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Agricultural Education in School Curriculum

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Abstract:

The article highlights the role of agriculture in the Indian economy, need to incorporate agricultural education into the school curriculum. This also discusses the evolution of agricultural education, the integration of technology and sustainable practices in the curriculum, and the transformative impact of the New Education Policy (NEP) in India. It underscores the importance of agricultural education in promoting food security, nutritional knowledge, sustainable production, survival skills, and environmental awareness. Furthermore, it explores the benefits of agricultural education in fostering interdisciplinary learning, responsible consumption, life skills, and career opportunities in agriculture. The inclusion of agriculture as a necessary discipline in schools is crucial for equipping students with comprehensive knowledge, addressing global challenges, and making informed decisions related to food production and sustainability.

Keywords: *Agriculture Education, Curriculum, NEP.*

Introduction

Agriculture plays a crucial role in the Indian economy, with over 70 percent of rural households relying on it, contributing around 17 percent to the country's total GDP and employing approximately 58 percent of the population. Indian agriculture has witnessed remarkable growth in recent decades, with food grain production increasing from 51 million tonnes (MT) in 1950-51 to a record-high of 250 MT in 2011-12, and its contribution to GDP rising to 19.9 percent in 2020-21. The impact of agriculture on various aspects of society is significant, as it directly influences food production and nutritional intake, affecting people's health. While concerns about the excessive use of artificial fertilizers and pesticides have been raised, agricultural businesses are increasingly adopting less harmful methods. Additionally, agriculture has been a major contributor to the Indian economy and is expected to play an even more significant role in driving economic development, fostering infrastructure development, and nurturing a strong sense of

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collective spirit among farmers. However, the industry faces challenges in adopting sustainable practices to minimize its environmental impact, as it currently accounts for a significant portion of greenhouse gas emissions.

Agriculture and education:

With the rise of modern agricultural practices, formal education in agriculture has gained importance, leading to the establishment of specialized institutions offering training in farming, livestock production, agricultural engineering, and agribusiness. These programs equip students with the necessary skills to tackle industry challenges. The integration of technology in agricultural education has further transformed the field, incorporating digital tools, precision farming technologies, and remote sensing techniques into the curriculum. This fosters data-driven decision-making, precision agriculture, and sustainable farming practices to promote environmental stewardship and address food security concerns.

In recent years, the education sector in India has experienced a significant transformation through the introduction of the New Education Policy (NEP) in 2020. The NEP aims to revitalize the entire education system, including agricultural education, by advocating multidisciplinary and holistic learning approaches. It underscores the integration of practical skills, research-oriented education, and entrepreneurship development within agricultural curricula. The NEP envisions agricultural education aligning with the evolving needs of the sector, fostering innovation, and encouraging research. It also places emphasis on nurturing critical thinking, problem-solving abilities, and creativity among students. Additionally, the policy promotes collaboration between academic institutions, research organizations, and industry stakeholders to bridge the gap between theoretical knowledge and practical application.

Purpose of inclusion of Agriculture intoschool curriculum:

Agriculture has always been a fundamental aspect of human society, providing the basis for our survival throughout history. However, our academic institutions have progressively overlooked its significance, diminishing its status as a necessary discipline.While agricultural studies exist at the undergraduate level, most students do not have the opportunity to learn about it during their school years. Considering the increasing importance of food production and sourcing, it is crucial to revise the academic structure to include agricultural education.

Numerous studies conducted aiming to understand the relationship between agricultural education at the secondary school

level and agricultural transformation have revealed positive contributions of agricultural education in developing agricultural human capital, institutionalizing and expanding lower-level agricultural education, and implementing an aggressive program of positive discrimination in favor of rural sections of the community. This approach extends to both education and employment, making agricultural education and its beneficiaries relevant to the Indian context.

Apart from the general importance of agriculture, following reasons are explaining the incorporation of agriculture as a necessary discipline in schools will contribute to sustainable agricultural practices by providing students with a comprehensive understanding of agriculture, they will be better equipped to address global challenges, and make informed decisions.

1. Food Security:

Agriculture is essential for food security. By teaching students about agriculture in school, they can learn about the food production process and develop the skills needed to contribute to sustainable farming practices. This will help to ensure that future generations have the knowledge and skills to address the challenges of food production and distribution.

2. Essential Nutritional Knowledge:

Acquiring knowledge about agriculture and farming enhances children's understanding of the nutritional value of their food. Most children lack the ability to discern the nutritional quality of different foods. This lack of knowledge leaves them vulnerable to marketing claims, preventing them from making informed decisions about their health. Learning about nutritional value empowers them to follow a balanced diet and avoid unnecessarily eliminating necessary foods due to trending diet cultures.

3. Awareness about sustainable production:

Environment and agriculture are interdependent. Both can have positive and negative impact on each other. By teaching students about sustainable farming practices, conservation of natural resources, and the importance of biodiversity, agricultural education can help them to understand the environmental impacts of agriculture and how to reduce them. This can help to foster a sense of environmental responsibility in students and encourage them to take action to protect the environment for future generations.

4. Knowledge about Basic Survival Skills:

Agricultural education enables students to acquire essential survival skills. They can learn to differentiate between poisonous and non-poisonous plants and gain insights into growing their own food. Additionally, agricultural education covers topics such as

soil health, plant identification, and food safety, providing practical knowledge applicable to their daily lives. The more they learn, the more self-sufficient they become.

5. Understanding the Origin of Food

Surprisingly, many adults have limited knowledge of the efforts, resources, and expenses involved in food production. By including agriculture and farming as major disciplines in schools, children can gain a comprehensive understanding of food production and management. This knowledge enhances their awareness and helps them grasp concepts such as crop seasonality, harvesting, and transportation.

6. Integration of Multiple Disciplines

Agricultural education is valuable because it combines knowledge from various disciplines. By understanding which plants thrive in specific climates, students can learn about basic geological and climate differences between regions. They also delve into biology, chemistry, physics, and mathematics to make critical calculationsand estimations about crop plantation and harvesting.

7. Encourages Responsible Consumption

The incorporation of both theoretical and practical agricultural education can effectively instill a sense of responsibility in students regarding their food consumption. The UK faces a significant problem with food wastage, with 8.4 million people lacking access to sufficient food while approximately 3.6 million tonnes of food goes to waste annually in the country.When younger minds understand the immense effort involved in producing even a small portion of food, they are less likely to waste it, both during their younger years and as adults. This responsible behavior has the potential to transform the food industry and foster discussions about sustainable living.

8. Life Skills:

Agricultural education teaches students a variety of practical skills that are valuable in any career. These skills include problem-solving, critical thinking, teamwork, leadership, and entrepreneurship. By participating in agricultural activities, such as growing crops, raising livestock, or managing farm businesses, students can develop a strong work ethic, responsibility, and resilience.

9. Career Choices in Agriculture

Many young people from urban cities have limited knowledge about the agriculture and farming sector and the opportunities it offers. Since most of them do not come from farming backgrounds, they lack exposure to this vital part of the economy. By providing education on agriculture and farming in schools, students can explore and consider careers in this sector that they may have otherwise overlooked. This exposure broadens

their career choices and enables them to make informed decisions about their future.

Final Thoughts

In conclusion, agriculture and farming hold immense significance in our society. The new education policy (NEP-2020) presented offers a comprehensive structure to advance agricultural education by incorporating technology and traditional wisdom, fostering multidisciplinary approaches, and encouraging flexibility and inclusivity within higher education institutions. By integrating agricultural education into school curricula, we can profoundly influence growth of young minds and their development. This integration equips them with the necessary knowledge and skills to become responsible, proactive, and self-reliant individuals, thereby making valuable contributions to the overall economy of the country.

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