



FACT SHEET:

THINK, EAT, ACT

Animals Are Integral to Sustainable Agriculture

A sustainable farm is one that mimics nature. It is one that harnesses the natural synergies between plants and animals and seeks to enhance the land being used to grow food. Animals are integral to an ecologically balanced farm, and without them, achieving this balance is not possible.¹

Animals are part of a larger whole

Natural ecosystems are always diverse- plants, trees, animals, insects and soils all interact to support one another, and each plays an important role in maintaining a functioning system. Mixed farms that emulate the diversity of natural ecosystems are healthier and more resilient, which is why a mix of livestock and crops is important for ecological agriculture. Farms that specialize in raising large numbers of only one type of animal, or that have large fields with only one crop (monoculture) are more susceptible to diseases, pests, and environmental problems, some of which include:

- **Water, soil and air pollution:** intensive manure spreading that exceeds the land's capacity to absorb and cycle nutrients leads to fish kills, groundwater contamination, and poor drinking water quality.²
- **Global warming:** excessive quantities of excrement, the conversion of forest to grazing land and the consumption of fossil fuels to produce feed grain are some of the worst contributors to rising greenhouse gases in our atmosphere.³
- **Depleted soils:** because crop and livestock operations are disconnected, they are often located at distant sites from one another making it difficult to use manure as fertilizer. Instead, synthetic fertilizers are used which deplete the soil of many important nutrients.
- **Loss of species and crop biodiversity.** Because industrial livestock operations rely on very few breeds specially bred for production, many heritage breeds are becoming rare or endangered. These operations also focus on growing or purchasing crops for feed (such as corn and soy), therefore a variety of beneficial plants (such as perennial forages) are not cultivated at the expense of ecosystem diversity. This renders the agro-ecosystem less resilient to extreme weather and drought.

Mixed farms, by contrast, harness natural synergies that prevent the troubling issues created by confined animal feeding operations instead producing positive environmental contributions.⁴ For example, integrating forages and livestock greatly improves soil organic matter. This sequesters carbon reducing the amount of CO₂ in the atmosphere.⁵ From a holistic perspective it is easy to see how animals play important roles on mixed farms. Grass-finished beef, free-range chicken and turkeys, and even pasture-raised pigs can all be integral to maintaining a healthy ecological balance on mixed farms:

Animals improve soil health.

Animal manure contains many nutrients that nourish the soil and build organic matter. Without animal manure, crop farmers must apply costly chemical fertilizers that can actually degrade soil over the long term.⁶ Pasturing animals allows farmers to earn an income from soil-building perennial forages. Perennial forages improve soil health by providing year-round ground cover and preventing soil erosion. They also control weeds, which decreases the need for harmful herbicides and allows microbial activity to flourish in the soil.⁷ This, in stark contrast to monoculture crop and animal operations where annual crops are grown strictly for feed with heavy use of pesticides and herbicides for weed, insect and disease control.

Animals control weed and pest populations.

Weed and pest control is a challenge on every farm, but animals offer a non-toxic alternative to pesticides and herbicides. Chickens naturally want to scratch the soil and peck at weeds, so using free-range chickens to weed a raspberry patch makes both economic and ecological sense because it eliminates the need for pesticides or hired labour. Sheep can help control pest populations in organic apple orchards, as they eat fallen fruit that would otherwise serve as a breeding ground for codling moth, a pest that commonly destroys apples.⁸ By identifying and harnessing these natural synergies, common management problems can be solved in more environmentally friendly ways.

Animals on mixed farms are healthier.

Animals raised on mixed farms have better immune systems because they enjoy uncrowded, active, stress-free living conditions and a nutritious diet. The combination of a biodiverse farm (including livestock, crops, insects and soil microbes) and a diet that incorporates plants such as chicory

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and plantain (which contain anthelmintic constituents to kill parasites) in forage mixture helps to reduce the incidence of parasites.⁹ Healthy animals reduce veterinary costs for farmers and the overuse of antibiotics that can result in the development of antibiotic resistant pathogens.

Mixed farms are a viable alternative to industrial agriculture

If we were to remove livestock from agriculture (and meat from our diets) we would become even more dependent on the industrial food system.¹⁰ Certainly, saying “no!” to factory farmed meat is necessary, but we don’t have to take all meat off the menu. Understanding the importance of the role livestock play in fostering ecologically friendly agriculture is key to recognizing the impact of our day to day food choices.

Ironically, opting out of eating meat altogether could result in a more industrialized food system. Farms would require chemical fertilizers to grow crops (as no manure would be provided by animals), soils would not be as healthy¹¹ and regions best suited for raising animals would be forced to import more food, increasing fossil fuel consumption required for transportation. Furthermore, soils not suitable for cultivation would be tilled and monocropped, destroying habitat for wildlife and promoting soil erosion.

Supporting small, diversified and ecologically balanced farms in your area by paying slightly more for the many benefits this livestock provides will encourage positive changes to our food system.¹² Think holistically when making your food choices and remember to “Think, Eat, Act!”

- Fact Sheet author is Nicole Basque, *Beyond Factory Farming*

Sources:

- 1 Permaculture Institute. <http://www.permaculture.org/nm/index.php/site/classroom/>
- 2 Environmental Defence Canada. It’s Hitting the Fan: the unchecked growth of factory farms in Canada. 2002.
- 3 Livestock’s Long Shadow. <http://www.fao.org/docrep/010/a0701e/a0701e00.HTM>
- 4 Clark, E. Ann. Benefits of Re-integrating Livestock and Forages in Crop Production Systems. <http://www.beyondfactoryfarming.org/get-informed/consumer-choice/social-environmental-impacts-meat-eating>

- 5 Where’s the Beef. <http://www.managingwholes.com/biodiversity-beef.htm>
- 6 *ibid*
- 7 Clark, E Ann. Benefits of Re-integrating Livestock and Forages in Crop Production Systems. <http://www.beyondfactoryfarming.org/get-informed/consumer-choice/social-environmental-impacts-meat-eating>
- 8 Clark, E. Ann. Safe Food Healthy Communities conference presentation <http://beyondfactoryfarming.org/mp3/Ann.MP3>
- 9 *ibid*
- 10 Pollan, Michael. An Animal’s Place. <http://www.beyondfactoryfarming.org/get-informed/consumer-choice/social-environmental-impacts-meat-eating>
- 11 Clark, Ann. Benefits of Re-integrating Livestock and Forages in Crop Production Systems. <http://www.beyondfactoryfarming.org/get-informed/consumer-choice/social-environmental-impacts-meat-eating>
- 12 Roberts, Wayne. Real Food for a Change. Random House.

Additional Resources to Sink Your Teeth Into

- Our website:* www.beyondfactoryfarming.org/get-informed/consumer-choice/conscientious-eating
- Teaming with Microbes: A Gardener’s Guide to the Soil Food Web.* By Jeff Lowenfels and Wayne Lewis
- Polyface Farm.* Joel Salatin’s multi-species farm is an excellent example of the intricate synergies that exist between animals, plants, soil and insects. www.polyfacefarms.com
- Holistic Management.* Outlines the principles of working with nature to ensure a well balanced, economically viable farm system. www.holisticmanagement.org
- Real Food for a Change.* Wayne Roberts provides creative and practical ideas for how to change the industrial food system in Canada by making the the best food choices possible.
- International Federation of Organic Agriculture.* Provides cutting edge research on agro-ecology and going beyond organic food production. <http://www.ifoam.org/index.html>

Beyond Factory Farming
#200 - 416 21st Street East
Saskatoon, SK S7K 0C2
Phone: (306) 955-6454
Toll Free: 1-877-955-6454
Fax: (306) 955-6455
www.beyondfactoryfarming.org

Local Contact Information: