Certificate course on

BIOFERTILIZERS AND ORGANIC FARMING

Academic year 2021-22

Syllabus

Biofertilizers and Organic Farming

(30h)

UNIT - I: (15h)

- Manures and Biofertilizers: Types of fertilizers, manures. Manure composition. Manures for crop
 productivity.
- 2. Differences between fertilizers and biofertilizers: pH changes and water contamination.
- 3. Bacterial Biofertilizers: General account on the microbes used as biofertilizer.
- Algal Biofertilizers: Associative effect of different microorganisms. Azolla and Anabaena-azollae association, nitrogen fixation, factors affecting growth, Azolla in rice cultivation.

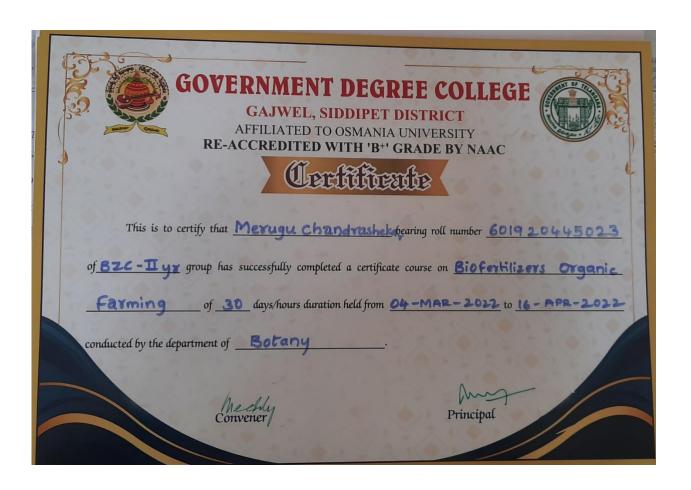
UNIT - II: (15h)

- Fungal Biofertilizers: Mycorrhizal association, types of mycorrhizal association, occurrence and distribution, phosphorus nutrition, growth and yield, colonization of VAM – isolation and inoculum production of VAM, and its influence on growth and yield of crop plants.
- Organic Farming: Green manuring and organic fertilizers, Recycling of bio-degradable municipal, agricultural and industrial wastes, Biocompost making- types, method of vermicomposting, Panchakavya. Biological pest control (neem).

Suggested Readings

- 1. Dubey R.C. 2005. A Text book of Biotechnology. S.Chand & Co. New Delhi.
- 2. Kumaresan V. 2005. Biotechnology. Saras Publications. New Delhi.
- John Jothi Prakash E. 2004. Outlines of Plant Biotechnology. Emkay Publication. New Delhi.
- Sathe T.V. 2004. Vermiculture and Organic Farming. Daya Publishers. New Delhi.
- 5. Subha Rao N.S. 2000. Soil Microbiology, Oxford & IBH Publishers. New Delhi.
- Vayas S.C, Vayas S. and Modi H.A. 1998. Bio-fertilizers and organic Farming Akta Prakashan. Nadiad.

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