

## **Editorial**

### **Organic Farming**

Modern agriculture depends on the uses of chemical fertilizers and synthetic pesticides, both of which result in deterioration of the cultivated land and the nearby environment. Many farms are now so badly ruined such that it is not possible to grow any crops since their soil physical condition was severely damaged; the farmers themselves are often in debt with poor health as the result of the effect of the application of dangerous synthetic pesticides. This has aroused many people to seek for alternative approach, and organic farming was suggested.

There have been many successful cases that organic farming - a farming practice employing a technique of conserving organic matter and not applying any chemical fertilizers and synthetic pesticides - has improved the yield and quality of crops and at the same time reduced the expenses of the chemicals and their application. For example, a rice farmer in Surin Province who used to grow rice using the technique of burning the rice stumps, followed by the application of chemical fertilizers, then of synthetic pesticides even before seeing any sign of pests, with the idea that prevention is better than cure. In the first few years, the yield was high and it paid off for all the expenses, still with considerable amount of cash left over. However, as this practice was continued, the soil became crumpy with lots of chemical residues. Worst is the quality of rice, which became poorer and poorer each succeeding years such that no rice mill would buy the grains. This has forced all concerned to seek for alternative approach. When organic farming was practiced, first by not burning rice stumps but plowed them under the soil, then the application of compost and farm manure; and when pests showed up, locally produced botanical pesticides were used. It was claimed that not only better quality and yield of rice were obtained, but the environment of the area was much improved; animals such as crabs, shrimps, fish, frogs, etc. start to re-inhabit the rice field. The Thai Cabinet was in favor of such a practice and announced that Surin Province be the showcase in using organic farming, not only for rice production, but other agricultural produces as well. This has resulted in the establishment of the National Assembly of Organic Farming which is the body composed of several non-governemnt organizations. It was soon endorsed by the Ministry of Agriculture and Cooperatives who requested the Cabinet to proclaim organic farming as the National Agenda. The assembly met just before year-end at the Agricultural Museum established in Commemoration of His Majesty 50<sup>th</sup> Anniversary of His Accession to the Throne to publicize the practice of organic farming. The main thrusts of the campaign went as far as to stop importing chemical fertilizers and synthetic pesticides and the establishment of small-scale compost plants in 7,000 sub-districts all over the country.

The whole idea looks good, particularly to produce composts domestically such that all local organic wastes will turn into compost and thus save the cost of expensive chemical fertilizer and reduces transportaion costs; moreover, this will also create jobs for many unemployed people in the villages or encourage young people who seek their employment in the big cities to return to their villages to be with their families.

One thing to consider is, will this practice be sustainable? The favorable results were obtained from very few cases in just a short span of time. Where are all the plant nutrients, particularly the N-P-K elements, coming from, as compost contains so little of these elements? Even with tons of compost there is insufficient amounts of elements that are depleted by crops each season. Thus, there is still a need to put in adequate amount of chemical fertilizers. A compromise approach is to combine compost with chemical fertilizers at the small factories, the amount of which depends on local condition. The compost containing adequate amount of chemical fertilizers would be ideal for crops as it has organic matters suitable for the growth of beneficial microorganisms, a small amount of slow released plant nutrients, and strengthen with the adequate amount of plant nutrients supplied by chemical fertilizers. This compromise, however, may not be acceptable by the extremists who favored organic farming, or to the farmers who have contracts to produce organic produces for their special customers. Before starting to implement such a huge project, there is a need to have a study to determine the best approach for maximum benefit in a sustainable way.