

Use of eco-friendly techniques in sustainable agriculture and quality of organic crops

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Abstract

One of the most important issues of the twenty-first century is sustainable crop production. Advanced production systems need to be implemented to meet the food needs of the growing human population. Current production methods in agriculture, e.g., the improper use of chemical pesticides and fertilizers, create a long list of environmental and health problems. Conventional agriculture that utilises large quantities of inputs in the form of fertilisers, pesticide, labour and capital) made it possible to grow enough food to meet the current global needs. However, these practices of intensive agriculture made leading to environmental damage and degradation of several ecosystem. Intensive agriculture system consumes fossil fuel, water, and soil at unsustainable rates. At the same time causes to environmental degradation, air and water pollution, soil desertification, diminishing biodiversity. Increasing concerns about intensive agriculture and its detrimental effects have led to the development of sustainable agricultural practices such as organic farming. Organic farming aims to by improving the natural environment, increased water retention, reduced soil erosion and increased agro-biodiversity.

During the recent years, consumers' trust in food quality has decreased drastically, mainly because of growing ecological awareness. It has been found that intensive conventional agriculture can introduce contaminants into the food chain. Consumers have started to look for safer and better controlled foods produced in more environmentally friendly, natural and local systems. Organically growing foods are widely believed to satisfy the above demands, leading to lower environmental impacts and higher nutritive values. Studies have shown that organic crops contain fewer nitrates, nitrites and pesticide residues but, as a rule, more dry matter, vitamin C, phenolic compounds, essential amino acids and total sugars than conventional crops. Organic crops also contain statistically more mineral compounds and usually have better sensory and long-term storage qualities.

Biography

Ozlem Altuntas, Dr. Turgut Ozal University, has main focus and researches area is the fate of organic nutrition in vegetables basically mycorrhiza, PGPR, vermicompost, and organic fertilizers. Her work experience and knowledge in fields of; soil and soilless culture of vegetables in greenhouse, organic vegetable production, use of biostimulants, beneficial microorganisms in agriculture, effects of abiotic stress (drought, salinity, nutrient deficiency and toxicity, low and high temperature stress etc.) factors on vegetables.

Publications

1. Effects of salinity stress on chlorophyll and carotenoid contents and stomata size of grafted and ungrafted galia C8 melon cultivar
2. The effects of vermicompost on yield and some growth parameters of lettuce
3. Serada biber yetiştiriciliğinde arbusküler mikorhizal fungus kullanımının bitki gelişimi ve verime etkileri
4. The effectiveness of grafting to improve salt tolerance of sensitive melon when the tolerant melon is use as rootstock
5. Quality Parameter Levels of Strawberry Fruit in Response to Different Sound Waves at 1000 Hz with Different dB Values (95, 100, 105 dB)

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