

**KASHYAPIYA KRISHI SUKTI: AN ANCIENT INDIAN FRAMEWORK FOR
SUSTAINABLE AGRICULTURE, WATER MANAGEMENT AND RURAL RESOURCE
CONSERVATION****Dr. Vipin Kumar Saraswat^{*}, Dr. Tarun Sharma¹, Dr. Sumit Nathani²**^{*}Ph.D., Post Graduate Department of Dravyaguna, National Institute of Ayurveda, Amer Road, Jaipur, Rajasthan.¹Assistant Professor, Post Graduate Department of Dravyaguna, National Institute of Ayurveda, Amer Road, Jaipur, Rajasthan.²Professor, Post Graduate Department of Dravyaguna, National Institute of Ayurveda, Amer Road, Jaipur, Rajasthan.***Corresponding Author: Dr. Vipin Kumar Saraswat**

Ph.D., Post Graduate Department of Dravyaguna, National Institute of Ayurveda, Amer Road, Jaipur, Rajasthan.

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ABSTRACT

Background: Ancient Indian agricultural literature contains systematic descriptions of land management, water conservation, seed selection, crop cultivation, livestock management, agricultural implements, vegetable husbandry and rural organization. *Kashyapiya Krishi Sukti*, attributed to Sage Kashyapa and generally placed around the early medieval period, represents an important text within this agricultural knowledge tradition. **Objective:** The present article aims to examine the agricultural principles described in *Kashyapiya Krishi Sukti* and organize them into a contemporary framework of sustainable agriculture, resource conservation and rural ecological management. **Methods:** The available source text of *Kashyapiya Krishi Sukti* was examined through textual and narrative analysis, with particular attention to its organization of agricultural knowledge. Major themes were identified and categorized into land and soil management, water management, farmers and village institutions, agricultural implements, ploughing, livestock, seasons, seed management, crop cultivation, vegetable husbandry and broader agricultural-resource management. Contemporary scientific and government-supported literature was consulted to provide contextual interpretation. **Results:** The text presents agriculture as an interconnected system involving land, water, seeds, animals, implements, farmers, village institutions and governing authorities. Its first major section contains 606 verses distributed among fourteen subsections covering land classification, water reservoirs, canals and wells, farmers and village officers, agricultural implements, plough and bullock management, cattle characteristics, agricultural seasons, seed procurement, ploughing and cultivation of grains, pulses and other crops. Further sections address vegetable husbandry, edible and non-edible materials and other agricultural practices. Three major contemporary themes emerged: resource-based agriculture, integrated crop-livestock systems and diversified agricultural production. **Conclusion:** *Kashyapiya Krishi Sukti* represents a systems-oriented agricultural knowledge framework in which productive farming is associated with appropriate land, assured water, quality seed, suitable implements, healthy draught animals, competent farmers and supportive rural institutions. Its principles should be regarded as historical knowledge requiring critical textual examination and independent scientific validation before contemporary application.

KEYWORDS: *Kashyapiya Krishi Sukti*, seed management, sustainable agriculture, *Vrikshayurveda*, water management.

1. INTRODUCTION

Agriculture has historically been closely associated with the management of soil, water, plants, animals and human resources. In the Indian knowledge tradition, agricultural knowledge was preserved not only through practical experience but also through specialized textual

works dealing with farming, horticulture, irrigation, cattle management, plant health and rural organization. Among these works, *Kashyapiya Krishi Sukti* occupies an important position in the history of Indian agricultural literature.

Ayachit's English translation, published by the Asian Agri-History Foundation in 2002, identifies the work as a treatise on agriculture by Kashyapa.^[1] The Indian Institute of Spices Research library catalogue independently records the publication as Ayachit SM, translator, *Kashyapiyakrishisukti (A Treatise on Agriculture by Kashyapa)*, Asian Agri-History Foundation, 2002.^[1]

The work is partitioned into four functional sections totaling over 850 verses. **Section I**, dealing with grain agriculture, contains approximately 606 verses and is further divided into fourteen subsections covering introduction, division of land, water reservoirs, canals and wells, farmers and village officers, agricultural implements, plough worship, bullock worship, characteristics of cows and bullocks, agricultural seasons, seed procurement, ploughing, grain cultivation and cultivation of pulses and other crops. **Section II** deals with vegetable husbandry and contains approximately 178 verses, **Section III** deals with edibles and non-edibles and contains approximately 42 verses, while **Section IV** contains approximately 30 verses concerning multiform offerings.

Throughout the work, agriculture is presented as a major livelihood supporting human society, domestic livestock and ritual requirements. Contemporary agricultural-heritage literature has also identified *Kashyapiya Krishi Sukti* as an important source concerning agriculture, including irrigated rice cultivation, cattle management, soil characteristics, pulses, vegetables, fruits, spice crops, ornamental plants, tree planting, garden development and related agricultural activities.^[2]

The present study therefore examines *Kashyapiya Krishi Sukti* as an integrated agricultural knowledge system and explores the correspondence of its major themes with contemporary areas of sustainable agriculture, resource conservation and rural ecological management.

2. METHODS

2.1 Study design

The present work is a textual and narrative analysis and does not constitute an experimental or field-based study. The available source text of *Kashyapiya Krishi Sukti* was examined to identify its organization, major agricultural themes and relationships among different components of agricultural production.

2.2 Textual and narrative analysis

The textual analysis focused on the organization of verses, subject divisions, terminology and descriptions of agricultural practices. Narrative analysis examined the sequence in which agricultural subjects are presented and the relationship established between land, water, farmers, implements, livestock, seeds and crops.

2.3 Thematic categorization

The agricultural information was organized into the following thematic domains.

1. Land and soil management
2. Water harvesting and irrigation
3. Farmers and village administration
4. Agricultural tools and ploughing
5. Bullocks and cattle
6. Agricultural seasons
7. Seed procurement
8. Grain and pulse cultivation
9. Vegetable husbandry
10. Broader agricultural and rural resource management

2.4 Contemporary contextualization

Contemporary government and scientific literature was consulted to provide context for the possible modern relevance of the identified themes. The presence of a traditional practice in the classical text was not considered equivalent to modern scientific validation. Scientific validation would require independent experimental, field, ecological or engineering studies.

2.5 Comparative framework

The identified classical agricultural themes were compared with contemporary fields such as soil science, irrigation management, agricultural extension, agricultural engineering, conservation agriculture, livestock-crop integration, seed science, agronomy, horticulture and agroforestry.

3. RESULTS

3.1 Organization of agricultural knowledge

The analysis identified a systematic organization of agricultural knowledge within *Kashyapiya Krishi Sukti*. The text addresses land, water infrastructure, farmers, village officers, agricultural implements, ploughing, bullocks, cattle, seasons, seeds and crop cultivation before proceeding to specialized vegetable husbandry and other agricultural subjects. The sequence can be represented conceptually as: Land → Water → Farmer → Implements → Draught animals → Seed → Ploughing → Crop establishment → Crop management → Harvest/use.

This organization indicates that agriculture was presented through multiple interconnected components rather than as a collection of isolated farming operations.

3.2 Land classification and agricultural suitability

A dedicated treatment of land division and identification demonstrates the importance attributed to the agricultural resource base. The text appears to recognize differences among agricultural lands and their suitability for particular purposes. From a contemporary perspective, these observations can be compared with soil texture, structure, drainage, moisture-holding capacity, nutrient availability, salinity and pH. The land-classification system described in the *Kashyapiya Krishi Sukti* should be understood primarily as an indigenous framework of land assessment and agricultural knowledge, rather than

being directly equated with modern soil-taxonomic classifications.

3.3 Water Management

Water management is a prominent component of the agricultural framework. The text discusses reservoirs, canals, wells and related water infrastructure. This indicates an understanding of agriculture in relation to water storage, distribution and availability. The water-management framework can conceptually be represented as: Rainfall → Water storage → Reservoirs → Wells → Canals → Field irrigation. This provides an important historical basis for investigating traditional water-management systems through contemporary hydrological and watershed approaches.

3.4 Farmers and village institutions

The text contains dedicated treatment of competent farmers and village officers. This indicates that agricultural productivity was associated not only with natural resources but also with human knowledge, responsibility and institutional organization.

The agricultural framework therefore includes the farmer as an active decision-maker and recognizes the importance of village-level support and administration.

3.5 Agricultural implements and plough technology

The text contains specific treatment of agricultural tools and implements and separately addresses plough-related practices. Traditional implements can be investigated using contemporary agricultural-engineering parameters including draught requirement, field capacity, soil disturbance, energy efficiency, durability and suitability for particular soil conditions.

3.6 Bullocks and cattle

Bullocks and cattle occupy an identifiable position within the agricultural framework. Their treatment demonstrates the historical integration of livestock with crop production. Bullocks were important for draught power, while cattle contributed to the broader rural agricultural economy. The classical descriptions of cattle and bullocks provide potential subjects for veterinary, physiological, animal-husbandry and draught-capacity studies.

3.7 Agricultural seasons and crop selection

The text discusses agricultural seasons and crop-land suitability, including references to rice and pulses. This indicates an association between crop selection and environmental conditions. The classical seasonal framework can be compared with contemporary agro-climatic crop planning, while recognizing that historical recommendations require evaluation under present climatic and ecological conditions.

3.8 Seed procurement and seed management

Seed procurement receives dedicated attention in the agricultural framework. This indicates the recognition of

seed as a critical component of successful crop production.

Traditional seed-selection and preservation practices can be investigated using contemporary parameters such as germination, genetic and physical purity, vigour, moisture content, storage life and seed-borne disease.

3.9 Ploughing and crop establishment

Ploughing is treated as a distinct agricultural operation. Field preparation influences soil aeration, moisture movement, weed management, seed placement and root development. The classical descriptions provide historical material for comparative research with modern tillage and conservation-agriculture practices. However, these practices should be understood within the agricultural context of the *Kashyapiya Krishi Sukti* and should not be interpreted as prescribing a universally applicable tillage system.

3.10 Grain crops, pulses and other crops

The largest section of the text concerns grain agriculture. Approximately 606 verses are distributed among fourteen subsections, including detailed treatment of grain crops, pulses and other crops.² This crop-specific organization corresponds with the contemporary agronomic understanding that different crops require different soil, water, seasonal, seed, spacing, nutrient and management conditions.

3.11 Vegetable husbandry and agricultural diversity

A separate section of approximately 178 verses is devoted to vegetable husbandry. The presence of a dedicated vegetable section indicates that agricultural production extended beyond cereals and pulses. The broader agricultural framework described in the *Kashyapiya Krishi Sukti* encompasses a diverse range of plant resources, including cereals, pulses, vegetables, fruits, spices, ornamental plants, and other economically or practically useful plant species. Such diversity provides a basis for studying historical agricultural diversification, nutritional diversity, livelihood diversification and ecological resilience.

3.12 Comparative framework

Table 1 presents a comparative framework between the major agricultural themes described in *KashyapiyaKrishiSukti* and their corresponding areas of investigation in contemporary sustainable agriculture. It demonstrates how classical concepts related to land, water, farmers, implements, ploughing, livestock, seasons, seeds, crops, vegetables, and trees or gardens can be examined through modern agricultural, ecological, and sustainability perspectives. This comparison is intended as a research framework, not as evidence that every classical practice has already been scientifically validated.

Table No.1: Comparative Framework.

Major theme in <i>Kashyapiya Krishi Sukti</i>	Classical agricultural emphasis	Contemporary area for investigation
Land	Division and identification of agricultural land	Soil science and land suitability
Water	Reservoirs, canals and wells	Water harvesting and irrigation management
Farmer	Characteristics of competent farmers	Agricultural extension and farmer capacity
Village officers	Rural agricultural administration	Local agricultural governance
Implements	Tools and agricultural resources	Agricultural engineering
Plough	Plough-related practices	Tillage and conservation agriculture
Bullocks	Bullock management and characteristics	Livestock-crop integration
Seasons	Seasonal farming and crop-land suitability	Agro-climatic crop planning
Seeds	Seed procurement	Seed quality and conservation
Grain crops	Crop-specific cultivation	Agronomy
Pulses	Cultivation of pulses and other crops	Crop diversification and soil fertility
Vegetables	Dedicated vegetable husbandry	Horticulture and nutritional diversity
Trees/gardens	Agricultural and horticultural resources	Agroforestry and ecosystem-based agriculture

4. DISCUSSION

4.1 *Kashyapiya Krishi Sukti* as an integrated agricultural system

The principal finding of this analysis is that *Kashyapiya Krishi Sukti* can be studied as an interconnected agricultural system. Land, water, seeds, animals, implements, farmers and institutions occur as related components rather than isolated subjects.

This systems-oriented organization has conceptual relevance to contemporary sustainable agriculture, in which agricultural productivity is increasingly considered together with soil health, water availability, biodiversity, resource efficiency and livelihood security.

4.2 Water and resource conservation

The prominent position of reservoirs, canals and wells indicates the historical importance of water infrastructure in agricultural production. This provides an opportunity for interdisciplinary research involving agricultural science, hydrology, groundwater studies and watershed management.

Traditional descriptions should be understood as historical accounts of water-management practices rather than as universally optimal models for contemporary agricultural systems; instead, they may provide valuable historical insights and generate hypotheses for site-specific investigation and evaluation.

4.3 Crop-livestock integration

The treatment of bullocks and cattle alongside crop production demonstrates the historical integration of livestock with agriculture. This has conceptual relevance to contemporary integrated crop-livestock systems. However, historical animal-based agriculture and

modern integrated farming systems are not identical. Their similarities and differences require empirical investigation.

4.4 Agricultural diversity

The presence of cereals, pulses, vegetables and other useful plants indicates diversification of agricultural production. Such diversification can be examined in relation to contemporary concepts of nutritional diversity, crop diversification, soil fertility, biodiversity and livelihood resilience.

4.5 Scientific validation of traditional agricultural knowledge

Contemporary literature has begun to investigate traditional agricultural practices using modern scientific methods. For example, a 2025 study published in *Applied Soil Ecology* reported that liquid Kunapajala application to *Piper nigrum* was associated with changes in plant growth, selected soil properties, nutrient uptake and rhizosphere bacterial communities.^[6]

Such findings demonstrate the possibility of scientifically investigating traditional agricultural practices. They should not, however, be interpreted as evidence that all practices described in *Kashyapiya Krishi Sukti* are scientifically validated.

4.6 Proposed research programme

Table 2 presents the proposed rigorous research programme, encompassing different areas of investigation.

Table No 2. Proposed Rigorous Research Programme.

Research area	Suggested approach
Textual research	Critical comparison of available manuscripts, editions, translations and commentaries to establish reliable readings of individual agricultural instructions.
Soil-science investigation	Comparison of descriptions of agricultural lands with modern measurements of soil texture, pH, electrical conductivity, organic carbon, available nutrients and water-holding capacity.
Water-management studies	Evaluation of descriptions of reservoirs, canals and wells using hydrological modelling, groundwater studies and watershed-management approaches.
Agricultural engineering studies	Examination of traditional ploughs and implements for draught requirement, field capacity, soil disturbance, energy efficiency and suitability for particular soil conditions.
Livestock studies	Comparison of traditional criteria for cows and bullocks with veterinary, genetic, physiological and draught-animal parameters.
Seed science	Evaluation of traditional seed-selection and preservation methods for germination, vigour, storage life and seed-borne disease control.

4.7 Vision for sustainable agriculture

The agricultural knowledge represented in *KashyapiyaKrishiSukti* can be interpreted through three broad contemporary themes depicted in the table no.3.

Table No 3. Vision for Sustainable Agriculture.

Section	Theme	Description
15.1	Resource-based agriculture	The text places land and water infrastructure near the beginning of its agricultural framework, emphasizing the importance of managing the resource base before expecting sustained crop production.
15.2	Integrated crop-livestock systems	The inclusion of bullocks and cattle within the agricultural framework demonstrates the historical integration of animals and crop production.
15.3	Diversified agricultural production	The presence of cereals, pulses, vegetables and other useful plants indicates an agricultural system extending beyond a single crop category.

Together, these themes provide a conceptual basis for studying traditional agricultural knowledge in relation to modern sustainability objectives. Contemporary work on Vrikshayurveda similarly discusses the possible relevance of traditional plant and agricultural knowledge to regenerative agriculture, biodiversity conservation, ecosystem restoration and resource conservation.^[7,8]

4.8 Future research priorities

Several research areas emerge from the systematic organization of *KashyapiyaKrishiSukti*.

1. **First**, critical editions and reliable translations should be developed so that individual agricultural recommendations can be studied accurately.
2. **Second**, each traditional practice should be classified according to whether it represents an empirical agricultural observation, a technical recommendation, a cultural or ritual practice, or a combination of these.
3. **Third**, experimentally testable practices should be evaluated using appropriate agronomic designs.
4. **Fourth**, traditional land and water-management practices should be investigated in different agro-climatic zones rather than assuming universal applicability.
5. **Fifth**, traditional crop diversity should be documented alongside modern genetic-resource conservation programmes.

6. **Sixth**, interdisciplinary research involving Sanskrit studies, Vrikshayurveda, agronomy, soil science, hydrology, agricultural engineering, botany, ecology and rural sociology would allow the agricultural knowledge contained in the text to be studied comprehensively.

5. CONCLUSION

Kashyapiya Krishi Sukti represents a broad and systematically organized body of Indian agricultural knowledge. Its treatment extends from land classification and water infrastructure to farmers, village officers, agricultural implements, ploughing, bullocks, seeds, seasonal farming and crop cultivation. Its separate treatment of vegetable husbandry further demonstrates the diversity of agricultural production described in the tradition.

The major significance of the text lies in its integrated conception of agriculture. Land, water, seed, animals, tools, farmers and institutions are presented as interconnected components of agricultural productivity. These themes have identifiable areas of correspondence with contemporary subjects such as soil management, irrigation, seed science, agricultural engineering, livestock-crop integration, crop diversification and sustainable agriculture.

The future study of *Kashyapiya Krishi Sukti* should therefore focus not merely on demonstrating its antiquity but on critically documenting its contents and identifying specific practices that can be subjected to reproducible scientific investigation. Such an approach can help preserve India's agricultural knowledge heritage while identifying potentially testable components for contemporary agricultural research.

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