Study of compost status in the southern agricultural regions of Iran

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History of using compost is as old as existence of man on the globe. Along with appearance of mechanized agriculture and demand for more product and increased level of agricultural wastes led researchers to find logical methods to change these materials to compost. In Iran, use of vegetal and animal wastes has been usual for farmers and villages from the old time. Rural wastes are principally composed of animal excrements and vegetal residues which along with soil and air constitute four essential principles of agriculture in the Iranian villages; compost produced as a result of changing animal and vegetal wastes to organic fertilizer can be presented to the market. In addition to removal of wastes, the nutrients present in it are recovered. Regarding importance of microbial changes during the process, factors effective on them should be identified and regarding climatic conditions of each region be adjusted. In the Khuzestan province, through implementation of sugarcane project and concurrent with activity of sugar plants, huge amounts of molasses cake filter and Bagasse produced by plants along with sugarcane leaf and shoot can be easily as a result of microbial activities converted to compost and be used as an environmental organic fertilizer using very desirable high productivity. The produced organic substance, due to having a light texture, minerals and compounds needed for different plants, while modifying the soil physics, and making it suitable for the plant root growth and expansion, leads to humidity absorption and providing better conditions around the roots. Typical elements in biological organic fertilizer formed of sugar cane biogases are: Iron, manganese, zinc, copper, nitrogen, phosphorus, potassium, organic carbon, organic materials, and other useful substances needed for plant growth. Using compost, the soil physical texture is improved through which air can move and therefore oxygen is easily absorbed by the plant root and soil permeability is increased. The produced organic fertilizer since it has passed all stages of composting in controlled conditions lacks any odor or pathogens, seeds of weeds and toxic substances for plant growth. Also due to compost being rich in useful heterotrophic microorganisms, by this method prevents growth of plant diseases and also existing microorganisms can make soil nutrients more absorbable for plant growth. And, if along with compost some sulphur is poured in the plant fertilizer holes can neutralize effects of high nitrate and high calcium carbonate present in the soil and lend to grad growth of plants. Therefore, producing compost from sugarcane bagasse is quite economical and has high added value. Using this compost provides nutrients needed by trees, farms, gardens, and pots and minimizes use of chemicals. Using this compost, the plant health, freshness and nutrition will be ensured.

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