

Use of WhatsApp, YouTube & Social Media in Crop Education

Rita Fredericks

CEO, Precision Grow (A Unit
of Tech Visit IT Pvt Ltd)



*Corresponding Author

Rita Fredericks*

Available online at

www.sunshineagriculture.vitalbiotech.org

Article History

Received: 27. 9.2025

Revised: 2. 10.2025

Accepted: 7. 10.2025

This article is published under the
terms of the [Creative Commons
Attribution License 4.0](https://creativecommons.org/licenses/by/4.0/).

INTRODUCTION

Agriculture is still the pillar of food security in the world, but most farmers, especially from the developing world, are hindered by a lack of access to information, technology upgrades, and education. Historically, agricultural extension services took the form of face-to-face training, field days, hard copies of manuals, and radio broadcasts. Though effective, these approaches are constrained by expense, reach, and scalability. With the advent of the digital age, channels like WhatsApp, YouTube, and other online social media have become low-cost, high-impact means of crop education. Farmers, students, extension agents, and researchers can instantly exchange information, pose questions, and learn from each other irrespective of location.

WhatsApp in Crop Education

1. Instant Communication

WhatsApp enables farmers to create groups with colleagues, agronomists, or extension officers to discuss crop problems, pest infestations, and weather forecasts in real time.

2. Multimedia Sharing

By sharing pictures, videos, voice recordings, and documents, farmers can post pictures of infected crops, obtain expertise, and learn complicated techniques through visual comprehension that enhances understanding.

3. Building Community

Local or regional WhatsApp groups help promote a sense of community learning in which farmers share success stories, new innovations, and local solutions, which improve collaborative problem-solving.



Source: <https://www.slideshare.net/slideshow/social-media-for-shaping-future-agricultural-extension>

4. Cost-Effective Extension

As opposed to traditional training programmes, WhatsApp-based intervention takes little money but offers ongoing learning opportunities, making them sustainable for smallholder farmers.

YouTube in Crop Education

1. Visual Demonstrations

YouTube offers a strong library of video tutorials illustrating practices like seed treatment, application of fertilizers, irrigation methods, control of pests, and mechanized agriculture.

Visual learning is more effective in understanding and retaining.

2. Replay and Accessibility

Farmer and student can access YouTube videos whenever they want, enabling repeated playback of steps to maintain proper usage. This is especially useful for those techniques needing step-by-step walkthroughs.

3. Expert-Led Channels

Several agricultural universities, NGOs, and private agri-tech firms have YouTube channels providing scientifically proven advice that helps narrow the gap between research and practice.



4. Multilingual Content

The platform facilitates content development in local languages, promoting better understanding and uptake by various farmer groups.

Social Media Platforms (Facebook, Instagram, Twitter)

1. Awareness and Campaigns

Facebook and Instagram are popular social media platforms used to spread information regarding crop diseases, government policies, and emerging technologies. Visual posts and infographics are easy to comprehend.

2. Knowledge Sharing

Experts and farmers can join groups or forums based on agriculture, where questions are answered collectively. Twitter allows real-time updates on pest outbreaks, weather forecasts, and market prices.

3. Networking

Social media allows farmers to interact with peers, scientists, and extension officers worldwide, facilitating the exchange of ideas, innovations, and best practices.

4. Market Linkages

Certain platforms provide a platform for farmers to advertise and sell products, enabling them to obtain equitable prices and acquire the economic side of crop management.

Advantages of Leveraging Digital Platforms in Crop Education

1. Knowledge Dissemination at Speed – Information is received by farmers immediately, as opposed to delayed conventional extension approaches.

2. Visual and Practical Learning – Videos, images, and tutorials improve comprehension of complex agricultural practices.

3. Interactive Learning – Farmers can ask questions, share experiences, and receive feedback from experts.

4. Cost-Effectiveness – Low-cost access compared to formal training programs.

5. Empowerment and Decision-Making – Timely information on weather, pests, and market conditions supports informed decisions.

6. Inclusivity – Smallholders, women farmers, and marginalized communities gain access to knowledge previously unavailable.

Challenges

➤ **Digital Literacy** – Not every farmer is internet- or social media-literate.

➤ **Internet Connectivity** – Rural communities have poor network connectivity, restricting access.

- Misinformation – Unverified information can circulate, resulting in inappropriate farming practices.
- Language Barriers – Most digital information is in English, restricting understanding among regional language speakers.
- Dependence on Technology – The overuse of digital platforms could decrease traditional learning or extension visits.

Case Studies

India: ICAR and State Agricultural Universities employ WhatsApp groups and YouTube videos to educate farmers on crops such as rice, wheat, and vegetables. Organizations like Digita Green produce videos in the local language and distribute them through mobile apps to inform smallholder farmers.

Kenya: WhatsApp groups between tea and coffee farmers facilitate instant sharing of disease warnings and fertilizer advice. Schools and farmer training centers learn contemporary horticultural methods through YouTube tutorials.

USA: YouTube and Facebook Live are extensively applied in precision agriculture training, with live demonstrations of drone crop monitoring, soil sampling, and irrigation systems.

Recommendations for Effective Digital Crop Education

- Digital Literacy Training – Farmers must be trained to efficiently use smartphones, apps, and social media.
- Localized Content – Posts and videos in local languages concerning local crops and climates.
- Confirmation of Facts – Expert moderation of posts to ensure authenticity.
- Hybrid Model – Use digital resources along with conventional extension visits for increased impact.
- Private and Government Initiative – Subsidization of internet, smartphones, and awareness drives improves adoption.
- Feedback Mechanisms – The platforms must enable farmers to report problems and ask questions for ongoing learning.

Future Prospects

The use of digital platforms in agriculture will grow as AI, IoT, drones, and mobile analytics get connected with social media and apps. Crop learning in the future will incorporate interactive simulations, virtual farms, and AI-based

personalized advice to provide more immersive and customized learning. Social media will play an active role in bridging the difference between field practice and research, allowing farmers to implement sustainable and climate-smart practices.

CONCLUSION

WhatsApp, YouTube, and social media have transformed crop education into instant, interactive, visual, and accessible form. These media have created the enabling environment for sharing knowledge, problem-solving together, and empowering farmers, students, and researchers. Although issues of digital literacy and disinformation persist, the strategic application of these technologies can greatly increase agricultural awareness, productivity, and sustainability. As more people become digitally adopted, these platforms will be essential to modern crop education, with the ability to empower farmers to embrace changing agricultural problems.

REFERENCES

- Alhassan, Y. J., Muhammad, A. M., & Chari, A. D. (2023). Social media usage and agricultural extension service delivery. Implications for effectiveness in Northwest Nigeria. *Discoveries in Agril. Food Sci*, 10(5), 1-12.
- BARUA, S. (2021). *Use of YouTube for Diffusion of Innovative Agricultural Technologies: A Digital Self-Help Approach to the Farmers* (Doctoral dissertation, departmenty of agricultural extension and information system, sher-e-bangla agricultural university, dhaka-1207).
- DUPARE, B., & KOLHE, S. Effectiveness of Social Media for the Dissemination of Soybean Production Technologies.
- Mamgain, A., Joshi, U., & Chauhan, J. (2020). Impact of social media in enhancing Agriculture extension. *Agriculture and Food: E-Newsletter*, 2(9), 367-370.
- Nain, M. S., Singh, R., & Mishra, J. R. (2019). Social networking of innovative farmers through WhatsApp messenger for learning exchange: A study of content sharing. *The Indian Journal of Agricultural Sciences*, 89(3), 556-558.