

Sustainable (Sashwat) Yogic Agriculture
Rural Development Wing
Rajyoga Education and Research Foundation
Brahma Kumaris, Mt Abu, India

Context

Two thirds of India's population lives in rural areas where agriculture and allied activities are the main source of livelihood. The 1960s saw the introduction of mechanized agriculture with the 'green revolution'. Hybrid, genetically modified seeds, chemical fertilizers and pesticides became readily available on the market and were encouraged under Government schemes. As a result of this, although crop productivity increased in the short term, there was a rapid increase in soil infertility and toxic residues causing food-borne illnesses due to the continued overuse and misuse of inorganic fertilizers and pesticides in the production, storage and delivery supply chain. At present, agricultural productivity has stagnated and food security is seriously threatened. Farmers have no guarantee of crop success and land is becoming increasingly infertile, demanding further use of fertilizers which results in further soil fertility exhaustion. The reduced resilience against climate stress and pest infestation, of genetically modified seeds has added to the insecurity experienced by the farmers. Overuse of pesticides removes the friendly insects thereby destroying the delicate ecological balance. The above-mentioned factors have not only led to acute food insecurity but also disillusionment in the farming community and in the youth in particular. Statistics show that between 1995 and 2007, one farmer has committed suicide every 35 minutes.

Background

Based on the scenario described above, the Rural Development Wing (RDW) of the Rajyoga Education and Research Foundation (RE&RF) is working in partnership with Government institutions, NGOs and Research institutes to empower farmers, reconsidering methods of crop protection and improvement of agricultural production. It focuses on delivering a positive, results based message and implementation in order to improve the standard of living and quality of life of the rural communities of India.

The RDW has worked with farmers across India to develop a sustainable yogic farming technique by incorporating ancient Rajayoga Meditation. Using this technique, farmers bestow positive vibrations to the crops along with other organic inputs. Over the last five years this technique has been adopted by a large number of farmers who have benefited significantly. Farmers employ meditation as one of the key ingredients at each stage of farming. This can easily be practiced by farmers as they go through their daily chores in the field. When combined with methods of organic farming this resulted in significant reduction in cost of inputs and improved productivity with better nutrition content. This farming technique is an extension of Organic farming where the farmers use the techniques of ancient Rajayoga Meditation to improve both the quality of the crop and the yield.

Sustainable Yogic Agriculture builds upon research conducted globally, which established a definitive impact of emotions on the flora. For instance - early work by Sir Jagdish Chandra Bose proposes the impact of emotions (feel pain, understand affection etc) on plants. Later studies proved that plants possess advanced affective or cognitive abilities. [Trewavas A (2005) Green plants as intelligent organisms. Trends in Plant Science 10: 413-419]. Charles Darwin in his book 'The Power of Movements in Plants', mentions that the micro-organisms at the feeder roots are sensitive as is the brain to acquire signals of nature and likewise monitor the plant activities.

History

The practice of Sustainable Yogic Agriculture within the RDW started as an experiment of meditation to empower the five elements of nature. At the Brahma Kumaris (BK) centre in Maharashtra state, the BK teachers together with the BK farmers decided to experiment on a piece of land that had a history of low

productivity. Regular meditations directed towards the crops, resulted in a rich, pest free harvest without the use of any extra inputs such as pesticides or inorganic fertilizers. Impressed by these results, the BK farmer was enthusiastic to encourage fellow farmers to conduct further experiments. The RDW then took on this project in order to develop a methodology and conduct training for BK farmers across India.

Research

In June 2009, a Memorandum of Understanding (MoU) was signed between the SD Agricultural University (Gujarat) and the Rural Development Wing in order to conduct research on ‘The role of meditation in agriculture with organic inputs on the productivity of various crops’. The main objectives of the MoU were to develop agricultural research approaches with implication of techniques of Rajayoga meditation, exchange ideas, information and data arising from the research efforts. The main scope of the MoU was to develop and test the application of meditation on organic farming modules for various crops, study the effect on soil micro flora and to study the restoration of soil fertility and consistency in the levels of productivity whilst maintaining the natural balance.

The experimental land is divided into three replications; a) Organic Farming Module – 1 (OFM-1) which involves the standard organic farming techniques; b) Organic Farming Module – 2 (OFM-2) which adds meditation to the standard organic farming techniques; and c) Chemical Input Module (CIM), which applies the standard inputs of chemical fertilizers and pesticides.

The research is currently in its second of five years with the third crop having been harvested in November 2010. The seeds to be sown in OFM-2 are placed in the BK centre for a period of one month before sowing. This is then followed by weekly meditations taking place in the fields by groups of BK teachers and students throughout the crop growth cycle. Within this research, quality factors are being considered and no significant results were found in the first year. However, within the second year, positive results have been observed as follows within the crops produced from the meditated seeds:

- Soil parameters-increase of desired microbial load
- Significant drop in the Pest Damage;
- Reduction of damage caused by root cutting pests;
- Percentage of seed germination is higher in meditated seeds;
- Faster growth rate of meditated seeds, which took six days less time to germinate;
- Healthier root modulation;
- Improved growth strength and velocity;
- Improved test weight of seeds;
- Increased micronutrient content of crops- increase in quality parameters such as iron, manganese, Copper content of the grain; and
- Significant growth in friendly insects’ population

The Director of Research of the SD Agricultural University, in a recent interview, concluded that the study, although still in its early stages, is moving towards statistical significance.

Further Research

In partnership with the Department of Agronomy, Govind Ballabh Pant University of Agriculture and Technology, Pantnagar, Uttarakhand, further research was carried out on ‘The effect of seed treatment through Rajayoga Meditation on the yield of wheat’. The research was carried out on an organically certified farm in Rudrapur where seeds were subject to two types of treatments prior to sowing; a) seeds were meditated upon for one week and sown without any input other than irrigation; and b) unmeditated seeds were sown as per standard organic practice. The harvest took place in April 2010 under the inspection

of 21 agricultural scientists from different parts of India. **The study concludes that meditating on the seeds prior to sowing is equal to use of standard organic inputs.** Further studies are being conducted to confirm the findings in the change in quality and quantity of the crop due to the effect of meditative energy on various metabolic and catabolic activities in plants.

In March 2010, a national seminar was conducted on ‘Sustainable Yogic Farming: A new step for a new era’, jointly organized by Dr.BSSK Vidyapeeth, Dapoli and the Maharashtra Society of Extension, Education, Pune. The seminar explored the role of extension, education in the changing agricultural scenario of India and Dr Raut, former head of Department of Plant Pathology illustrated some of the findings over the past eight years of experimenting with sustainable yogic agriculture as follows:

- Increased crop yields and quality enhancement;
- Increase of protein content of produce from 0.7 to 1.13%, carbohydrates from 4.15 to 5.67 and vitamin C from 6.05mg to 14.90mg/ 100 gm of tomatoes. The overall increase in energy value per 100 gms of tomatoes was from 19.5 Kcal to 27.47 K cal.

Methodology

- *Priming of Seeds* – A sample of seeds to be sown are brought to the local BK centre for one week to one month prior to sowing. Students and teachers meditate regularly on these seeds filling them with the energy from the Source of peace, non violence, love, strength and resilience.
- *Meditation at the time of seed germination.*
- *Regular - daily or weekly meditations in the fields by groups or individuals practicing the lifestyle of Rajayoga with the Brahma Kumaris.*
- *Special meditations on the instance of plant illnesses or presence of pests* – encouraging nature to find her own balance through reinforcing the scores of friendly insects to protect and cure the crop.
- *Special meditations at the time of harvest* - Particular focus on gratitude towards nature is adopted at this time.

Recommendations

1. To reduce and finally terminate the unnecessary usage of inorganic inputs in farming, thereby reducing farmers’ expenditures, input costs as well as environmental pollution and reduction of food borne illnesses; replacing chemical inputs with the techniques of sustainable yogic farming.
2. To further study and practice of vibration-based transmission of positive energy towards fields, which not only builds a strong relationship with nature, but also raises awareness of the positive qualities of the individual, thus developing constructive relations and unity within rural communities.
3. To provide training for rural communities in the methods of sustainable yogic farming demonstrating the practical, financial benefits together with benefits on the personality level such as development of a positive attitude and increased capacity to face challenges in a constructive and confident manner.
4. To encourage rural communities to use natural household inputs such as organic fertilizers made from vegetable, plant waste, cow dung, urine etc, thereby reducing expenditure and increasing food security.