

## **DIPLOMA IN AGRICULTURE**

### **I-SEMESTER**

<b>Soil Health Management, Seed &amp; Seed production</b>	<b>GUDA-101</b>
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#### **Theory:**

UNIT I: Soil-Profile, Types, Characteristics, Properties (Physical, Chemical and Biological Importance of soil testing, method of soil sampling, interpretation and farm advisory, based on soil test results. Problematic soils and their management.

UNIT II: Macro-Micro Nutrient deficiencies and their symptoms; Integrated Nutrients Management; Liquid Fertilizers; Plant Growth Regulators

UNIT III: Difference between seeds and grains; Importance of Quality Seeds in crop production; Seed treatment-Important and procedure; Types of seeds

UNIT IV: Agencies involved in seed production; Seed production methodology; Selection of seed; Seed testing; Seed enhancement; Seed certification

#### **Practicals:**

#### **References:**

1. Sachet A K 1985, Agricultural metrological instrument cum practical record, NCERT New DELHI
2. Varshney M C and Balakrishna Pillai 2003. Textbook of Agri meteorology, ICAR New Delhi
3. Biwas, T.D. and Mukherjee, S.K. 1990. Textbook of Soil Sciences, Tata McGraw-Hill Publishing Company Limited, New Delhi.
4. ISSS (2015) Fundamentals of Soil Sciences, Div. of Soil Science, IARI, New Delhi
5. A.K. Joshi and B.D Singh 2005. Seed technology, Kalyani publisher New Delhi
6. Agrawal P.K 1990 seed technology, ICAR New Delhi

**Theory:**

UNIT I: Crop planning in Rainfed Areas; Importance of Water Management in Crop Production

UNIT II: Natural Resource Management for Dry land Agriculture; Climate Change and adaptation strategies for Rainfed agriculture

UNIT II: Basic Principles in irrigation; Water use Efficiency System and Methods of Irrigation

UNIT IV: Systems Installation and Management of Micro irrigation (Sprinkler & Drip Irrigation); Budget requirement for Installation of Micro Irrigation System

**Practicals:****References:**

1. Telkar Shiv Kumar G, Solanki S.P. Singh, Kamal Kant 2019, Fundamentals of Agronomy, Kalyani Publishers, New Delhi
2. RP Singh 1995. Sustainable development and agriculture in India, scientific publisher Jodhpur
3. Singh S S 1993. Crop management under irrigated and rainfed condition Kalyani publisher New Delhi
4. Dr. Gopichandran 1989. Fundamentals of Agronomy oxford IBH publishing comp New Delhi