



Reviving Ancient Agricultural Wisdom: Insights from Surapala's Vrikshayurveda

Dr. Noor Fathima ^{1*}, Dr. Dhanush SS ²

¹⁻² Assistant Professor, Department of PG Studies in Dravyaguna, JSSAMC, Mysuru, Karnataka, India

* Corresponding Author: Dr. Noor Fathima

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Abstract

For decades, modern agricultural practices have prioritized yield enhancement, relying heavily on synthetic fertilizers and pesticides. This approach, while successful in the short term, has led to declining soil fertility, environmental degradation, and reduced nutritional quality in crops. India's ancient agricultural treatise, Vrikshayurveda, offers a sustainable alternative. Authored by Surapala, this text embodies the principles of plant life management, emphasizing eco-friendly methods for soil treatment, plant nourishment, and disease control. This article explores the historical roots, methodologies, and contemporary relevance of Vrikshayurveda for sustainable agriculture.

Keywords: Vrikshayurveda, fertilizers, pesticides, soil treatment, plant nourishment

Introduction

Modern agricultural practices often emphasize productivity at the expense of environmental health. Over the last seventy years, the indiscriminate use of chemical inputs has led to significant ecological challenges, such as soil degradation and groundwater contamination. Contrasting this, ancient India's agricultural systems were rooted in conservation, sustainability, and the holistic management of natural resources.

Among these traditional approaches, Vrikshayurveda stands out as a dedicated text on the science of plant life. This treatise, attributed to Surapala (circa 1000 CE), offers comprehensive guidelines for cultivating healthy plants and ensuring their productivity. The principles outlined align closely with Ayurveda's holistic philosophy, aiming to maintain balance and harmony in the natural world.

Historical Background

Surapala's Vrikshayurveda was composed under the patronage of King Bhimapala in Bundelkhand, central India¹. Rediscovered in the 20th century, it has since been translated into English and Hindi, offering insights into ancient horticultural wisdom. The text emphasizes sustainable farming practices that were developed long before the advent of chemical fertilizers. These methods relied on organic materials such as cow dung and natural fertilizers like kunapajala, a fermented liquid manure.

The book categorizes plants into four groups based on their morphology—trees (Druma), shrubs (Gulma), creepers (Lata), and fruit-bearing plants (Vanaspati). It also discusses soil types, irrigation techniques, and disease management, showcasing an advanced understanding of agroecology^[1].

Ancient Agricultural Techniques

1. Soil and Water Management

The text identifies three main types of soil—fertile (Anupa), arid (Jangala), and semi-arid (Sadharana)^[2]. It prescribes specific cultivation practices tailored to each soil type. Additionally, the importance of water conservation and rain harvesting is highlighted, reflecting the reliance on natural resources in ancient agriculture^[2].

2. Natural Fertilizers

Kunapajala, a biofertilizer derived from animal remains and organic matter, is central to Vrikshayurveda ^[3]. Prepared through fermentation, it enriches soil fertility and enhances plant growth. Modern experiments have validated its efficacy, demonstrating increased crop yield and pest resistance ^[3].

3. Plant Propagation and Protection

Surapala provides detailed methods for seed preservation, germination, and sapling transplantation. For instance, seeds were treated with a mixture of cow dung and honey to promote healthy growth. The text also describes using plant-based treatments to address pests and diseases, such as applying mixtures of turmeric, mustard, and medicinal herbs.

4. Seasonal Guidelines

The treatise specifies watering schedules based on seasonal variations. In summer, plants require morning and evening irrigation, while in winter, watering is recommended every alternate day. This adaptive strategy minimizes water wastage and ensures optimal growth.

Relevance in Contemporary Agriculture

The ecological challenges faced by modern agriculture underscore the need for sustainable alternatives. Vrikshayurveda provides valuable lessons in organic farming, biodiversity preservation, and soil health restoration. Techniques like kunapajala preparation and crop rotation can complement modern methods, reducing dependency on chemical inputs. Furthermore, integrating traditional practices with contemporary science can promote sustainable agricultural development. For example, using biofertilizers derived from ancient recipes can address soil fertility issues while minimizing environmental impact. Governments and agricultural institutions could adapt these methods to train farmers in eco-friendly practices, ensuring long-term food security.

Conclusion

Surapala's Vrikshayurveda reflects an advanced understanding of agricultural science, emphasizing harmony between human activities and nature. Reviving these ancient practices could provide solutions to the environmental and economic crises caused by industrial farming. As global interest in organic farming grows, this treatise serves as a blueprint for sustainable agriculture, blending tradition with innovation.

References

1. Mishra Ranjana. Surapala Vrikshayurveda: A Treatise on Agricultural Technologies. International Journal of Historical Insight and Research; c2015.
2. Griffith R. The Hymns of the Atharva Veda. Motilal Banarsidass; c1986.
3. Sadhale N. Surapala's Vrikshayurveda: The Science of Plant Life. Secunderabad: Asian Agri-History Foundation; c1996.
4. Dr. Anil K Verma. Effects of Long-Term Tillage Practices on Soil Microbial Networks and Nutrient Cycling. Journal of Soil Future Research. 2023;4(1):79-85.