

Article Id
AL04528

A STUDY ON THE ROLE OF YOUTH PARTICIPATION IN AGRICULTURE AND EXTENSION SERVICES IN ENHANCING SUSTAINABLE AGRICULTURAL DEVELOPMENT

Email

¹Sandeep Kumar* and ¹Shubham Gaurav

sandeepsolanki5000@gmail.com

¹Department of Agricultural Extension Education, Bihar Agricultural University, Sabour, Bhagalpur (Bihar), India

Youth involvement in agriculture and extension activities is crucial for ensuring sustainability and modernization. With challenges like climate change, declining farm income, and rural-urban migration, engaging youth has become essential. Young people contribute innovation, energy, and readiness to adopt modern technologies such as digital tools, precision farming, and climate-smart practices. Agricultural extension services empower youth by providing technical knowledge, training, and linking them with research and markets, fostering entrepreneurial skills. However, barriers like limited access to land, credit, and negative perceptions persist. Strengthening extension systems, promoting agri-entrepreneurship, and integrating ICTs can enhance youth participation, boosting productivity, rural development, and employment generation.

Although it employs about half of India's workers, agriculture only makes up around one-fifth of the country's GDP (Sen, 2025). According to Kumar and Dhingra (2024), rural young are a demographic dividend since they are more literate than previous generations, willing to embrace innovations, and in a unique position to revolutionise agriculture through technology and entrepreneurship. However, a growing number of young people are migrating to cities in search of non-farm employment, and many farmers are over 50 (Chakraborty et al., 2025). Redesigned extension systems that provide timely information, develop capabilities, and connect young people to institutions and markets are necessary to overcome these limitations. (Mukhopadhyay, 2024). Extension today includes farmer groups, entrepreneurship, value chain development, and policy advocacy in addition to technology dissemination. Another change is required for youth engagement: extension needs to be youth-focused, tech-savvy, and entrepreneurial. According to empirical research, extension workers use mobile phones, internet advisories, and social media more than computers, televisions, or projectors as information and communication technology (ICT) tools (Prasad & Pradhan, 2019).

Importance of Youth in Agriculture

A significant source of energy for the entire food supply chain in the agricultural industry is youth. From the seed to the consumer, they are essential to the production of food crops. Youth have a major role in the post-harvest phase. The advanced, practical outcomes in the field of agriculture are the responsibility of the young people working in research sectors

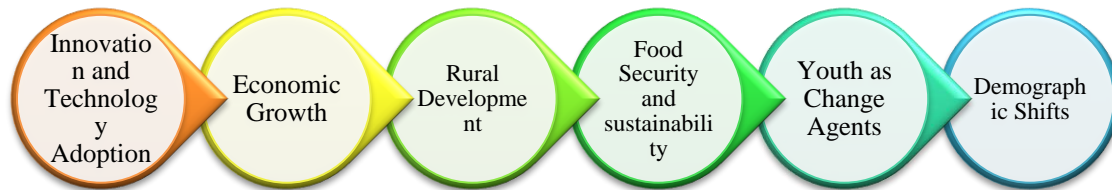


Fig. 01: Role of Youth in Driving Agricultural Development and Transformation

Youth Engagement and Empowerment in Agriculture

Youth engagement and empowerment in agriculture is the process of involving young people actively in agricultural activities and strengthening their capacity through education, skills, resources, and institutional support to enhance their decision-making ability, productivity, and livelihood security.



Fig. 2: Youth Engagement in Agriculture and Extension in BAU, Sabour Activities

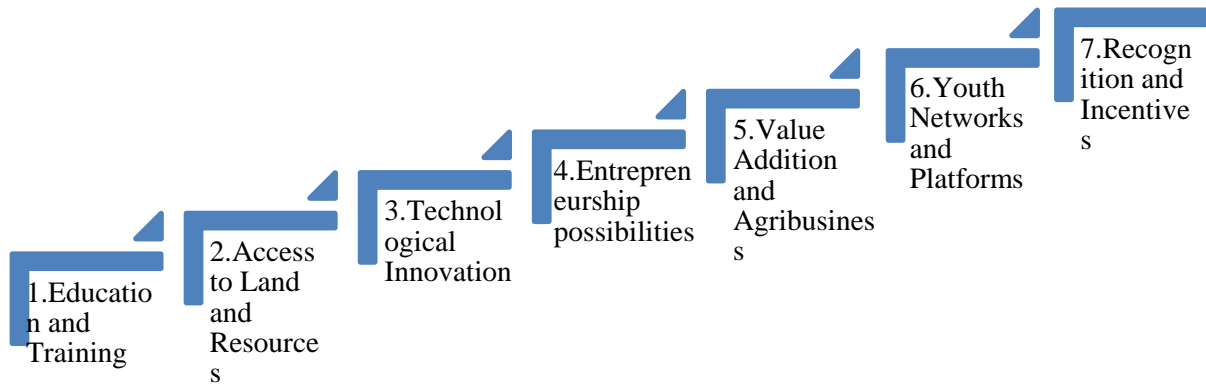


Fig. 3: Key Factors Enhancing Youth Participation in Agriculture

Role of Agricultural Extension Services

Agricultural extension programs are essential for empowering farmers and improving their expertise. These extension programs work as links between actual farming and scientific research by offering training, teaching, and advising services. The prosperity and sustainability of an agricultural environment that is always changing. The resources, expertise, and information that farmers possess are crucial to farming communities. Agricultural extension services play an increasingly important role in helping farmers increase their knowledge and skills so they may better adjust to changing conditions, enhance their livelihoods and production, and improve their practices.

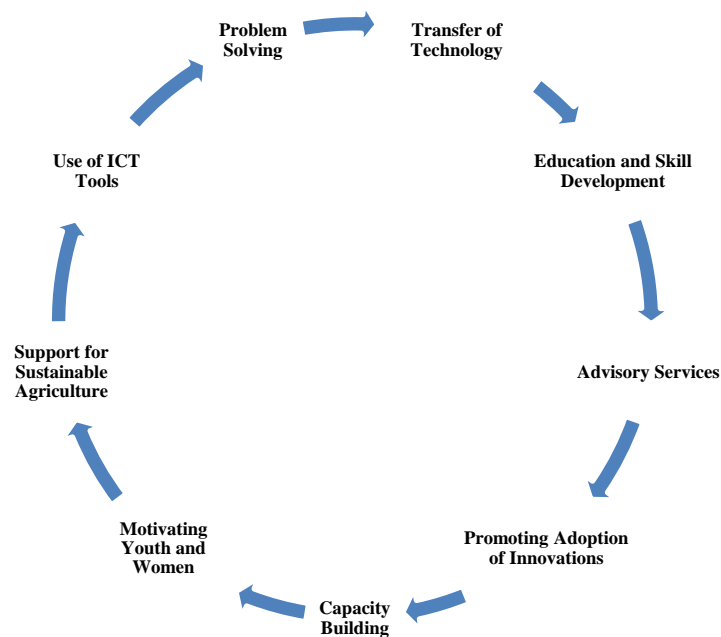
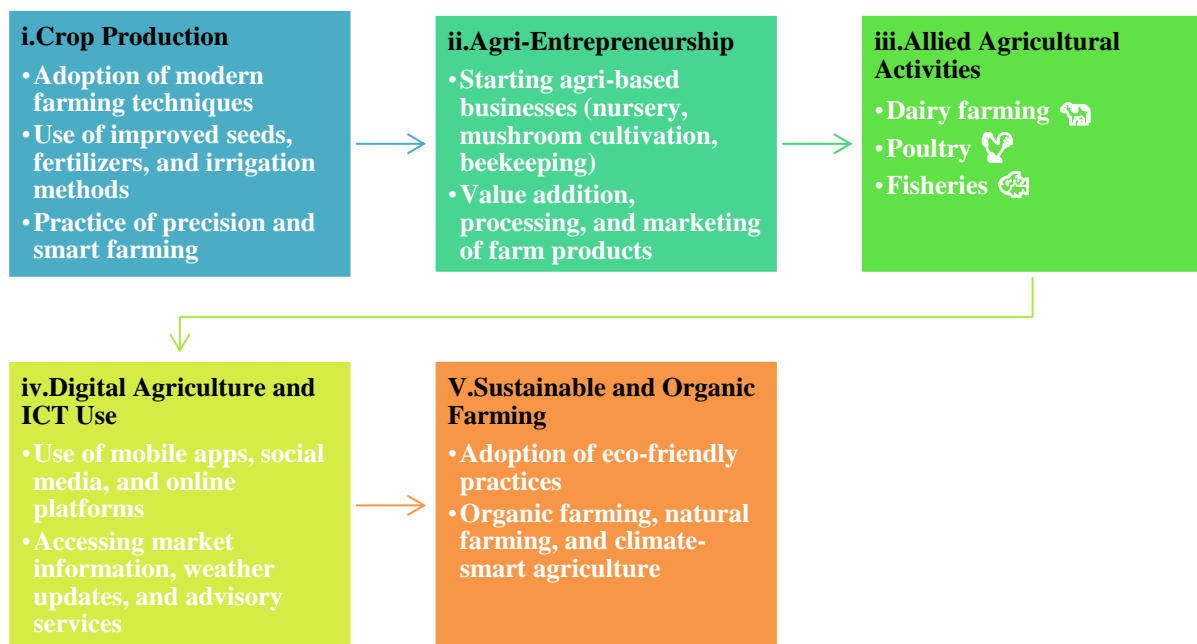


Fig. 4: Cycle of Youth Empowerment and Sustainable Development

Areas of Youth Participation

- The various agricultural and extension service sectors or fields where young people actively participate, contribute, and use their abilities, expertise, and creativity are referred to as "areas of youth participation." Crop production, agri-entrepreneurship, Allied Agricultural Activities, digital technology use, Sustainable and Organic Farming and agricultural marketing are some of the areas where young people promote rural transformation and agricultural growth.



Conclusion

The engagement of youth is necessary for the sustenance and advancement of agricultural practices. The innovative nature and open-mindedness towards new technologies will help tackle issues such as climate change and low earnings from farms. Agricultural extension services will help the youth participate in agriculture by providing education and information about markets. There are constraints like scarcity of funds and unfavourable attitudes, but improvements in extension services and agri-entrepreneurship will facilitate youth participation.

References

- Sen, S. (2025). Centre for sustainable agricultural skill development and community livelihood advancement in West Bengal. *International Journal for Research in Applied Science & Engineering Technology (IJRASET)*, 13(8), 1196–1202.
- Kumar, M., & Dhingra, A. (2024). Youth engagement in agribusiness. *Just Agriculture*, 4(11), 202.
- Chakraborty, S., Panda, S., Das, L., Mondal, S., Aktar, F., & Malitha, A. B. (2025). A study on the status and involvement of rural youth in different livelihood resources in Jalpaiguri district of West Bengal, India. *PlantArchives*, 25(1), 2628–2632.
- Hossain, S. M., & Mukhopadhyay, S. D. (2024). Comparative effectiveness of extension and advisory service (EAS) providers in a pluralistic extension system of West Bengal, India. *Archives of Current Research International*, 24(11), 442–449.
- Prasad, C. V., & Pradhan, K. (2019). Assessing the extent of ICT usage by extension professionals for sustainable agriculture and society in sub-Himalayan region. *International Journal of Current Microbiology and Applied Sciences*, 8(7), 142–151.