FROM UTOPIA TO DYSTOPIA: SOCIAL MEDIA AS THE FUTURE OF AGRICULTURAL EXTENSION

In this blog, Aditya K S, Bhuvana N and Subash S P explore a potential pitfall for farmers with social media usage, possibly exposing them to a barrage of fake news resulting in polarization, impediment to extension efforts and their undermining. The authors hope that this blog goes 'viral' and ignites discussion in the extension system on how best the system can be prepared to face this challenge in these changing times.

Source: Illustration by Sandeep Joshi-https://www.tribuneindia.com/news/archive/business/punjab-govt-to-reach-out-to-farmers-via-social-media-679679

BACKGROUND

'Never let a crisis go waste' Winston Churchill once said. In times of crisis, trying out innovative and out of the box ideas is much easier; people won't question even if they fail. Historically, many unconventional, disruptive and never tried before approaches were implemented during times of crisis; be it the World Wars or Great Recession. Covid-19 pandemic is a recent addition to the list of crises, probably biggest of them after World War II. Covid-19 lockdowns have resulted in many hardships, particularly to weaker sections of the society, like daily wage earners, who have little savings and resources to fend for themselves. According to CMIE database, the unemployment rate has increased to 23% in lockdown period.

Many people have tried to look for a silver lining during these stressful times. Covid-19 lockdown has taught us the importance of hygiene, importance of maintaining good health, work-life balance amongst many other things. Another positive is that the lockdowns and social distancing norms have given a push for digital learning platforms. Many social media platforms like YouTube and Facebook are also used as substitutes for classroom teaching or training in both formal and informal education systems.

AGRICULTURAL EXTENSION AND SOCIAL MEDIA

Agricultural extension has also quickly adjusted to the new normal and has started to increasingly use social media platforms to reach out to the farmers. In this blog, we argue that, though increase in use of social media use seems to be a good option for reaching out to a large number of farmers, which is economical both in terms of cost and time, this digital transition of agriculture brings with it a new set of challenges. One of those challenges is related to fake news and polarization, which might become serious issues for transferring new and scientifically valid knowledge. Hope some of you might have viewed the 'viral' documentary "The Social Dilemma" streamed on Netflix. (https://www.youtube.com/watch?v=uaaC57tcci0). The documentary talks about the monetization of social media platforms (Box 1); they earn money if we spend more time on social media.

Box 1: Monetization model of social media

We might think that YouTube, Facebook and many other social media services are platforms which are free and for a humanitarian cause; but these platforms earn by making us spend time on them. As stated in the documentary "if you are not paying for a product, then you are the product", social media platforms mint money by selling our attention, time or precisely by subtly changing our perceptions and behaviors. These social medias are run by algorithms, or simply say machine learning tools, which tracks activity of each user, including likes and dislikes, the posts scrolled, commented, time of videos paused and viewed content, and based on these individual access and usage analysis, the Artificial Intelligence system further shows us the content which is most likely to get us addicted and make spend more time. These are based on thorough knowledge of psychological principles aimed at getting us glued to social media feed. In summary, social media platforms have no incentive to show you what is useful to you in your media feed. What the algorithm tries to do is to learn from your past activities, and suggests similar content, to make you spend more time on these platforms. (Think of this next time when you open your Social Media feed. Know this for a fact that even when you know social media is trying to show you the things you might like and make you addicted (in reality the content may be useless), it is hard to refrain from watching it. Scary isn't it? Well who is in charge of your life now?

Let us turn our focus on understanding what this means for using social media for agricultural extension. Most agriculture extension agencies have used Facebook live sessions for reaching out to farmers. Few others have created and uploaded videos on Good Agricultural Practices on YouTube (read recent blog by Tamizhkumaran and Saravanan 2020a) and shared links to farmers using different social media like WhatsApp. Everyone is aware of the advantages of e-Extension or digital extension; it can reach large number of people, saves time and money, and can effectively integrate multimedia into content. A study by Bhattacharjee and Saravanan (2016) on social media in agricultural extension showed that Facebook is the most popular social media. The study also raised concerns on lack of authenticity of the information shared online. Let us take a minute to look at the possible challenges that we, as an extension system, has to face in future. This is a possible offshoot of social media use.

Cost-effective smartphones, internet packs and local language support has increased social media use by rural populations in recent times. Covid-19 lockdown has provided a further push to it (read Tamizhkumaran and Saravanan 2020b). From a utopian perspective, it is for the good that any person

can access to essentially limitless quantity of information easily with a click. Paradoxically, it has become a much tougher job to discern the authenticity of information available on the internet. How to say which information is correct and which is not? Seems like a philosophical question for which there is no straightforward answer.
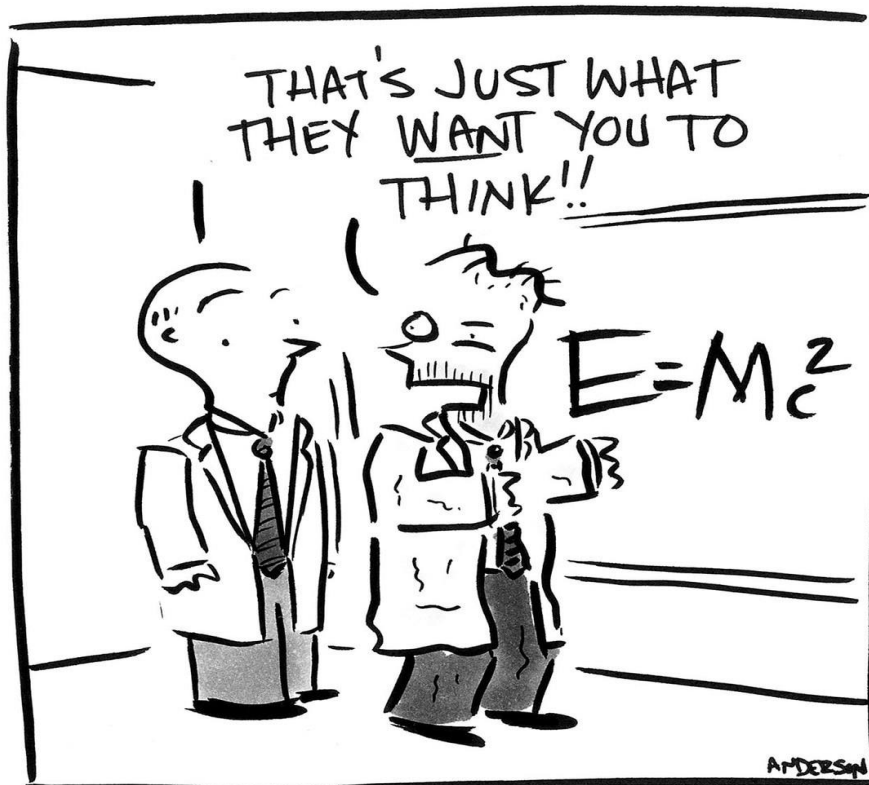
Fake News

Research indicates that fake news spreads six times faster than authentic news (Visoughi et al 2018). There are famous cases of conspiracy theories, which seems like outright rubbish, but have a huge supporter base. Have you ever heard 'Earth is Flat' conspiracy theory? Many videos that claim the earth is flat have millions of views.

(https://www.youtube.com/watch?v=RywkkwO78m8 is the link if you wish to watch it. But, let us warn you, you might get many similar videos in your YouTube recommendations! Hope you won't end up being supporter of flat earth theories!). There is a separate class of people who believe in it.

Even during Covid-19 times, many conspiracy theories claimed that Covid-19 is a hoax to keep people indoors, leading to massive protests across the USA and Germany against lockdown measures. There are continuous efforts by various international organizations to quell these conspiracy theories (Ball and Maxmen 2020).

Conspiracy theory of relativity

Source: https://andertoons.com/science/cartoon/6154/scientist-equation-conspiracy-theory-of-relativity

So, how will the fake news that floods social media affect farmers and what are its implications for agricultural extension? To begin with, there is no dearth of conspiracy theories in agriculture. People have various kinds of theories to say that all modern agricultural practices are harmful to both environmental and soil health, there are magical formulations which can control all kinds of pests and diseases, and the list goes on. When a farmer either watch such videos or comes across such content a few times, there are chances that he/she might believe in few of them. It could lead to dangerous consequences. A more recent incidence is effect of fake news on sale of animal products during the early days of the pandemic. There was a delay by the government agencies in clearing these rumors (Chander et al 2020).
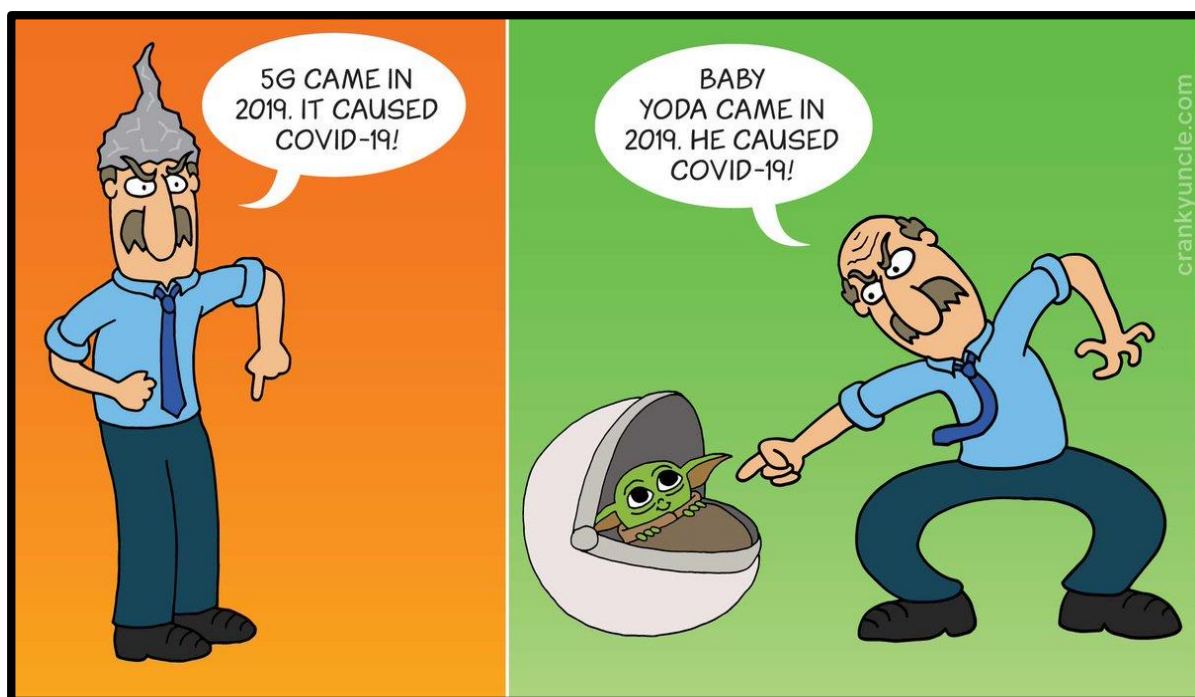
Let us consider an example. A farmer, let us call him 'X', watches a couple of Facebook/YouTube videos and posts that claim that new ordinances or policies the government has made is to promote private interest and farmers get nothing from it (though truth may be farfetched from it). The same is also true of Facebook and video posts from beneficiaries of a policy when they try to present only one side of the story that goes with their interests. The machine learning algorithms of Facebook and YouTube estimate that if videos and post which X has seen before are shown, there is higher likelihood of them being watched. In turn, X spends more time in doing so (the more time X spends on social media, and it is good for the platforms as they can push more advertisements and earn more). So next time X opens his social media feed, he/she finds more content which is similar to content he/she has watched earlier, and reaffirms his/her views that the policy is bad. He/she individually builds a lopsided view of the issue, which results in confirmation bias; we generally search for evidences which support our hypotheses and tend to ignore the information which is not consistent with our earlier hypotheses, rather than objectively looking at the evidence.

Polarization

This reaffirmation of one-sided information leads to what is called 'Polarization'; people with extreme opinions on either side of any issue. And it is extremely difficult for anyone to change their opinions as we are in such an era where people often consider the information they read on the internet as more authentic than what the person in front of them says (to quote a famous dialogue of another web series Patal Lok, the lead character Hathiram Choudhary says "Aise Mahabharata me likha hai, lekin maine WhatsApp me pada hai!!; English translation- "…Its written in Mahabharata, but I read it in WhatsApp ")). Similar perceptions might result in technology adoptions as well. For instance, claims on using cow urine and dung alone to maintain soil fertility has got lot of traction online. But, these recommendations may work only in a few places and for a few soil types but are not generalizable. Extension agents are also not immune to confirmation bias!

IMPLICATIONS FOR AGRICULTURAL EXTENSION

This can be a real tough challenge going forward. There is a saying that incomplete knowledge is more dangerous than ignorance. When pushing for adoption of new technologies, perceptions shaped through exposure to social media can act as a major hindrance. It takes a lot of effort to make farmers unlearn and look at other side of the story. With the internet, you can find evidence for almost any type of hypotheses (for example, there is a hypothesis that 5G towers caused Covid-19. Later, YouTube removed all videos that had claimed a link between 5G and Covid-19 but it was too late). Watch the BBC documentary here https://www.youtube.com/watch?v=Gi5dOvlMCgE.)
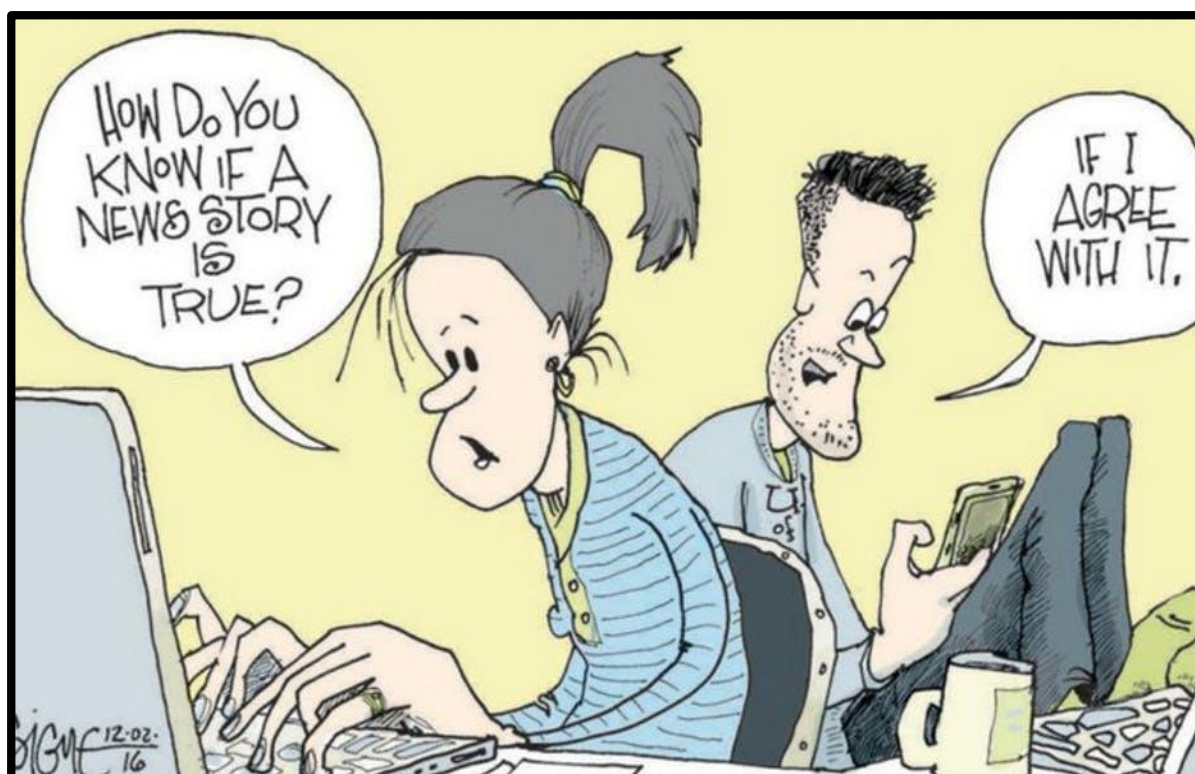
Source: https://crankyuncle.com/cartoons-debunking-covid-misinformation/

Fake news is not new; the ways and means to spread them have improved due to internet and social media. Algorithms developed as business models for advertisement targeting are inadvertently helping spread false information at a rapid pace. People have little incentive to be true when they are making social media content; incentives are large to look good and appeal to more people. Platforms have no incentive to push for contents which are factually correct (even identifying fake news is a herculean task in itself), they want to push content which audience are more likely to see and spend time on.

So, how do we, as agriculture extension professionals, address the issues of fake news and polarization? We really don't have a definitive answer to this, but wish to highlight some possible strategies.

Social media is here to stay and we need to address the elephant in the room; we need to train both extension agents and farmers in discerning authenticity of the information they obtain through the internet. Farmers need to be taught that whatever they see or read on the internet cannot be considered true. One option is to advice farmers to discuss new information or some interesting things that they saw or read on the internet, in closed social media groups in the presence of experts or in groups mediated by extension personnel. Also, extension organizations and research institutes need to play a pro-active role in quashing fake news in the initial stages itself.

World Health Organization is playing that role in controlling fake news related to Covid-19. We need organizations to shepherd media content, identify fake news and flag it. Social media platforms like Facebook have stringent policies against fake news and if an organization can identify and report fake contents, they will take quick action. Also, we need more research to understand roots of the problem, which often forms a part of the solution we are looking for.

Source: https://theconversation.com/science-contre-fake-news-la-bataille-est-engagee-90161

PS: There is a difference between using ICT in extension verses using Social media platforms for extension. As discussed, social media has a business model behind it which using its algorithm might not be as benign as we think.

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