

Developments and Prospects of EM Technology in Thailand

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Abstract

The technology of Effective Microorganisms was introduced into Thailand in 1980 by Professor Dr. Teruo Higa of Okinawa, Japan. Since its inception, the program has gained momentum rapidly, through the offices of the Sekai Kyusei Kyo of Thailand. At present, EM is successfully used in orchard management, vegetable and livestock farming and in fish and prawn culture. It is also utilized in the Zoological gardens, garbage treatment and environmental protection.

At present, there are over 17000 trained personnel, who use EM. The people range from farmers, teachers to administrators. Thus, the Department of Agricultural Extension of the Ministry of Agriculture and Cooperatives, Royal Government of Thailand, together with key farmers trained in EM technology have established the Nature Farming of Thailand Forum. Its objectives are to promote the production and provide markets for EM based products, that are free of chemical pollutants. The technology of EM is widely used in Thailand, and the progress made is presented.

Introduction

The Royal Kingdom of Thailand, is an agricultural country. Its economy until the very recent past was based on agricultural commodity exports. Even at the present time, agriculture brings a considerable income into the Kingdom.

The Kingdom of Thailand is fortunate to have sufficient food for its consumption. Its principal food crop, rice, is cultivated widely. Extensive cultivations of vegetables, other highland crops and fruits support these rice enterprises. In addition, commercial crops such as cassava are also grown extensively. However, most of the crops are grown by the rural communities, under difficult conditions.

The concept of Kyusei Nature Farming was introduced into the Royal Kingdom of Thailand in the 1950's, with the establishment of Sekai Kyusei Kyo in Bangkok, Thailand. This early establishment was supported by Japan, and the program of Kyusei Nature Farming was carried out by the members of the Sekai Kyusei Kyo,. This was a small group of active people trying to develop the environment and organic or nature farming, at a time, when the green revolution, which brought about excessive use of chemicals and new varieties of cereal crops was being promoted as a miracle to help the poor developing countries of Asia.

The programs of Kyusei Nature Farming in that era were carried out in accordance with those advocated by Mokichi Okada. The methods of nature farming relied upon the use of organic wastes to enrich the soil and produce greater yields. However, the programs of extension on new varieties fertilizer responsiveness and the use of agrochemicals, all of which were seen as the ultimate answer to the food problems were being promoted. Therefore, the programs on Kyusei Nature Farming were being conducted in quiet but a very solid basis, by teaching the technology to interested farmers, who would adopt this method on their farms.

EM Technology in Thailand

The technology of Effective Microorganisms, developed in Japan by Professor Dr. Teruo Higa was introduced to Thailand in 1986. This introduction was through the Sekai Kyusei Kyo in Japan, which too had adopted this technology as a system to enhance productivity of Kyusei Nature Farming. The first studies were very promising, and in 1988, a barren and abandoned land was obtained at Sara Buri, to establish a nature farm with EM Technology. This center, which did not allow the entry of and agrochemicals within its premises, developed the systems of Kyusei Nature Farming with EM on a modest scale.

The program on Kyusei Nature Farming and EM in the Royal Kingdom was promoted significantly by the First International Kyusei Nature Farming Conference held in Khon Kaen, Thailand in 1989. This conference which brought together delegates from over 23 countries saw the developments

made within one year at Sara Buri and contributed to its programs by forming the Asia Pacific Natural Agriculture Network (APNAN) and by providing useful suggestions. The scientists and administrators of Thailand who participated were first made aware of this technology in Khon Kaen and at Sara Buri, during the field visits.

The concept of using EM in Kyusei Nature Farming and in agriculture developed with time. A principal factor that aided this expansion was the rapid development of the Sara Buri Kyusei Nature Farming Training Center. This center was being progressively expanded with new facilities for training both local and overseas people on the concepts of Kyusei Nature Farming and EM Technology.

Regular training are being held in this training center today. From its inception, the Sara Buri Center, which blossomed into a unit of excellence within a short period of 6 years, has trained 18,000 people from the agricultural sector of Thailand. In addition delegates from over 25 countries, some very important people such as Ministers and Deputy Ministers, Secretaries of States, Senior Governmental officials, scientists and farmers have all come to this center for training and observing the benefits of Kyusei Nature Farming and EM Technology.

The concept of training on EM Technology does not rely on scientists and administrators alone. Hence over 1000 field workshops have been since the establishment of the center, and over 70,000 farmers have been trained in EM technology. This has built up a base at the grass roots level - to enable the real practitioners of agriculture to adopt Kyusei Nature Farming and EM Technology throughout the Royal Kingdom. The success of the project on EM lies in this factor and the diligence of the trainers.

Kyusei Nature Farming, as advocated by Mokichi Okada is a way of life. Hence future generations need to be trained in this concept. This factor has not been forgotten in the EM program of Thailand. Today over 2400 Primary and High schools in 76 provinces of the Kingdom teach EM technology in their curriculum. Some 600 Junior High schools also adopt this program. In addition, Sara Buri also maintains an agricultural school, where students are trained in the concepts of Kyusei Nature farming, while following the regular curriculum of the education system in Thailand. This project is further strengthened by the training of over 3600 teachers from different parts of the Kingdom.

The concept of using EM for crop production was soon overtaken by its versatility. EM was proven to be successful in animal management and environmental sanitation. Hence, today, EM is used in all aspects of agriculture, education, waste water management, garbage treatment and is waste water treatment. EM is used in crocodile farms, shrimp farms, zoological gardens and many such enterprises, all with very successful results. Hence the holistic nature of Kyusei Nature Farming and EM is proving its merits within Thailand.

Traditional systems generally fight new developments and scientists and practitioners are often skeptical of new technologies, especially if microorganisms are involved. This is also the situation in the Royal Kingdom. At the inception, there was much debate on the efficacy of EM and its usefulness. However the first sign of acceptance came in the form of scientific publications appearing in Journals of the Ministries of Agriculture and Forestry of the Kingdom. This was seen to be a landmark. Thereafter, in 1994, the Ministry of Health of the Royal Kingdom tested EM and requested that this be used for sanitation purposes in hospitals. This was due to the benefits of EM in overcoming foul smells and cleaning the environments. Hence at the present time, EM is slowly but surely being accepted in the different areas of activity within the Kingdom. This is indeed a reward for the workers who have developed the technology.

EM at present and the future

The quantum of EM used in Thailand ranges from 70,000 - 100,000 liters per month at the present time. This is for agriculture, animal husbandry, forestry, aquaculture, sanitation and environmental management. In addition there is a growing interest on expanding these activities to encompass all fields of activity. Hence in 1998, the Royal Thai military will also send trainees to Sara Buri - this would give the program further encouragement.

Conclusion

Kyusei Nature Farming is a holistic way of life, aided by EM technology. This is proven in the kingdom of Thailand. In addition, with the establishment of APNAN in 1989, and its expansion has enabled the Thai program to offer its services to many parts of the world. People from all continents have visited Thailand to see and study the technology and we have hosted many international meetings, the biggest and most important being this. Thailand is happy of this progress and the people associated with the EM program in the Kingdom ensures its expansion and success into the 21st century.