

**2015 ACORN Conference & Trade Show
Delta Prince Edward Hotel, Charlottetown, PE**

Workshop Title: Plenary: Soil Matter Organic From the Ground Up

Speaker & their title: Jeff Moyer, Executive Director Rodale Institute

Executive Summary:

Farming is all about the soil. This presentation explores why soil is the key to our very existence, how we can impact our soil by the way we farm, and what we all need to do to regenerate our planet, our environment and our climate.

Detailed Notes

Jeff chose to title his presentation "A Journey into Our Food System: Looking Beyond Short-Term Results". He emphasized that we are indeed on a journey as we develop our potential for organic production. Organic agriculture has a long history. Some of the early pioneers of this organic journey were mentioned with particular emphasis on J I Rodale. It was Rodale who coined the phrase "Healthy Soil = Healthy Food = Healthy People."

It is obvious that food and the soil in which it grows is vital to our society and personal well being. The land which comprises the Rodale Farm has been farmed for thousands of years. However topsoil is being lost in North America at an alarming rate.

Our food system is broken. Especially if we just consider yields. Jeff provided many frightening examples of health problems related to issues in the food system, agriculture, and general environment. Rates of autism are increasing everywhere. Pesticide exposure appears to lead to increased risk of Autism. Obesity is also increasing. Jeff told the story of a farmer friend who has to feed more grain to his cattle to get same results he achieved in the past. There is less nutrition in feed. Parkinson's Disease has also been linked to pesticide exposure.

Fifty percent of food produced is wasted. Most farmers don't grow food. They grow commodities.

Organic growers have a compass pointing us in different directions. We have some solutions to address the problems noted above. We have to start by asking the right questions and put some science behind what we say.

Jeff mentioned an article published in Nature in 2012, which stated that organic production yields are lower than conventional ones. However the article went on to state that with the right management practices organic can equal or surpass conventional methods. In this case the Media distorted the message and only reported one aspect of the study. There are many examples of this.

As organic farmers we cannot stand still. We have the same resources available to us as conventional farmers but we have a different philosophy. The Rodale Institute has been conducting Farming System Trials (FST's) continuously for 35 years. Three different systems have been used: organic manure based, organic legume based and conventional chemical based.

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The trials have demonstrated significant impact on soils. Soils in organic systems have a much more active soil biology with a greater variety of microbes and larger populations of mycorrhizae. The result is improved soil structure and enhanced carbon sequestering.

In addition to improved soil structure and biology, the 30-year long FST's also demonstrate that:

- Yields are the same or marginally better with organic management systems
- Energy inputs are less in organic systems
- Profit margins are higher in organic systems

Jeff emphasized the significance of less energy being required in successful organic systems. He reminded participants that one kilogram of chemical fertilizer requires a great deal of energy to manufacture and that fertilizer is one of the main energy inputs in conventional, agriculture. An analysis of the energy required to produce and bring to market one container of Tropicana orange juice revealed that 58% of the total energy required was expended in the chemicals used to grow the oranges themselves. The majority of energy required was not in transportation and packaging as was expected.

The benefits of organic management systems are scale neutral. Organic management will work on any size farm. Jeff also noted that animals belong on farms adding additional opportunities for diversity and organic management.

Jeff ended by encouraging all organic farmers and supporters to work hard to bring more people into the organic food movement. This task is vital to our survival. As climate change continues to dominate public discourse we can remind people that solid evidence exists demonstrating that organic systems sequester huge amounts of carbon. A recent study pointed out that a worldwide shift to organic systems can sequester all the carbon produced annually.