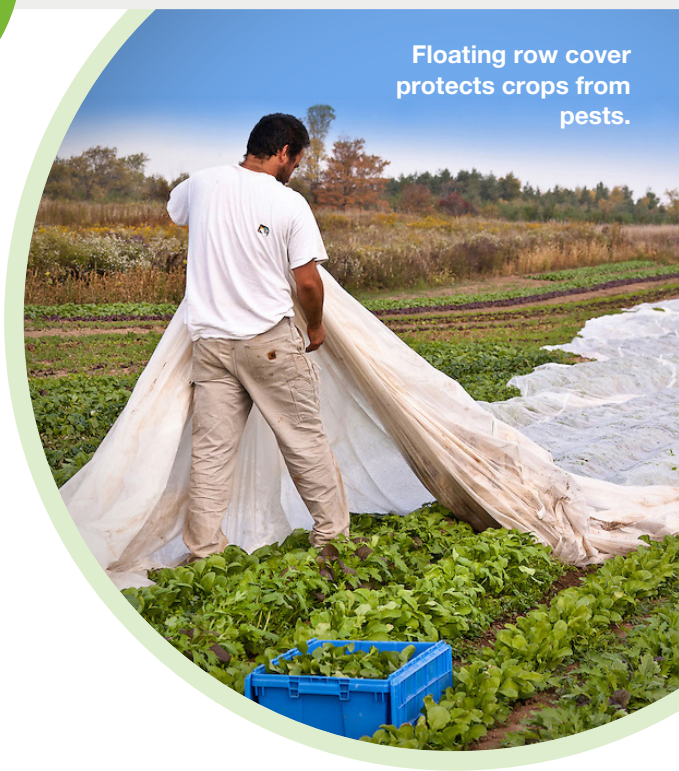
snapAG FARMING BASICS

ORGANIC FARMING

Organic farmers aim to grow crops and raise livestock in ways that are sustainable and harmonious with the environment.[1]



Floating row cover protects crops from pests.

ORGANIC FARMING PRACTICES

Organic farmers grow crops in specific ways. Non-organic farmers may also use some of these practices, which include:

- Providing habitat for soil life by adding organic matter and rotating crops. Organic farmers protect soil life by avoiding excessive tillage, and the use of fertilizers and pesticides that harm soil organisms.[2]
- Feeding the soil by adding organic matter and growing legumes, such as alfalfa and clover, which transform nitrogen from the air and make it available to growing crops. Farmers also add compost, crop residues and rock powders, which soil microorganisms convert into plant-available nutrients.
- Rotating crops, rather than growing the same crop on a field year after year. Organic farmers design crop rotations to prevent the build-up of pests, disrupt weed life cycles, keep the soil covered, and use nutrients efficiently.
- Protecting biodiversity by leaving wild areas, and restricting the use of pesticides. Compared to non-organic farms, on average, organic farms have 30% greater biodiversity of birds, insects and pollinators.[3]

How do organic farmers control crop pests?

What do organic farmers use instead of commonly used herbicides, fertilizers and insecticides? The answer is complicated. Organic farmers don't simply rely on organic alternatives – instead, they work with nature to provide nutrients and control pests. When choosing planting dates, seeding rates and crop varieties, farmers consider what will work best to avoid pest and weed problems.

When prevention isn't enough, organic farmers consult the lists of substances permitted by the Canadian Organic Standards. To assess which substances are allowed, rigorous reviews are conducted that evaluate consequences as far-reaching as the environmental impact of a substance's manufacture and disposal.[4]

BUFFER ZONES

Farmers don't live in isolation. To protect organic crops from pesticide spray drift generated by neighbouring farms, organic farmers must establish buffers. Permanent hedgerows or windbreaks can do the trick or a **buffer zone** – a distance of at least 8 metres between their crops and land where non-permitted substances are used. Buffer zones may need to be larger if there is a greater risk of contamination by, for example, sprays drifting on the wind, fertilizer run-off or cross-pollination by genetically engineered (GE) crops (e.g., organic alfalfa grown for seed must be 3+ km away from GE alfalfa).

Harvesting spring greens

Age-old farming with a new twist

Today's organic farmers use traditional agricultural methods along with innovative new techniques and technology backed by scientific research. Organic crop yields are, on average, 8-25% lower than non-organic yields but this gap is closing due to improvements in research. Also, organically managed farms frequently have higher yields than their conventional counterparts under severe drought conditions (which are expected to become more common due to climate change).[5]

Organic livestock

Organic farmers provide livestock with fresh air, sunlight and access to the outside whenever weather conditions permit. Their feed and **forages** (crops grown specifically for feeding livestock) are organically grown. These practices strive to minimize stress, promote good health and prevent disease.[6]

Canadian Organic Standards have strict animal welfare requirements, including limits on housing densities. For example, poultry cannot be kept in conventional cages; instead farmers must provide living conditions that accommodate the health and natural behaviour of poultry including free access to pasture, open-air runs, and other exercise areas, subject to weather and ground conditions.[7]

Chickens have access to the outdoors.

WHAT IF ANIMALS ON AN ORGANIC FARM GET SICK?

Although farmers focus on prevention, when animals on an organic farm get sick, they can be treated with permitted substances, including certain herbal remedies, vitamins, organic molasses and activated charcoal.

The use of hormones and antibiotics to promote growth are prohibited; however, medical treatment can't be withheld from sick or injured livestock to preserve their organic status.[8] If antibiotics are used, meat from the animal won't be sold as organic. Milk from the animal may be considered organic after a specified **withdrawal period** (how much time passes between when an animal is last treated with antibiotics and when it is sent to be prepared to be sold to consumers).