Indian Council of
Social Science Research

ICSSR Sponsored one Day National Seminar

(09.12.2024)

Implementation, Success and Challenges of National Mission for Sustainable Agriculture (NMSA) in India

Editors

Dr. M. Sampath

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This edition Published by
PG and Research Department of Economics
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Coimbatore – 641014
Tamil Nadu

ISBN: 978-9-33417-015-3

First published in 2024

ISBN: 978-9-33417-015-3

Harnessing Indigenous Wisdom: The Role of Indian Knowledge Systems in Sustainable Agricultural Practices

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Introduction

Indian Knowledge System (IKS) represents the vast body of knowledge accumulated over millennia, encompassing diverse fields such as medicine, philosophy, astronomy, and agriculture. In the context of agriculture, IKS has been instrumental in developing sustainable farming practices that not only optimize productivity but also ensure environmental harmony. This paper delves into the agricultural wisdom of IKS, highlighting the principles of sustainability, biodiversity, and resource management that have guided Indian farmers for centuries. These practices have evolved in response to the unique climatic, ecological, and social conditions of the Indian subcontinent.

Overview of Indian Knowledge System in Agriculture

The agricultural practices derived from IKS are based on an intimate understanding of local ecosystems, weather patterns, and the cyclical nature of seasons. Farmers, over generations, have accumulated knowledge about soil fertility, crop selection, and water conservation, which has been passed down through oral traditions and community practices. Several key elements of IKS in agriculture are discussed

1. Vedic Influence on Agriculture

The Vedas, ancient Indian scriptures, contain references to agricultural practices. The Rigveda and Atharvaveda, in particular, mention techniques such as plowing, sowing, and harvesting. Agriculture was seen as a divine act, and rituals were performed to ensure favorable weather and abundant harvests. The connection between agriculture and spirituality highlights the holistic approach of IKS, where farming is viewed as a sacred duty.

2. Organic Farming and Natural Fertilizers

Traditional Indian farming has long emphasized organic practices. Cow dung, compost, and green manure have been used as fertilizers, enriching the soil without the adverse effects of chemical inputs. Vermicomposting, a practice that involves using earthworms to decompose organic matter, is another indigenous technique that boosts soil fertility. These practices ensure that the soil remains fertile for future generations, a principle that is central to sustainable farming.

3. Crop Rotation and Mixed Cropping

Indian farmers traditionally practiced crop rotation and mixed cropping to maintain soil health and reduce pest infestations. Crop rotation involves alternating the types of crops grown in a particular field, which helps in replenishing soil nutrients. Mixed cropping, where different crops are grown together promotes biodiversity and reduces the risk of total crop failure. These methods have been crucial in enhancing productivity without depleting natural resources.