



ISBN: 978-93-89350-74-6

e-ISBN: 978-93-89350-75-3

Pages:106

2021

 Printed Copy

Hardbound ₹ 1,295/-

# Manual on MANURES, FERTILIZERS AND AGRO-CHEMICALS

This book entitled “*Manual on Manures, Fertilizers and Agro-Chemicals*” brought out by Dr. A. S. Mailappa, is a comprehensive treatise on the subject and is an outcome of his visionary perception and quest of a great need for an easy ready reckoner practical manual. This book addresses the various exercises / experiments as laid out in the syllabus of various undergraduate courses offered during the undergraduate programmes of Agriculture, Horticulture and Forestry.

This book has 20 well-defined chapters covering various aspects on collection, preparation, analysis of manures, fertilizers and agrochemicals, including things to learn at the end of every chapter. The contents are presented in such a way that the readers shall easily understand various aspects of analysis of test samples.

It is written in a very simpler and lucid manner, to ensure easy and clear understanding about execution of various practical experiments including step-by-step calculations and interpretation of analytical results related to analysis of manures, fertilizers and agrochemicals.

This book will serve as a guide for them to understand various analytical principles and user-friendly instrumental methods on the subject and thereby helping them to progress ahead in acquiring in-depth knowledge on carrying out of various research activities / programmes in the field of agriculture and allied disciplines.

**Readership :** Students / Teachers / Researchers / Lab-technicians of Agricultural Universities / Institutes, engaged in analysis of Manures, Fertilizers and Agro-Chemicals.

**A. S. MAILAPPA**

## (Contents)

- Basic Principles of Instrumentation Methods and Techniques
- Analytical Chemistry - Basic Concepts
- Laboratory Vessels and their Uses
- Determination of Moisture Content in Plants / Manures / Composts
- Determination of Total Nitrogen in Manures/Composts (Micro Kjeldahl Method)
- Determination of Total Phosphorus in Manures / Composts (Colorimetric/Vanadomolybdate Yellow colour method)
- Collection and Preparation of Fertilizer Samples for Laboratory Analysis
- Estimation of Ammoniacal Nitrogen In Nitrogenous Fertilizers (Ammonium Sulphate / Ammonium Chloride)
- Estimation of Nitrate Nitrogen in Nitrogenous Fertilizers (Sodium Nitrate / Potassium Nitrate / Calcium Nitrate)
- Estimation of Ammoniacal and Nitrate Nitrogen in Nitrogenous Fertilizers (Ammonium Nitrate / Calcium Ammonium Nitrate)
- Estimation of Amide Form of Nitrogen in Nitrogenous Fertilizers (Urea)
- Determination of Water Soluble Phosphorus ( $P_2O_5$ ) in Phosphatic Fertilizers (Super Phosphate / Rock Phosphate)
- Determination of Potassium in Potassic Fertilizers (Potassium Chloride-Indirect Method)
- Determination of Sulphur in Fertilizer Samples
- Diagnostic (Quick) Tests to Detect Spurious and Adulterated Fertilizers
- Determination of Active Ingredient (Chlorine) in Lindane (Argentometry)
- Determination of Active Ingredient (Endosulfan) in Thiodan (Iodimetry)
- Determination of Active Ingredient (Malathion) in Malathion (Iodimetry)
- Determination of Active Ingredient (Copper) in Copper Oxychloride / Fytolan (Iodimetry)
- Determination of Active Ingredient (Sulphur) in Sulfex (Iodimetry)

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