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Social Media and Indian Agriculture: Between Information and Misinformation

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In the present age, social media has emerged as the most dominant tool for communication and information sharing. With the rise of smartphones, every individual has the ability to access, watch, and circulate content in seconds. India, the world's most populous country, also leads in terms of active social media users. What is remarkable is that rural India has now overtaken urban India in numbers. According to the Internet in India Report 2024 by IAMAI and Kantar, rural areas have around 347 million social media users, nearly 39 million more than urban India, and rural internet use is growing at almost double the pace of urban areas. This reflects a narrowing of the long-standing rural–urban digital gap, suggesting that technology is no longer a privilege of the cities alone. The implications of this digital shift are immense for agriculture, the backbone of the Indian economy. Agriculture sector provides employment to more than 40% of our population contributing almost fifth part of GDP of the country. It becomes crucial to provide scientific information on time. Farmers need accurate information about application of fertiliser, pesticides, herbicides, irrigation techniques, soil health, as a minor up and down can cause a drastic change in the

production. Social media platform can be leveraged to serve these purposes and can also help in connecting farmers with valuable knowledge and with the market. Social media platforms is not only filled with the helpful information but also with information, which is misleading, sometimes harmful and sometimes disastrous when applied.

Various viral video with very famous personality claims that raw cow dung is good for crops, the scientist says just opposite of it. Manure which is raw and not followed by the proper process is always harmful for our crops. It attracts insects such as White Grub which damages the roots of our plant resulting a heavy loss of crop, and it is very difficult to remove the population of White Grub from field later. The raw Cow dung also releases methane gas, harmful for plant, soil and our environment. Kitchen gardening is one of the activity most of us Indians love to do, the main aim is to grow healthy and organic food for own consumption. The social media promotes the content related to such activities too. Application of banana peels, onion skins or any household waste to the plants is shown as 'organic compost', although the results of such videos are so satisfactory but this also a false claim. Applying any waste which have not gone through the process of composting will always attract the insects who will ultimately feed the plants. Tricks such as propagating rose cuttings in potatoes are widely circulated despite lacking any scientific basis. The problem becomes even more serious when such practices are picked up by farmers who already face challenges in accessing formal agricultural extension. Studies show how limited awareness is among farmers regarding correct use of inputs. A 2019 study revealed that only about 38 percent of farmers knew how to use pesticides correctly. More recent research in 2024 found the situation even more worrying: barely 10 percent of farmers were aware of proper pesticide application guidelines, while more than half did not seek guidance at all. This knowledge gap makes farmers vulnerable, and the persuasive power of short, visually appealing videos can easily mislead them into adopting practices that harm productivity and income. The irony is that the same social media platforms also hold tremendous potential for positive change. Many agricultural universities, Krishi Vigyan Kendras, and government departments have begun using YouTube, WhatsApp, and Facebook to disseminate validated scientific knowledge. Some farmer groups on social media function as communities where experiences and local solutions are exchanged, while apps like Kisan Suvidha provide real-time weather and price updates. Social media also gives farmers direct market access; through groups and online platforms, they can connect with buyers without intermediaries, ensuring better prices. In these ways, the digital space can empower rather than mislead. Yet one cannot ignore that misinformation spreads faster than truth. A study by MIT showed that false news spreads six times faster than verified news on platforms like Twitter. The same applies in agriculture: a ten-second reel showing cola being poured on crops for "miracle growth" will always travel faster than a carefully explained scientific advisory. The very features that make social media entertaining—brevity, simplicity, and visual appeal—also make it a dangerous vehicle for unverified agricultural claims. The government has not been blind to the digital revolution. Programs like Digital India have expanded internet access, while schemes such as the National Agriculture Market

(eNAM), Pradhan Mantri Fasal Bima Yojana, and apps like Kisan Suvidha aim to integrate technology with farming. But what remains missing is a systematic effort to counter agricultural misinformation online. Just as health fact-checkers became prominent during the pandemic, there is a need for agriculture fact-checkers who can debunk viral myths quickly in farmer- friendly formats. Agricultural universities and ICAR institutions must step beyond academic journals and begin creating reels, infographics, and videos in local languages. Farmers are more likely to trust information that comes in their dialect and in a form they find engaging. The challenge, however, goes beyond simply producing accurate content. Millions of videos are uploaded daily, and no regulator can monitor them all. Content circulates in diverse dialects, making fact-checking difficult. Farmers as every human being often gets influenced by their peers or other farmers performing same activities as them rather than the scientists. Scientific explanation is useful but present population doesn't only need information, they need content which is entertaining or something which is catchy. This challenge can only be addressed by bringing all the parties i.e. government, social media companies, scientist and influencers in one platform. Social media companies should incorporate feature which can identify and flag content as misleading a feature which X already have. Local influencers leveraging their popularity can promote scientific practices in entertaining way. If we look at this problem, it can ever be solved by one party but by the collaborative effort of every stakeholder involved. Research institute, extension centres, agriculture universities and the government have the key role to burst such false claims and spread scientific information. Farmers need to be aware of such false claims, and if any claim seems beneficial, they must verify the claim with the scientist before applying it on their field. Social media have both positive and negative impacts on our life. It will be always us who will decide which part we are looking at. Social media, on the one hand have been proven as one of the best ways to share information, guide farmers contributing to bridging the gap between the rural and urban areas of the country. On the other hand, some social media influencers to gain popularity spreading fake or half information by these social media platforms. We must understand our responsibility as any minor error in agriculture practice can result in a huge loss as we are dealing here with living things.