & Horticultural)

SETTING OBJECTIVES

An understanding of the agricultural and horticultural crop industries in Ontario and the issues surrounding these industries.

Suggested Lesson Outcomes

- To be able to identify what crops are grown in Ontario
- To have a better understanding of pesticide use in agricultural practices and the certification required to purchase and apply pesticides
- To understand what GMO crops are and their impact on agriculture
- To discover more about organic farming
- To improve impromptu speaking skills

ROLL CALLS

- Name one field crop grown in Ontario.
- Name a fruit or vegetable grown in Ontario.
- What do you think is the biggest issue facing crop production in Ontario? in Canada?

SAMPLE MEETING AGENDA TIME: 3 HOURS

Welcome, Call to Order & Pledge		10 min
Roll call		5 min
Parliamentary Procedure	Minutes & Business	10 min
Topic Information, Discussion & Activities	Topic Information – Crop Production in Canada – Pesticide Use on Farms – Conventional and Organic Farming – GMO Crops – Impact of Agriculture on the Environment – Public Speaking Activity #1 GMO Debate Activity #2 DNA Extraction from Egg Yolks Activity #3 Thirty Second Speeches	40 min 30 min 30 min 40 min
At Home Activity	Greenhouse Produce grown in Canada in the winter	5 min
Wrap up, Adjournment & Social Time		10 min

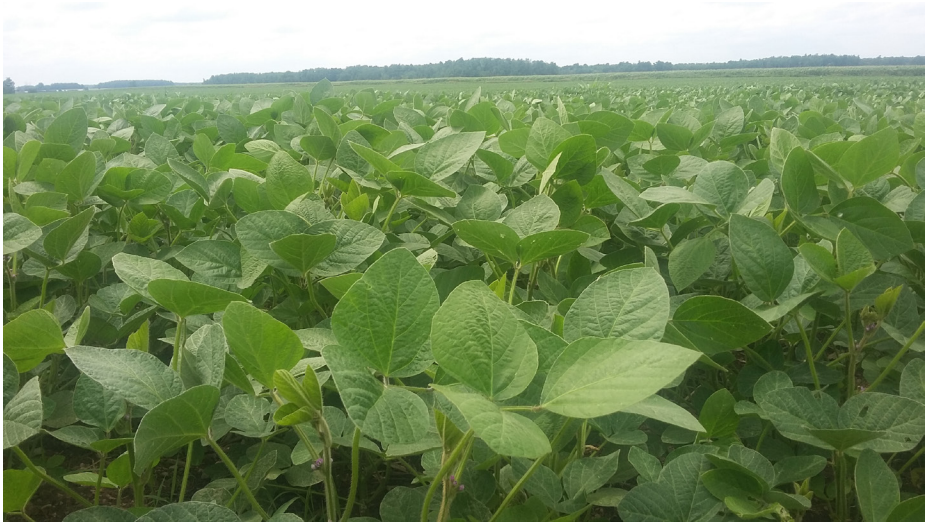
CROP PRODUCTION IN CANADA

Canadian farms provide a diverse range of crops for domestic and international markets. There are literally hundreds of types of crops being grown in fields and greenhouses across the country from grains and pulses to fruits and vegetables, as well as flowers and specialty crops.

Share It!

Which crops are mainly grown in the area where you live?

GRAINS AND OILSEEDS



Soybeans growing in an Ontario field
Photo credit: Elizabeth Johnston

Canada's farmers are growing a wide and expanding variety of grains and oilseeds which are crops used to make oil. Corn, soybeans, barley, oats, canola and wheat (including durum wheat, the kind used for pasta) are the major grains and oilseeds. Soybeans are found mostly in Ontario, Quebec and Manitoba although more farmers in Saskatchewan and the Maritimes are also growing these crops. Canola is grown mainly in Western Canada as are barley, oats and durum wheat. But, as research continues and different types of varieties of each of these seeds are developed, many of these crops are starting to be grown in areas that have never seen these types of crops before. For example, a significant amount of canola is now grown in Northern Ontario.

Other Canadian grains and oilseed crops include:

- Lentils
- Flaxseed
- Mustard
- Canary seed
- Chickpeas
- Sunflower seed
- Quinoa
- Peas

Experience It!

Visit a local farm machinery dealer to see tillage, plants and harvesting equipment up close. Inquire about the costs of each piece of machinery.

Canadian grain and oilseeds are consumed widely throughout the world. A significant portion of our oats, for example, are exported to the United States while Italy imports a lot of Canadian durum wheat. We are also a leader in the production and export of mustard as well as many other crops.

Research It!

Canola was developed in the 1970's by Canadian plant scientists and is now the oil of choice for millions around the world. Find out who developed it, where they developed it and how they developed this crop.

PULSES AND SPECIALTY CROPS

The eight major pulse crops and specialty crops grown in Canada are peas, lentils, beans, chickpeas, mustard, sunflowers, canary seed and buckwheat. Canadian production of these crops has increased from about one million tonnes in the early 1990's to 5.9 million tonnes in 2015. During that same time, Canada has become the world's largest exporter of lentils and peas, and one of the world's top five exporters of dry edible beans.

Pulses are the dry, edible seeds of plants in the legume family. Legumes are plants whose fruit is enclosed in a pod, like beans and peas. Pulse crops are very high in protein and fibre and have virtually no fat. They also contain high levels of minerals like iron, zinc, and phosphorous as well as folate and other B-vitamins. They have even been shown to lower bad types of cholesterol and to reduce the risk of heart attack and stroke. Overall, pulses are an extremely health food choice.

Pulses also play a big role is sustainable food production. There are referred to as a nitrogen-fixing crop which means they draw nitrogen from the air and store it in their roots. This means that farmers don't have to apply that type of fertilizer on their fields. Pulses then leave that nitrogen in the soil for the next crop furthering reducing the amount of fertilizer farmers subsequently need to apply.

Canada is also a world leader in the production and export of mustard with Saskatchewan responsible for 74% of Canada's production. Farmers in Saskatchewan grow 390,000 acres (approximately 158,000 hectares) of mustard in three different types – yellow, brown and

oriental mustard.

Quebec and Ontario produce a wide array of coloured beans as well as white navy beans. Manitoba also produces beans as well as lentils and peas. The largest producer of peas, lentils and chickpeas is Saskatchewan and the province has a small but growing bean industry. Alberta produces beans with the help of irrigation systems for watering them as well as peas, lentils and chickpeas.

Judge It!

Get four samples of the same seed of any one of the above grains, oilseeds, pulses or speciality crops and number them one to four. Research what qualities that particular type of seed should have and then judge the four samples based on the desired qualities.

FRUITS AND VEGETABLES

In every province and territory in Canada, growers are constantly improving their practices using new technology and techniques to ensure optimal efficiency and quality.

There are more than 120 different fruit and vegetable crops grown in Canada on over 27,500 horticulture farms. This range includes apples, pears, peaches, cherries, cranberries, blueberries, grapes, ginseng, garlic, onions, carrots, pepper, asparagus, lettuce, potatoes, cauliflower, cucumbers, cabbage, broccoli, herbs and so much more.

Experience It!

If there is a fruit or vegetable processing company in your area, arrange for a visit to see how the produce is processed in their facility.

Farmers in Ontario, Quebec and British Columbia are responsible for 90% of Canada's total vegetables production and 65.6% of the country's total fruit production area.

In 2015, Canada had 9057 vegetable farms. Ontario ranked #1 for planted acres followed by Quebec and Alberta & British Columbia.

In 2016, there were 1362 fruit farms in Ontario which ranked Ontario 3rd behind British Columbia and Quebec.

MUSHROOMS

Unlike many Canadian crops, mushrooms are an edible fungus which are grown on Canadian farms year-round. Over 200 million pounds (approximately 91 million kilograms) are produced annually on more than 100 Canadian farms. Approximately 60 of those

Experience It!

If there is a mushroom farm or a greenhouse in your area, arrange for a visit to see how their product is grown.

farms supply Canada's grocers. Canada's most popular mushroom is the white button followed by brown and Portobello mushrooms.

GREENHOUSE PRODUCTION

More and more of the fresh vegetables – tomatoes, peppers, cucumbers and lettuce in particular – and flowers that beautify Canadian homes are grown in greenhouses. Demand for year-round fresh produce is driving new greenhouse construction. By 2016, Canada had over 250 million square feet of greenhouse space, also called 'production under glass.' More than half of that is for greenhouse vegetables.

Ontario has more greenhouses than any other province, followed by British Columbia and Quebec, and has the largest greenhouse production sector in all of North America.

Vegetable greenhouses primarily grow peppers, cucumbers, tomatoes and lettuce but some growers are expanding into other types of produce like strawberries. These local greenhouse strawberries are juicy and sweet and are on the shelf in the grocery store within only three days of being harvested.

There are more than 1900 flower growers across Canada. Tulips, gerbera, lilies, daisies, daffodils and roses are among the most frequently produced cut flowers in Canada.

A SEASON FOR EVERYTHING

We could not always buy strawberries, cherries and sweet corn at the grocery store year-round. Every crop is ready for harvest, and eating, at a different time of the year. Refrigeration, new technology and faster transport all mean more fresh fruit and vegetable choices for consumers at the grocery store all year long. You can now also get fresh berries outside of the traditional picking season. Berry farms are now growing day-neutral (ever-bearing) strawberries and fall bearing raspberries which means we can get locally grown fruit longer.

NEW CROPS IN CANADA

Thanks to research, Okra and Asian eggplant are among Canada's newest locally grown vegetable crops. Farmers are now growing crops that are popular with new Canadians, particularly from South East Asia, Africa and the Caribbean. Immigrants to Canada also bring their distinct floral preference, though some preferred flowers are not available here yet.

WINE, CIDER AND BEER

Fruits such as grapes and apples aren't just consumed as food. They also make excellent beverages. Canada's main wine regions are found in Ontario, British Columbia, Quebec and Nova Scotia where there are more than 670 grape wineries.

Many of Canada's new craft cideries are using North American apple varieties such as McIntosh,

Ida Red, Spy, Gala, Paula Red and Russet to make their ciders.

Craft beer is also popular and becoming even more so. There are farmers who grow specialty grains and different hop varieties to help brewers make unique types of beer. Many of these are locally made in small breweries. In 2016, there were more than 775 breweries across Canada.

PESTICIDE USE ON FARMS

All Canadian farmers purchasing and applying pesticides must be certified to use pesticides that have a label stating "only to be used by certified applicators" although there is some difference in certification requirements between the provinces and territories. In order to be certified, farmers must take courses and attend workshops to make sure that they're up to date with the latest technologies and farming practices, including following product label directions.

Research It!

Find out when pesticide courses are offered in your area, what the cost is and who the course is offered through. Find out if anyone can take the course or if there are requirements for those wanting to be certified through the Grower Pesticide Safety Course.

In Ontario, farmers must pass the certification exam for the Grower Pesticide Safety Course before they can buy and use pesticides. The training includes pest management techniques, protecting the environment, avoiding health risks, proper storage and maintenance of application equipment and record keeping. Farmers must be re-certified every five years.

Experience It!

Visit a local crop inputs supplier to see the various pesticide products that can be purchased only by those farmers that are certified. Find out what different types of pesticides are available for purchase for different types of crops in your area.

Crop protection product use on food products can be controversial with some consumers looking for pesticide-free products. Most farmers live where they work, drink water from their own wells and feed their families with the food they produce. It's in the farmer's best interest to use crop protection products responsibly and sustainably. Financially for the farmer, it also makes sense to do the right thing. Pesticides can be expensive and applying more than what's needed can be a waste of money.

Experience It and Research It!

Visit a local grocery store and find a product that's labeled pesticide-free. If possible, ask the store manager if that particular product sells better than similar products that don't have a pesticide-free label.

Research to find out the science behind the claim that the product is pesticide free. Be prepared to present your findings to the group.

CONVENTIONAL AND ORGANIC FARMING

Generally speaking, food labelled as organic are grown or produced without the use of substances such as synthetic (man-made) fertilizers or pesticides, genetically modified organisms, growth hormones or medications like antibiotics. Farmers growing organic food frequently have to adhere to production standards intended to improve environmental sustainability This can include a focus on crop rotation, humane livestock management practices and traceability from farm to fork.

All Canadian products bearing the Canada Organic logo are certified by an independent auditor who verifies that the farm meets the Canadian Organic standard. The Canada Organic standard specifies many production requirements such as which crop protection products may be used and minimum space requirements for livestock.

Farmers and the production techniques they use are very diverse and organic and conventional farmers have a lot in common – some farmers even produce both conventional and organic crops. Sustainable production is key with both types of farming focusing on a wide variety of production techniques, including crop rotation, improving soil health, building local and export markets and using natural pest control methods. Organic farmers can in fact use naturally derived pesticides to control pests. Just as with crop protections products used by conventional farmers, these substances must be approved by the Pest Management Regulatory Agency which is part of Health Canada.

This logo indicates a product meets Canada's organic standard.

There's a growing market for organic food in Canada. Organic retail sales in Canada are worth $4.7 billion annual, growing at 13.6% every year since 2007. Canadian farmers are working hard to keep up. Canada had 4289 registered organic farms in 2016 with Quebec having the highest number of organic farms with 1268 farms.

Excerpts taken from: Real Dirt on Farming, 2017

Experience It!

Visit a local grocery store and look for the above label to find products that meet Canada's organic standard. Take note of the price and then seek out the same product that has been grown conventionally. Is there much difference in cost?

GMO CROPS

To be able to talk about GMO crops, we first need to know what GMO is about. GMO stands for Genetically Modified Organisms. It can refer to either animals or plants – basically all living things! Terms like GE (genetic modification), GE (genetic engineering) and biotechnology are also used and all can sometimes cause confusion and alarm.

Biotechnology is an umbrella term used to describe different ways of identifying genes, introducing beneficial genes, modifying existing genes and removing detrimental ones in plants and animals using a range of precise tools. Vaccines, antibiotics and other medicines are all examples of products created using biological agents. When it comes to agriculture, the goal is to produce more and better food by influencing or improving the natural biological processes in plants and animals.

Did you know? Talk about it!

The world's first GE animal approved for the human food chain is a salmon that uses 20 to 25 percent less feed than conventional farm-raised salmon which growing twice as quickly. It's called the AquaBounty Salmon. What benefits does this have financially, environmentally and socially?

Genetic engineering (GE) is a form of biotechnology in which specific genes are added or removed from an organism or the genes already within the organism are turned on or off to change its genetic makeup. The result is a genetically modified organism (GMO). GE technology has been used by plant scientists for decades. GMO crops are developed using precise plant breeding to achieve benefits such as resistance to certain insects and diseases, herbicide tolerance, enhanced nutritional value and reduced food waste.

There are currently five different GMO crops that are produced in Canada.

- Corn
- Soybeans
- Sugar beets
- Canola
- Potatoes

There are six more GMO crops that are grown around the word:

- Alfalfa
- Apples
- Cotton
- Eggplant
- Papaya
- Squash

Health Canada assesses all genetically-modified foods to ensure they are safe for humans before they can be sold in Canada. To date, no study has ever caused Health Canada to alter its conclusions about any GM food product it has approved.

Genetic modification is just one form of plant biotechnology which helps to create better crops that are good for farmers, the environment and consumers.

Discuss It!

GMO crops have been grown in Canada for 22 years and not one single case of illness has been attributed to GMO's. Why do you think there is such resistance amongst some people to accept using GMO products?

Communicate It!

What if the above GMO crops weren't available for farmers to grow? Would this have any impact on our food supply system? If so, what types of issues might arise?

Research It!

Find a food product that claims to be GMO free. Research to find out why they make that claim and what science they have to back up their claim.

IMPACT OF AGRICULTURE ON THE ENVIRONMENT

Farmers understand the importance of healthy soil, water and air. Farmers live where they work and depend on a healthy environment to grow cops and raise livestock successfully.

Canadian agriculture occupies a large and important part of the Canadian environment. The farm community is the chief steward and manager of extensive natural resources, owner and architect of much of the landscape and protector of a precious soil resource.

CROP ROTATION

Farmers grow a variety of crops and avoid planting the same crop on the same field year after year. Because different pests attack different crops, a rotation schedule helps to prevent major build-ups of insect pests or outbreaks of disease. Additionally, since different crops need different nutrients, changing crops each year helps the soil to stay healthy by not draining it of nutrients.

CONSERVATION TILLAGE AND NO-TILL

Farmers are at the frontline of all kinds of weather conditions, so they're among the first to experience and adapt to the changing climate. Persistent dry conditions in the prairies, for example, have created significant shifts in preferred tillage methods to help prevent top soil being blown away in heavy winds.

Today, crop growing methods like "conservation tillage" (working soil as little as possible) or "no-till" (not working the soil at all) are widely used. No-till involves leaving leftover material from the harvested crop (roots and stalk) in the field. The next crop is then planted directly into

Experience It!

Visit a farm that uses no-till methods for farming. Then, visit a farm that uses conventional tillage. Compare the plants and the soil the plants are growing in. Is there a difference? If so, what is the difference in plants and soil? Are there other differences? Ask the farmer if they noticed a change in crop yield when they switched the field from conventional to organic.

that ground-covering material. Both of these techniques help to increase the amount of organic matter and nutrients in the soil, prevent soil erosion, improve water conservation and promote populations of beneficial insect.

The development of crops that are tolerant to specific herbicides (through biotechnology) can have environmental benefits as well. Instead of churning (tilling) the soil, farmers growing these crops can use a spray to kill weeds without having to worry about the health of their plants. Less time, labour and fuel are spent preparing the field for planting. This change reduces greenhouse gas emission, another key component of sustainable food production. Plant science innovations of all kinds means farmers have to drive over their fields fewer times, saving on diesel food every year.

Excerpts taken from the Real Dirt on Farming 2018

Experience the Crop Industry - Farm Tour

Find out the answers to the following!

- Why did you choose to be a crop farmer?
- Why do you grow the crop(s) that you do?
- What type of challenges do you face with the crop(s) you grow?
- Do you use pesticides on your crops? Why or why not?
- Think of your own questions!

PUBLIC SPEAKING

Discuss It!

Have you ever given a speech before? Tell the rest of the group where you did your speech, what it was about and if you were happy with the job you did when giving your speech.

Before you take to the stage in front of an audience, read these seven simple tips and tricks:

1. **Tailor your message** – find out who your audience is so you can tailor your message and tone to best resonate with them.
2. **Personalize your story** – even though you've been provided with a template presentation, make sure to make it your own by weaving in your connections and feeling about agriculture. You know your story best, so trust yourself and tell your story with passion.
3. **Use key words and images that you identify with** – when customizing your PowerPoint presentation, make sure it resonates with you and you understand all the language you're using. The slide images and messages should act as cues as to what you're going to say for each slide – this way you don't have to memorize your presentation.
4. **Feel the flow** – print off your slides and lay them out on a table to get the full picture of your presentation. Ensure it's in an order that works naturally for you.
5. **Look for friendly eyes** – every audience will have smiling, engaged people in it. Make sure to maintain eye contact with these people throughout your presentation. It will not only calm you down but also help you connect with the entire room.
6. **Move to relax** – step away from the podium and move around. Even though this may feel strange at first, it's important to step out of your comfort zone because it will pay off in the end. Moving around will help you shake off the nerves, give you energy and keep your audience engaged.
7. **Get a second set of eyes** – having a trusted person give your presentation a look before you present will help reduce the chance of typos and ensure everything is flowing nicely.

Remember that presentation skills are like exercising a muscle – the more you do it, the stronger you will become. Seek out opportunities to practice and most importantly, have fun!

Source: AgMoreThanEver.ca

Check It Out!

The Canadian Young Speakers for Agriculture program has a public speaking competition each year at the Royal Agricultural Winter Fair (RAWF). Visit the RAWF website for more details!

AT HOME ACTIVITY

GREENHOUSE PRODUCE GROWN IN CANADA IN THE WINTER

Many vegetables and some fruits are grown in greenhouses in Canada during the winter months so we can still enjoy local, Canadian produce on our dinner plates. Create a list of at least five of the products grown in greenhouses and be prepared to share your list at the next meeting.

DIGGING DEEPER

For Senior Members

GMO'S IN TODAY'S WORLD

GMO's are a part of our lives as well as being a part of our food chain.

A number of new developments in recent years have really peaked some interest in the possibilities that GMO products can potentially give. Research a new genetically modified food product that has a certain desirable trait/characteristic that has come to market recently. Examples include AquaSalmon and Innate potatoes.

Find out what researchers did to create/modify the food product and what desirable characteristics the product has.

Be prepared to share your findings at the next meeting.

ACTIVITY 1: GMO DEBATE

There is debate whether genetically modified foods are good to ingest or not. Members will learn facts from both sides of the argument, for and against Genetically Modified Organisms (GMOs), because to cover only one side of the debate is bias.

DO	Time: 30 minutes Materials Needed: – Stop watch – Access to the Internet – Paper and writing utensil (optional) Instructions: – Divide members into two equal groups with 2 to 4 people in each group (if the club is large, more groups will be required – be sure to have an even number of groups) – Assign each group to be either pro-GMO or anti-GMO. – Give each group 10 minutes to prepare for their side of the debate using this reference manual and credible websites such as Croplife Canada (https://croplife.ca/) and Health Canada (https://www.canada.ca/en/health-canada/services/food-nutrition/genetically-modified-foods-other-novel-foods/factsheets-frequently-asked-questions/part-1-regulation-novel-foods.html) – Have each team create an opening statement and a minimum of two questions to ask the other group – Let each group give their opening statement and then let groups take turns asking their questions.
REFLECT	Learning Outcomes: To allow members to see the GMO debate from both sides and to work on their communication and debating skills, especially if they don't agree with the side of the debate they have been assigned to but must still defend that position.

APPLY	Processing Prompts: – Why is it important to look at an issue from both sides? – Was it easy or hard to defend your position in the debate? – Did the debate change the way you think about GMO's?

ACTIVITY 2: DNA EXTRACTION FROM EGG YOLKS

DO	Time: 30 minutes Materials Needed: – Small clear bowls (or test tubes) – A fork or spoon to stir – Measuring spoons – Dropper or straw – Bamboo skewer (or cotton swab) – Egg – Meat tenderizer (pineapple juice will work) – Isopropyl alcohol 75% or purer – Liquid dish soap – 1/8 teaspoon salt – 2 tablespoons water Instructions: – Separate the yolk from whites. Crack the egg into a small bowl. Gently lift the yolk out of the whites, letting the extra drip off. – Place the yolk in another bowl or just dump the whites out and return the yolk to the original bowl. – Wash your hands – raw eggs can be harmful! – Mix the yolk with about two tablespoons of water and 1/8 teaspoon salt until it is smooth. Note how cloudy it is. That is mainly fats suspended in the yolk and water. – Add about one tablespoon of dish soap. Mix lightly and let stand for five minutes. Notice how quickly the mixture clears. The soap is reacting with the fats and water. – Using a dropper or a straw, fill three bowls, each with a small amount of the yolk mixture. A narrow bowl or a deep tall bowl (or test tube) will work best because the DNA will float on top of the yolks in the end. – Add a pinch of the tenderizer to each dish and stir just a little to mix it in. – Using your dropper or straw, add the isopropyl alcohol to each dish. Drop it down the side of the dish so it floats on top of the yolk mixture. You should see white

	stringy stuff floating up into the alcohol. If you use the end of a bamboo skewer or a cotton swab, you can gently remove the DNA from the solution. **What Happened?** First, we removed the fats from the cell using simple soap. Soap is a molecule that at one end attracts fats and oils and at the other end attracts water. The second step was to add our meat tenderizer. Meat tenderizer contains an enzyme (a special chemical that speeds up reactions). It broke open the cell nucleus to release the DNA. Since the DNA is buoyant in water (it floats) it rose into the clear alcohol layer that also floats on water. If you are careful you can save your DNA in a small jar covered with the alcohol. But be careful, it is sensitive to light and air. It also will break down if you shake it too much. DNA is neat stuff. Even though it has the chemical codes that make each of us different and us different from trees and cats, it is over 90% the same for all living things. It is the different order of DNA's chemical parts that help determine what and who we are. These bits of stringy goo are what are what make us work. *Activity Source: Kids in the Kitchen* *http://scifood4kids.blogspot.com/2009/08/dna-extraction-easy-way.html*
REFLECT	Learning Outcomes: To allow members to experiment with extracting DNA from the cell nucleus in an egg yolk. Members will begin to have a better understanding of DNA, understand that DNA is present in every living thing and how this technology (even though it is basic within this activity) can be used to advance agriculture.

APPLY	Processing Prompts: – Was it easy or hard to extract DNA from the cell nucleus of the yolk? Why or why not? – Were you surprised to see the end result? What did you theorize might happen before doing this activity? – Are there other food products you think you could try the activity with? Research to see what other foods might work for DNA extraction. – How does this activity relate to GMO crops?

ACTIVITY 3: THIRTY SECOND SPEECHES (IMPROMPTU SPEECHES)

Everyone learning to master public speaking despises impromptu questions, yet they remain one of the best exercises to develop confidence and to learn how to quickly organize your thoughts. And by having everyone in the club participate, everyone shares the common fear of public speaking and it becomes a safe place to learn.

DO	Time: 40 minutes Materials Needed: – Paper and writing utensil – Camera to record video (optional) Instructions: – Have members write down two different random topics on two different pieces of paper (topics do not need to be related to agriculture). – Gather all of the topics and put them into a hat. – Have members take turns pulling a topic out of the hat and giving a 30 second speech after being given 10 seconds to prepare the speech. Members must keep talking for the full 30 seconds. – Have someone keep track of every time the person giving their speech uses a filler word such as um, so, uh. – Depending on the age of the group, have two people give feedback after each turn. – If possible, have someone record each speech and then view the videos in private or share them with the group. Look at things like body language, smiling, looking around and what the presenter did with their hands.
REFLECT	Learning Outcomes: To allow members to improve their public speaking skills while also learning how to organize thoughts quickly and how to speak when put on the spot.

APPLY	Processing Prompts: – Do you like giving impromptu speeches? Why or why not? – Have you ever had to give an impromptu speech in the past? What did you have to talk about? – What was the hardest/easiest part of doing the impromptu speech? – Do you think it would be easier or harder to do an impromptu speech in front of a large group? – Do you think its beneficial for everyday life to be able to do impromptu speeches? Why or why not?

Meeting 5 – Exploring Your Own Beliefs

SETTING OBJECTIVES

An understanding of why it's important for those in agriculture to tell their story and to learn how to effectively tell that story.

Suggested Lesson Outcomes

- To be able to tell a story of what you are passionate about in agriculture
- To continue practicing public speaking skills and become familiar with how to use video and social media to tell your story
- To become comfortable using a microphone and learn proper body language and gestures when public speaking

ROLL CALLS

- Name one thing you are passionate about within agriculture.
- Why is it important for those in agriculture to tell their story to the general public?
- What is your biggest fear when it comes to public speaking?
- Name one thing that really good public speakers do when making a presentation.
- What tools do you use to talk about agriculture? (e.g. social media, public speaking, displays) What method do think is most effective?

SAMPLE MEETING AGENDA TIME: 3 HOURS 50 MINUTES

Welcome, Call to Order & Pledge		10 min
Roll call		5 min
Parliamentary Procedure	Minutes & Business	10 min
Topic Information, Discussion & Activities	Topic Information – Telling Your Agriculture Story – Using Social Media to Tell Your Story Activity #1 Writing & Delivering Your Story (Public Speaking) Activity #2 How to Talk to Consumers About Agriculture and Food Activity #3 Create an Instagram Post about Agriculture	30 min 40 min 1 hour, 30 min 30 min
At Home Activity	Agriculture Video Feature	5 min
Wrap up, Adjournment & Social Time		10 min

TELLING YOUR AGRICULTURE STORY

In order for those who aren't from a farming background to learn about the truths about agriculture, they need to hear the stories about farming from those who still have a connection with agriculture. They need to hear from those who are passionate about what they do. When telling your story, you need to be genuine, truthful and proud of what you do and let that show as you explain what it is you do to help produce the food that everyone consumes.

But, not everyone is comfortable with speaking in public, whether in person or through platforms such as social media, so what can you do to help prepare yourself to tell your story? Here are a few suggestions about why and how you can tell your story.

WHY SPEAK UP AND TELL YOUR STORY?

Agriculture and food have been popular discussion topics online, in the media and at agriculture events. People are concerned about their health and making positive choices about what they eat. However, too often not enough of us in the agriculture and food industry are part of these discussions. When our voice is missing, one negative story can dominate the news and social media and leave the public with the perception "that's just the way it is" in agriculture.

Discuss It!

Do you consider yourself an agvocate? Why or why not?

Groups outside of agriculture are already telling our story – a story that doesn't reflect the reality that we care about our animals, the land, and producing safe, healthy food. We can't afford to let others tell our story. We need to speak up to ensure our industry attracts the trust, people and resources it needs to be successful in the future.

PROTECTING THE PUBLIC TRUST

The term "public trust" refers to the privilege of operating with minimal formalized restrictions based on maintaining public trust by doing what's right. For agriculture, this includes trust of consumers regarding how their food is produced. We need to let consumers know that we care about these things too and connect with them on shared values and create common ground.

Public trust (sometimes referred to as social license) is created through timely and effective communication, meaningful dialogue and ethical, responsible behavior. On the flip side, consumers can revoke that public trust when there is a real or perceived disconnect between their values and the values of the company or industry. An industry cannot operate to its full potential until its public trust is restored.

Maintaining public trust is everyone's responsibility. We can't stand on the sidelines. We need

to seize the opportunity and steer negative and inaccurate conversations back to the real story – the story of an industry that provides an abundant and safe source of food to an ever-growing global population. And that's your story. Your story is powerful. It makes the conversation real. And you have a voice as both a producer and a consumer in the food conversation. You are the common ground.

Excerpts from Agriculture More Than Ever https://www.agriculturemorethanever.ca/from-the-team/speaking-up-is-good-business/#.XIXaME2tqL0

10 WAYS TO BE AN AGVOCATE

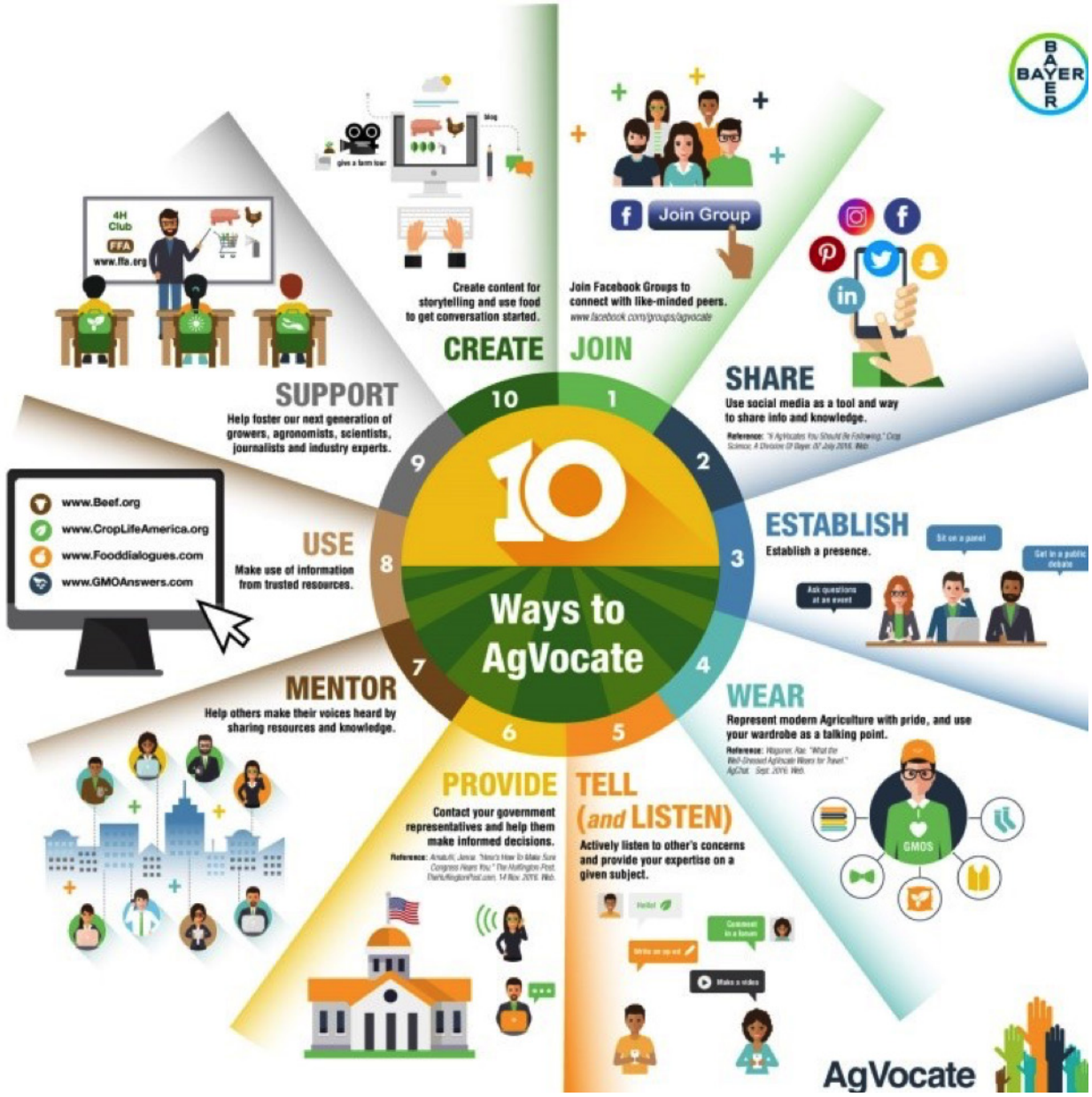


Image Credit: https://www.cropscience.bayer.us/our-commitment/agvocate

CREATING YOUR STORY

Start out by figuring out what you are comfortable talking about. Make a list of tasks you do on the farm or within your role with agriculture. Write down tasks that seem menial and sometimes boring to you. Even though you might think they are menial and boring, to someone unfamiliar with farming, they might seem like exciting or interesting tasks.

As you create your list, you might be surprised at how long your list becomes. Once you have created your list, pick one task and start thinking about how you would describe that task to someone with no farming background and why that task is important.

Discuss It!

Share your list of tasks with the rest of the group. Does anyone have tasks on their list that surprised you that they did on their farm?

Do It!

Review the Top Tips for Talking about Agriculture found in Meeting #2

SEVEN DOS AND DON'TS OF BODY LANGUAGE TO ENHANCE PUBLIC SPEAKING

Did you know that 60-65 percent of all human communication is nonverbal? Even when a person is standing still, their body is still communicating something.

Do It!

Review the Public Speaking Tips found in Meeting #4

Here are some things to try NOT to do when you're speaking. It may be difficult not to do some of the things listed below but with practise we can overcome these tendencies.

DON'T

1. **Fold your hands or arms**
   Folding your arms in front of your body may feel comforting to you, but it comes off as defensive and unapproachable. Try to keep your hands relaxed and at your sides. This is sometimes easier when you have a microphone as one hand must be automatically engaged.
2. **Look down or off into space**
   Make sure you look at your audience. There are lots of studies that show people looking at the ceiling are inauthentic, and people staring straight into nowhere are bored. Look at people. Make eye contact and ensure you look all around the room.
3. **Jiggle legs**
   Many people don't realize they jiggle their legs, jiggle coins in their pockets and rock

back and forth. These are all too common. Walking around the stage or the room can help keep jiggling at bay. Videotape yourself to see if you commit this sin.

4. **Fidget with objects**
   Clicking pens, playing with paper clips, jiggling things in your pocket may show you as impatient, bored, nervous, and restless – and the audience will begin to pay attention to your movements, and not what you're saying. Empty your pockets and use as few 'objects' as possible to avoid this temptation.
5. **Turn your back to the audience**
   If you're using slides or other visual aids, work to incorporate them into your talk without ever turning your back on the audience. If you're not looking at the audience, they're not looking at you and will quickly lose focus. Keep your listeners engaged.
6. **Roll eyes or use insulting language**
   Remember you need to respect your audience for them to show you the same. Some eye movement or language can be distracting or downright insulting. Be careful with humour as not everyone will share the same sense of what is funny as you do. Be positive.
7. **Hold objects in front of your body**
   You are separating yourself from others. You immediately block yourself from the audience, by creating a barrier. While this might be something small, it can come off to the audience as a wall. If you are standing in front of a lectern, try to find spaces when you can get out from behind it. A confident speaker can just stand in front of an audience and talk.

Talk About It!

Name some people you think are amazing speakers. What do they have in common? What is it about them that makes people want to listen? Analyze everything about them from clothes to facial expressions, to the use of humour, use of visual aids. Write these down and try to emulate them in your next speech. Non-verbal skills, such as facial expressions and body language are in many ways as important as what you say. If you're talking on social media, remember that humour and sarcasm don't always translate.

The best communicators learn from each other.

Reach Out!

Invite a guest speaker from a local Toastmasters (or similar) group to your meeting to discuss public speaking techniques.

Think About It!

People having anxiety about speaking in public is more common thank you think!

What do you do to help overcome your anxiety when having to do any public speaking, whether it's making a full speech or a short introduction or thank you of a guest speaker?

Think of all of the responses you can. They may include techniques and ideas such as shutting your eyes, breathing techniques, taking a drink of water, wearing your luck shirt, etc.

If you use any of these responses to help with anxiety, ask yourself 'do they help'? Or, do you have something else you do that helps to calm you when public speaking? If you are comfortable talking about it, let the rest of the group know what your response is to help with public speaking.

USING SOCIAL MEDIA TO TELL YOUR STORY

On social media, you have all sorts of opportunities to talk about what you do on your farm or Ag business, but you can also share videos, photos, news stories, resources, event information and so on.

But how do you go about it? Whether it's setting up a Facebook profile, a Twitter account or putting photos up on Instagram, there are similar questions you need to ask yourself.

WHAT INFORMATION ABOUT YOU DO YOUR VIEWERS FIND INTERESTING?

- What is your favorite place on your farm? Why is it so special?
- Post pictures of your farm and explain why it's important to you to care for the welfare of your animals.
- Post pictures of your family and what it means to them to work on the farm.
- Post weekly updates about what is going on at your farm (harvest, births, new fences, etc.)
- Create or share a video about what sustainability means to you and your farm.
- Discuss the one thing that you would like the public to understand about agriculture and farming.
- Describe a typical day on your farm either in words, pictures, or video.
- Engage other farmers in conversation and learn about what they do differently on their farm.
- What does animal welfare mean to you and your farm?
- Who is your role model in agriculture?

Source: https://www.agriculturemorethanever.ca/agvocate-tips/9-tricks-for-making-the-best-agvocate-videos/#.W8UpbfYpDIU

Discuss It!

If you could only post one picture of agriculture from your farm or your connection with agriculture, what would that picture feature?

KEEP YOUR VIEWERS ENGAGED

Now that you've started sharing your story, how do you keep your viewers coming back? Here are some suggestions:

- **Keep all posts positive.** Don't knock your followers for their beliefs and don't criticize others in agriculture. Throwing another sector of the industry ' under the bus' is not good practice.
- **Step out of your comfort zone.** Be brave. Be willing to learn and to listen to other sides of the story.
- **Showcase agriculture and your personal story.** What are the key messages you always want to get across?

- **Be transparent, honest and show humility.** No one likes a bragger. You may be right with your arguments but being arrogant or patronizing will NOT gain you followers. Share your difficulties, tough days and disappointments. Farming isn't easy and be prepared to showcase the good and the bad.
- **Don't forget to listen to others on social media.** Be willing to hear other sides of the story – and when necessary, own up to your lack of knowledge and mistakes. Learning is continual.

Source: http://animalagalliance.org/images/upload/Social%20Media%20Manual.pdf

Judge It!

Have four pictures of agriculture from media/social media. Have members judge the pictures based on both the quality of the picture and the appropriateness of the picture for showcasing agriculture in a positive light. Have members give reasons for their placings.

USING VIDEOS TO TELL YOUR STORY

People love videos. As an agvocate, you can connect with more people on social media with a video. And it doesn't have to be complicated. In fact, the simpler the better. Just tell your story. Let people see the moments of your growing season. Use your smartphone or GoPro and follow these tips:

- **Shoot horizontally, just like your TV.** Keeping all your footage consistent will make it easier for your viewers to watch.
- **Shoot HD.** Most smartphones default to the highest definition possible, but make sure your video quality is the best it can be by double-checking your settings.
- **Use the camera on the back of your phone.** The camera on the back of your phone shoots higher quality video. Have someone film you or try filming yourself by hand or selfie stick and see how it looks.
- **Be selective with your locations.** Choose locations that say something about you, your operation or where you live. If you're speaking, minimize competing noise and don't be too far away from the camera.
- **Watch your timing.** Begin recording three to five seconds before speaking or before the action starts. Keep recording for a few seconds after you've captured what you need.

This will give you room to work with your clips when you're editing.

- **Add some clips with flavour!** Think about footage showing off what you love about your operation, your lifestyle, where you live and what will interest someone who's not familiar with farming. Zooms and pans of these clips will add to the quality.
- **Turn it up!** If there is background noise, raise your voice while keeping the tone friendly.
- **Have fun and smile!** Being an agvocate means being authentic. Try smiling before you shoot. It keeps your tone warm and friendly, even if the content is more serious.
- **Look and listen.** Watch what you've filmed after each take (preferably with headphones). Make sure you got it, loud and clear.

AT HOME ACTIVITY

AGRICULTURE VIDEO FEATURE

Create your own video showing some aspect of agriculture and food that you have a connection with or that has had an impact on you. The video should be 30 seconds to one minute long. Be prepared to show your video at the next meeting.

DIGGING DEEPER

For Senior Members

PUBLIC TRUST

Public trust isn't static. As opinions change and issues arise, our ability to engage and respond impacts consumers' level of confidence and our overall credibility. By being open and proactively communicating with the public about how we grow food and why we operate in the ways we do, we can protect our public trust to continue producing high-quality, nutritious food in ways that are efficient and sustainable.

Watch the video "License to Farm' found at: https://www.youtube.com/watch?v=eJnAV_quG6Y

Choose an issue that has recently affected agriculture in a negative light. How did public trust help to steer that negative publicity back to the real story?

DIGGING DEEPER II

For Senior Members

SECRET INGREDIENTS FOR A GREAT TALK/PRESENTATION

There is no single formula for a great talk, but there is a secret ingredient that all the best ones have in common. TED curator Chris Anderson shares this secret -- along with four ways to make it work for you. Do you have what it takes to share an idea worth spreading?

https://www.ted.com/talks/chris_anderson_teds_secret_to_great_public_speaking

ACTIVITY 1: WRITING & DELIVERING YOUR STORY (PUBLIC SPEAKING)

DO	Time: 40 minutes Materials Needed: – Paper & Writing utensil – Video camera/phone with video capability (optional) Instructions: – Working individually or in pairs, have members work on a short 30 second to one-minute story about their connection to agriculture. – Ask members to verbally present their story to the rest of the group. – If possible, video tape each member as they present their story. Have members view their video (or if the comfort level is high enough within the group, have all members watch each video) and have members write down any detrimental body language they see in the videos. – If time permits, repeat this activity with each member creating a second story on a different topic.
REFLECT	Learning Outcomes: To allow members to create a personal story about their connection with agriculture and practice verbally delivering that story.
APPLY	Processing Prompts: – Was it easy or hard to write your personal story? – Was it easy or hard to verbally deliver your story? – Why is it important to tell your personal story? – When delivering your story was there any body language you exhibited that surprised you? – If you could deliver your story again, what would you change?

ACTIVITY 2: HOW TO TALK TO CONSUMERS ABOUT AGRICULTURE AND FOOD

DO	Time: 1 hour 30 minutes Materials Needed: – Computer/laptop – Access to the Internet Instructions: – Before watching the webinar, ask members the following: a. Describe a situation where you overheard someone sharing myths or stereotypes about farmers and agriculture b. What was your response? – Watch the webinar "How to Talk to Consumers about Agriculture and Food" by Kelly Daynard, Farm & Food Care Ontario https://www.agriculturemorethanever.ca/from-the-team/webinar-how-to-talk-to-consumers-about-ag-and-food/#.W8KJ9vYpBy0
REFLECT	Learning Outcomes: To allow members to gain knowledge about proper techniques for addressing consumers about issues relating to agriculture and food.
APPLY	Processing Prompts: – Thinking back to your answers you gave before watching the webinar, have your answers changed? – If so, what would you do differently? – Was there anything in the webinar that surprised you?

ACTIVITY 3: CREATE AN INSTAGRAM POST ABOUT AGRICULTURE

DO	Time: 30 minutes Materials Needed: – Computer/laptop with access to the Internet – Paper and Writing utensil Instructions: – View Instagram and explore this platform so any members not familiar with Instagram can gain an understanding of the website – Discuss hashtags and tagging people and businesses in a post – Have members write an Instagram post about an aspect of agriculture, being mindful of the limitation on how many characters can be in a post – Have members share what they wrote
REFLECT	Learning Outcomes: To allow members to gain an understanding of how to navigate the social media platform Instagram and how to effectively post information about agriculture that showcases the industry in a good light.
APPLY	Processing Prompts: – Did you learn anything new about Instagram? If so, what did you learn? – Was it easy or hard to fit your message within the allotted number of characters? – If you choose to post a picture with your Instagram post, what picture would you choose and why? – How effective do you think Instagram is/could be? NOTE: This activity could also be completed using the social media platform Twitter.

Meeting 6 – Meeting the Consumer Half Way

SETTING OBJECTIVES

An understanding of how to interact with the consumer about the agriculture industry in a positive and polite manner so agriculture is showcased in the best light possible.

Suggested Lesson Outcomes

- To be able to better handle difficult situations
- To learn what to do in a situation where unwanted guests interfere with an event
- To plan an event for a club achievement program

ROLL CALLS

- Name a topic in agriculture that is seen as controversial by some people.
- Have you been at an event where protesters tried to interfere with the event? If so, what did the protestors do and what was done to relieve the situation?
- When planning an event, what is one thing the event planner should do to insure a successful event?

SAMPLE MEETING AGENDA TIME: 2 HOURS 35 MINUTES

Welcome, Call to Order & Pledge		10 min
Roll call		5 min
Parliamentary Procedure	Minutes & Business	10 min
Topic Information, Discussion & Activities	Topic Information – Handling Difficult Questions – What to do when unwanted guests interfere with an event – Online Bullying – Agvocates to Follow Activity #1 Role Playing – Debating Controversial Agriculture Topics Activity #2 Speaking at a Moment's Notice	30 min 30 min 30 min
At Home Activity	Planning for the Club Achievement Program	30 min
Wrap up, Adjournment & Social Time		10 min

HANDLING DIFFICULT QUESTIONS

One of the most stressful parts of public speaking can be the question period, as we have no clue what is going to be asked. And when speaking up about agriculture, sometimes those questions deal with sensitive issues. The following are some tips from Farm & Food Care to help you learn to confidently handle these questions.

Food, from the way we produce it to the way we prepare it is coming under increasing public scrutiny. Issues surrounding food safety, environmental quality, biotechnology and animal "rights" are being debated in classrooms, legislatures and newspapers across the country. Only by addressing these issues with the public can we in agriculture be a part of the debate.

Check It Out!

To learn more about agricultural biotechnology, take a look at the 4-H Ontario Agricultural Biotechnology 4-H project!

BE A GOOD LISTENER

Before we can address issues and concerns, we have to understand what they are and identify the basis of the information.

Do It!

Re-visit the 'Being a Good Listener' information found in Meeting #3

ASK QUESTIONS FIRST

Use questions of your own to find out what a person knows and understands about their issue or concern. Use critical questions to get people to think about other aspects of the issue, implications of their solution, or to analyze their own information.

RESPECT OTHERS' OPINION

Avoid preaching at people or showing a lack of respect for their opinions even if they differ greatly from yours. We are all entitled to our views. And remember no matter how hard you try, some people will NEVER change their mind. Don't focus on these few, even though they are often amongst the loudest. Be confident in ending the discussion with these activists by saying something like, "let's just agree to disagree". Concentrate on the people who are willing to learn, to listen and to have a rational discussion.

ENCOURAGE INFORMED DECISIONS

Resist the urge to "convert" people to your way of thinking. The goal isn't to "sell" your product or way of life, but rather the information needed for people to make their own decisions. Ask them to think rationally, i.e. in the case of animal welfare questions, ask the questioner if in the middle of winter, they had a chance to be outdoors or indoors with warmth, food and security, which would they choose. Then point out that this is the same choice made by many animals.

Being inside allows them a sense of security.

BE UNDERSTANDING

Respect people's level of knowledge, even when it seems far less than what you think it should be. Try to relate and understand.

RELATE AND UNDERSTAND

Never resort to insults. You'll feel and look much better by taking the 'high road'.

CORRECT FALSE ASSUMPTIONS

All too often, people's concerns are based around a false premise or assumption. It is more important to correct the premise, than the details. For example, to debate the amount of water used to produce a pound of beef is to miss the point. Go to the heart of the matter – which is water isn't "used up" at all, rather it is recycled.

Communicate It!

Create a list of some common myths you have heard about modern agriculture. Discuss how you would debate each of these myths, being sure to go the heart of the matter.

SHOW YOU SHARE THE SAME CONCERNS

Find the common ground and work from there. For example, if someone thinks a certain practice is "cruel", begin by explaining that you care about animals too, then go on to explain why that practice is in the best interest of the animal (and ultimately the consumer too). If someone is concerned about food safety, begin by explaining you eat the same food they do and you care about the well-being of your family just as much as they care about theirs, then go on to explain the rules and regulations that you follow. Emphasize that farmers must take regular exams before they can do a number of things.

BE POSITIVE

Always explain the benefits first; to the consumer, to the animals, to the environment, to the economy/society and finally to the farmer. Talk about how the agriculture and food industry has changed and look to the future for more positive changes for the industry.

BE PROUD

Canadian farmers and food producers should be proud of what they do. Although no industry is perfect, the agriculture and food sector has little to apologize for. Always remember to point out that change is a part of life and like other industries the agriculture industry is always looking for better ways to do things. And when confronted with statements like "farmers are just out to get rich", be firm in that everyone has a right to get paid for their work. Consumers work for an income to support their family, and farmers do the same thing – often supporting multiple generations.

BE PATIENT

Old beliefs die hard and for many people this may be the first time they've heard agriculture's side of the story. Take as much time as necessary to explain important issues and address any concerns they may have.

STAY CALM, COOL AND COLLECTED

Avoid arguments. Allow people to express their opinions first. Then respond calmly and positively. Correct misinformation with facts. Point out contradictions or inconsistencies. Help them to see the bigger picture by pointing out things they may not have considered. Always be prepared to agree to disagree.

Judge It!

Get four samples of the same of any type of agriculture product or food not already judged in this project and number them one to four. Research what qualities that particular item should have and then judge the four samples based on the desired qualities.

BEWARE OF TRAPS

Recognize special interest crusaders for what they are: a vocal minority often with extreme or rigid beliefs. While they don't represent the average Canadian, the publicity they generate can and will have an impact on other's views. If confronted by activists, protesters or a hostile individual, politely answer their question and then move on to someone else. Never give them the attention and credibility they crave by confronting or debating them. And in the case of protestors at events, never be afraid to call the police.

Source: http://www.farmfoodcareon.org/wp-content/uploads/2017/05/communicatewiththepublic.pdf

WHAT TO DO WHEN UNWANTED GUESTS INTERFERE WITH AN EVENT

The biggest piece of advice when unwanted guests try to interrupt an event with their own message (usually in protest of what is happening or of agriculture in general), is to not engage. Even though it is tempting to reply and defend what you are doing, that is the desired goal of those protesting as they want to gather attention to what is going on.

Share It!

Have you ever been in a situation where you have felt threatened by someone trying to interrupt an event or show? What did you do? Share your experience with the group.

If the situation doesn't stop or starts to escalate, the event organizers need to step in to de-escalate the situation and potentially call local authorities to help end the situation. The ultimate goal is that no one, including animals, is hurt.

Reach Out!

Have someone from Farm & Food Care Ontario or your local police station come to a meeting to further discuss tips and suggestions for how to deal with a situation in which protestors try to interrupt an event.

ONLINE BULLYING

Difficult conversations happen on social media as well as in person. Sometimes those conversations can turn into a great learning experience for not only the ones having the conversation but also those following the thread of comments and information.

But, just as the use of technology itself has evolved, so has the ability to bully. Bullying, once restricted to in-person, has now moved into the online world. Bullying through electronic means is referred to as "cyberbullying."

TIPS TO HELP STOP CYBERBULLYING

Know that it's not your fault

What people call "bullying" is sometimes an argument between two people. But if someone is repeatedly cruel to you, that's bullying and you mustn't blame yourself. No one deserves to be treated cruelly.

Don't respond or retaliate

Sometimes a reaction is exactly what aggressors are looking for because they think it gives them power over you, and you don't want to empower a bully. As for retaliating, getting back at a bully turns you into one – and can turn one mean act into a chain reaction. If you can, remove yourself from the situation. If you can't, sometimes humour disarms or distracts a person from bullying.

Save the evidence

The only good news about bullying online or on phones is that it can usually be captured, saved, and shown to someone who can help. You can save that evidence in case things escalate.

Tell the person to stop

This is completely up to you – don't do it if you don't feel totally comfortable doing it, because you need to make your position completely clear that you will not stand for this treatment any more. You may need to practice beforehand with someone you trust, like a parent or good friend.

Reach out for help – especially if the behavior's really getting to you

You deserve backup. See if there's someone who can listen, help you process what's going on and work through it – a friend, relative or maybe an adult you trust.

Use available tech tools

Most social media apps and services allow you to block the person. Whether the harassment is in an app, texting, comments or tagged photos, do yourself a favour and block the person. You can also report the problem to the service. That probably won't end it, but you don't need

the harassment in your face, and you'll be less tempted to respond. If you're getting threats of physical harm, you should call your local police (with a parent or guardian's help) and consider reporting it to school authorities.

Protect your accounts

Don't share your passwords with anyone – even your closest friends, who may not be close forever – and password-protect your phone so no one can use it to impersonate you.

If someone you know is being bullied, take action

Just standing by can empower an aggressor and does nothing to help. The best thing you can do is try to stop the bullying by taking a stand against it. If you can't stop it, support the person being bullied. If the person is a friend, you can listen and see how to help. Consider together whether you should report the bullying. If you're not already friends, even a kind word can help reduce the pain. At the very least, help by not passing along a mean message and not giving positive attention to the person doing the bullying.

Source: Connect Safely *https://www.connectsafely.org/tips-to-help-stop-cyberbullying/*

AGVOCATES TO FOLLOW

There are a number of people (agvocates) and organizations that are making a big difference in people's understanding of agriculture. Many agvocates use social media to get their message out to literally thousands of people through Facebook, Instagram and Twitter, even though it sometimes means receiving negative comments and bullying while showcasing what agriculture is and does.

While some might view agvocates as being too close to corporate agriculture, or being seen as being pawns for one "view" of agriculture, almost all agvocates are independent individuals that are genuinely opening up themselves and their farms to show what daily life on a farm looks like.

Find an agvocate or organization in your area, follow them online and possibly invite them to speak at your meeting. Go online to follow and check out the following agvocates and organizations:

Sandi Brock, Agvocate, Sheep Farmer
Andrew Campbell, Agvocate, Dairy Farmer
Tim May, Agvocate, Dairy Farmer
Agriculture More Than Ever
AgScape
Farm & Food Care Ontario

Discuss It!

Are there other agvocates or organizations that promote agriculture that you can think of to add to this list?

DIGGING DEEPER

For Senior Members

WEBINAR: THE POWER OF SHARED VALUES

Charlie Arnot, CEO of the Center for Food Integrity, provides viewers with three simple steps to gain consumers' trust by tapping into the power of shared values. Charlie helps bridge the divide between science and consumer perception by providing the building blocks for simple, persuasive messages.

https://www.agriculturemorethanever.ca/from-the-team/webinar-the-power-of-shared-values/#.W8UvAvYpDIU

DIGGING DEEPER II

For Senior Members

WEBINAR: HOW TO HAVE A MEANINGFUL DISCUSSION ABOUT AGRICULTURE

Sometimes speaking up is easier said than done. Dr. Cami Ryan gives you the tools you need to have meaningful discussions about agriculture and food. Ryan shares what she has learned from her research exploring how science is communicated and perceived by the public and her own personal conversations about food.

Learn how North Americans' aesthetic relationship with food influences their relationship with agriculture and how human cognitive habits affect how people take in and perceive information. Plus, get help developing your own agriculture conversation game plan.

https://youtu.be/8pPBpuRtWlA

ACTIVITY 1: DEBATING CONTROVERSIAL AGRICULTURE TOPICS

DO	Time: 30 minutes Materials Needed: – Paper & Writing utensil Instructions: – Divide the group into teams of two or three people. – Have teams take turns arguing each side of the issue with one team acting as activists and one team acting as farmers. Before debating, research and discuss the issue and your roles for ten minutes. – After the debate, ask teams to make note of what resources they used to gather their information and why they chose those resources. The issues (but not confined to those listed here – add to the list!): – Eating meat – GMO's – Pesticide use – Water pollution – Chicken cages
REFLECT	Learning Outcomes: To allow members to become comfortable with discussing/ debating a number of potentially controversial topics relating to agriculture.

APPLY	Processing Prompts: – What resources did your team use to gather their information? Why did you choose these resources? Were there better resources you could have found? – Was it easy or hard to fill to defend any of the topics that you didn't agree with? – How did you feel while making your argument (defending your position)? Was there a better way you could have acted? – Do you think you would handle this situation differently if it happened in public at a livestock show or an agricultural fair?

ACTIVITY 2: SPEAKING AT A MOMENT'S NOTICE

DO	Time: 30 minutes Materials Needed: – Paper & Writing utensil Instructions: – Have members take turns drawing issues out of a hat one at a time. – Once a member has drawn a topic, they have 30 second to prepare their one-minute impromptu speech. – Have other members give honest suggestions on what the speaker did right and how they might improve their speech in the future. Remind everyone that this is a safe space to practice in. Everyone is there to help. Remember, everyone will be taking their turn as well! Issues for impromptu speech topics could include (but are not limited to): – GMO's – Manure Management – Soil Testing – Pesticide Safety Training Course – Studying Agriculture at University – Round-up Ready Crops – Farm Migrant Workers – Drones – The ageing farm population – Cage Free Eggs – Cows belching as a major cause of global warming – Castration
REFLECT	Learning Outcomes: To allow members to become more comfortable with speaking about contentious issues in agriculture with very little preparation time.

APPLY	Processing Prompts: – Does giving an impromptu speech get easier after trying it several times? – Would you rather give a prepared speech or an impromptu speech? Why? – What do you do if you don't know what to say about the topic you have chosen out of the hat? – What qualities do you see in the people that give really good impromptu speeches?