

# **THE ROLE OF FOOD AND AGRICULTURE IN GREEN COMMUNITIES**

**Paul Reed Hepperly**

*Research Director*

*Rodale Institute, Pennsylvania, USA*

*paul.hepperly@rodaleinst.org*

There is a growing recognition that reduction of 80% of the current greenhouse gases would be needed to reverse Greenhouse Gas elevations and consequential climate change. In the United States, 25% of the greenhouse gas emission comes from agriculture, food and forestry systems. Without sustainable management of agriculture, there is no way 80% greenhouse gas reduction could be feasible under present technology developed. The biggest opportunity for the agriculture and food system to improve this scenario is by improving soils for greater soil organic matter content therefore, magnifying carbon sequestration. Organic agriculture can reduce the energy requirement of 25 to 50% through elimination of synthetic fertilizers and pesticides. Besides the development of local organic foods, we recommend reducing the use of transportation and processing in our food system by use of compost, cover crops and no till agriculture supplementing carbon sequestration by energy efficiency measures. Greenhouse gases will also be minimized by introducing renewal energy and new types of architecture/planning to reduce energy requirements in residential, commercial industrial and agricultural activity. Use of wind and solar power would be examples of renewal energy supplies for Green Communities. In green communities of the future, greater emphasis will be given to recycling and local decentralized development.