



The Sustainability and Productivity of Agricultural Lands

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Fertilizers are important materials to the production potential of agricultural land, which are used to increase production potential, maintain high yield and product quality. They will degrade land fertility, however, if they are not applied properly or their quality is not good. Therefore it is crucial to enhance the management on quality control of commercial fertilizers and training farmers to use fertilizers appropriately. Meanwhile some proper practices are extended such as the use of organic fertilizers and bio-fertilizers, planting green manures during fallow season, improving soil quality, avoiding soil acidifying and degrading, and promoting land sustainability.

In 2011 year, besides to enhancing the inspection of the new application of fertilizer brands, the quality and labeling surveys of fertilizers were conducted to 776 cases, which were sampled from markets and fertilizer factories, and 140 cases were found to have some conditions not following fertilizer regulations. There were 488 courses held on appropriate fertilization issues including indoor courses, training workshops, and field demonstrations. And in order to put the appropriate fertilization system to work, which according to soil properties, are 44,406 samples diagnosed after samples were collected and soil properties and nutrient contents of crop leaves were analyzed.

In the extension of use of bio-fertilizers, there were 8,827 hectares of land in growing *leguminosae* and *cucurbitaceae* using *Rhizobia*, *Mycorrhizae*, or phosphate-solubilizing bacteria to substitute part of chemical fertilizers applied. There were 20,207 hectares of farm lands whose owners were encouraged to use the good quality composts. In encouraging the planting of green manure for reducing the use of chemical fertilizer come several issues:

1. There were 203 hectares of land used to grow soybean seeds. This produced 327,940 kilograms of soybean seeds supplying 13,118 hectares of land planted with soybean green manure during the fallow season between the first and second crop seasons of rice.
2. There were 50,595 hectares of lands planted with winter green manures, such as Rape and Berseem Clover during winter fallow season. These issues have integrated efficiency in maintaining soil fertility, decreasing the use of chemical fertilizers, beautifying the rural landscapes, enhancing sightseeing potential, increasing the honey sources, and decreasing the pressure of overproduction of winter vegetables.

(Data Source: Agriculture and Food Agency)

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