

## Engaging Stakeholders to Feed the People through Extension Services Using Facebook

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### Abstract

Population pressure is one of the basic complications for ensuring food security whereas the agricultural research is not conveyed with the proper pace as there are constraints in Extension Advisory Services (EAS) and link between research and farmers is fragile. To cope up the problem EAS is dire need for affective techniques and information communication technologies has considerably developed since last two decades. This may be affective rapid tool for interactions of information amongst the organizations. Face book is one of the famous tools for affective communication in millions of peoples in globe. A systematic review of different EAS available on Face book was done by consulting 100 Face book pages and 74 published papers worldwide finding of these work showed that published literature goes helpful for narrowing the gap of improvement, dissemination of motivational messages and provision of market information. The information about sustainable agriculture through Face book promoting services and farmer's empowerment for motivation to Good Agricultural Practices creating know how for future agricultural challenges and developing affective linkage among research, academia and farmers etc. was found affective. Moreover, adverse findings were also observed like Face book have no alternate to offline contact, no seasonal information, publicity of expensive technologies and reduced concern towards marketing element. By doing affectively managing for constraints and by connecting more farmers on Face book can foster development process. Face book is helpful for initiating farmer to farmer interactions and farmer to farmer marketing extension. In order to address the issues of poverty, low agricultural productivity etc. as Face book has tendency to eliminate middle man and revolutionize the change in agricultural extension educations can also be visible. Therefore, the Face book can be enterprise and all stakeholder of agriculture would be entrepreneur.

**Keywords:** Face book, extension advisory service

### Introduction

**Problem Statement:** Agriculture is the only sector which can assure existence of living being on the earth crust. As it assures the basic needs particularly food, shelter and clothing. Likewise, this sector directly concern with climate and sudden abrupt

changing in climate used to change the total scenario of its total productivity. This deterioration not only affecting the financial status of the farmers but also keeps risks on livelihood of mankind. Resultantly, hunger, poverty and food insecurity will be

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prevailing and causing mistrust between the nations. As per FAO (2013) still 8<sup>th</sup> individual goes to bed hungry. And population growth rate is much higher than the increase in productivity and other basic necessities and it is estimated would be 9.6 billion by the year 2050 (UN, 2013). The scenario is alarming and more food will be required to the increasing population. Cultural land is converting to un-cultivable for habilitation requirements. Therefore, we have to adapt vertical approach of productivity for this purpose. Planners and research organizations have to determine the core problem and their remedies. For this purpose EAS has a vital role to change the attitude of farmers and put up problems to the research organizations in time. Role of EAS is beyond expectations because of inadequate information dissemination to the farmers. For the purpose, latest information technology like Face book can play pivotal role for the objective.

**Social Media Emergence & Facebook Penetration:** Causes of low productivity are inadequate interaction, cooperation, lack of latest research orientated information, lack of authentic information and bulking of unauthentic information available on different online resources. Social media emergence to cope above said challenges is need of hour. Social media can reduce the disputes pertinent to information availability, accessibility and affordability among information seekers. Public and private sector organizations, profit, non-profit and non-government organization utilize the solicitations of social media for the changeovers. Possibly, social media is source of fostering development process. Tredinnick (2006) endorsed that social networking is driven by user participations and user-generated contents endorsing diversified ways for users to intact with organizations and stakeholders. Various

organizations use social media to streamline their management functions, interact with sponsors and donors and also educate stakeholders about their activities, services and programs (Waters, 2009). The demand for immediate accessible information has grown quickly along with development and encroachment of technology. Social media tools like, Facebook, LinkedIn, twitter etc. depict impacts on the seekers to conduct the business (Robin, 2008).

From the couple of years with active technology intrusion Facebook has become inevitable part of human environment. Simplicity of contents and manifold benefits like information sharing, social linkages and entertainment are possible ground behind finding significant place in system. Burgess (2009) described Facebook as most striking tool of social media harnessing social capital, developing new contacts and relations intent of sharing information. Strong and Alvis (2011) highlighted the presence of over 800 million people globally on Facebook. Half of these users were logging in on regular basis. Induction of Facebook in formal educational systems can supplement teaching and information delivery to improve learning process. Baran (2010) depicted the 84% students response that knowledge sharing in formal education contexts can be undertaken using Facebook to engage global scholars and enumerators. Generally, Facebook holds all elements to enhance encouragement and building sense of entrepreneurship among community masses. Facebook strengthens innovative learning modalities to boost knowledge level (Idris and Wang, 2009) and also possessed with aptitude to relocate other virtual Learning Environments (VLE) (Severance et al., 2008). Facebook is not restricted to upsurge the knowledge level but also helping in stimulating agricultural innovations among farming entities. Many

pages on Facebook are disseminating contents for the public to watch and get benefits. In India, farmers have been seen discussing market prices and information on Facebook (Ghosal, 2012). Sailer (N.D.) described about trainings and information sharing about farming to the consumers on social media like Facebook.

**Extension Advisory Services:** Extension services has pivotal role and linkage between research and the farmers as well as extension plays its role in motivating and changing the attitude of farmers but emphasis remains towards education provisions to the farming community (Rivera *et al.*, 2002). Whereas, extension activities are being undertake in multidimensional approach and affective response towards the basic needs of farms and farmers by making affective linkages with market (Rivera and Sulaiman, 2009). Thus extension advisory services work to improve knowledge, enhance skills and desirable change in behavior of the farming communities through dimensional approaches and latest material equipment's. Extension also narrowing the knowledge gap with affective and latest communication methods. Thus, this is helpful in boosting agricultural productivity. When the knowledge gap is narrowing it not only fills yield gap in a biochemical and economic measures but also gained knowledge is considered as significant for productivity and growth in agriculture sector.

Extensions services are also helpful in adapting good agricultural practices. Thus, it is directly beneficial for conserving resources and increasing capacity by lessening livelihood future risks. Birnor *et al.* (2006) depicted that agricultural extension services are helpful in supporting facilitating and assisting farming communities involved in agricultural

production. These organizations are affectively using the tool of latest information framing superior production technology of crops and thus improving livelihood in the long run.

During 1980's & 1990's maximum emphasis was paid on extension services globally in order to ensure green revolution for food security. High profile donor agencies provided ample amount of funds for the purpose but outcome was not up to the mark as inefficient approach of concern organization for the implementation and utilization of funds allocated for the purpose. Thus, during 1990's donors withdrew their financial support and extension could not play its role as per pace of population growth. Thus the gap of productivity coupled with population growth rate was widened. Henceforth, the affective improved extension services are the dire need of the day for food security of the globe.

With increasing population and converting well fertile soils around the cities and town in urbanization it is objective to make comprehensive study which is suitable for our requirements by considering the participatory approach adapted many countries like Kenya, Liberia and South Africa have been implementing their plus points and need of our society a policy for better educating, motivating in order to better productivity with vertical approach strategy to ensure food security to each and every individual of the countries.

In the light of above comprehensive discussion the main objective of this study is to document potential role of Facebook in reforming extension work for the dissemination of latest agricultural knowledge to the farmers to reduce information gap for better productivity.

## Methodology

Researchers used rational systematic review methodology to synthesize the scientific evidence from a range of sources. Method used followed the systematic review guidelines developed by the Collaboration for Environmental Evidence (CEE) and Centre for Evidence Based Conservation (CEBC, 2010). This method included the drafting of a protocol to define the methods, followed by systematic literature searches and selection of literature based on a defined set of 'inclusion criteria'. The protocol defined the methods for data extraction, development of the meta-database and data synthesis. Present study focused on the usage of Facebook in context of engaging various agricultural stakeholders in term of agricultural development to feed the future. Following the CEE settlement, research question was broken down into components like population (that is increasing immensely), developmental efforts (undertaken by the public and private sectors to boost productivity), usage of social media in dissemination of information, farmers access to social media, power of Facebook to engage stakeholders and different interventions of various public and well as private organizations undertaken using Facebook. These broken terms are called as "PICO terms" in systematic review.

Academic sources were sampled first, to avoid duplication later from less specialized databases. Already published material/literature emphasizing on role of Facebook in strengthening advisory services were searched using search engine. For said purpose various scholarly journals were visited/searched. Due to limited research and availability of most relevant material search was also generalized to find role of social media in advisory services uplift,

agricultural uplift and farmers' development. The literature was initially screened for relevance using inclusion criteria, which included (i) relevant subjects (Agriculture, social media, Facebook, development, information dissemination, extension education etc.), (ii) types of intervention (extension education to the farmers, information sharing for farmers, updating knowledge of farmers, lining farmers with each other. Initial filtering was based on title; then on abstract. The full text was then only reviewed for all articles, reports and papers that passed all inclusion criteria. From various scholarly journals about 74 published papers were found showing relevancy to social media role, advisory services and agricultural development. All the papers were screened carefully and only 14 published papers were particularly focused on Facebook roles in community development providing extension education and information. These 14 relevant papers were used for the analysis. About 60 papers highlighted the potential of various social media interventions in development. Only literature published in English were considered with searches.

At present, various public and private sector organizations are performing extension work for the development of farming communities. These public and private organizations are also using Facebook along with other social media interface for their activities. On 2<sup>nd</sup> stage these public and private sector organizations which were using Facebook were selected. A database of public and private sector organizations was developed. Database consist of the names of universities having extension education department, public sector extension department, private sector

extension department, Agri. Extension societies and Extension Blogs like Agricultural Extension in South Asia. About more than 100 pages of various organizations were included in the data base. Contents of these pages were analyzed using inclusion criteria i) signifying organizational disclosure ii) information dissemination iii) involvement of stakeholders. For disclosure, it was determined either following items; organizational description, mission statement and website of organization. For information delivery posting of innovative items, snaps, videos, posters and links to other sectors were assessed. Providing ways and methods to contact and involve numerous stakeholders from varied organizations were noted in context of involvement of stakeholders. Result of screening showed that total 46 pages were solemnly extension oriented and were being updated regularly. Pages created by any individual privately were not included because of in authenticity.

On the basis of content analysis of published literature and pages statements were developed. Response was generated on four point scale 1: not at all, 2: low, 3: moderate and 4: high. Each statement was checked in relevant literature and using frequency distribution method response was recorded. Statements having no relevant response from the published literature were rated not at all. Statements accumulate response falling below 33% were rated low and response in between 34-66% was rated medium followed by the response above 66% was declared high. Response in form

of frequencies is depicted in tables to find out the index score.

Data screened were further analyzed using following formula to assess the effectiveness/potential of Facebook relevant literature and constraints affecting the effectiveness of Facebook pages.

- i) Effectiveness score was calculated to highlight the potential of Facebook

$$\text{Effectiveness Index (EI)} = (E_h \times 3) + (E_m \times 2) + (E_l \times 1) + (E_n \times 0)$$

$E_h$  = Number of Pages/literature indicating the statements contribution as 'high'

$E_m$  = Number of Pages/literature indicating the statements contribution as 'moderate'

$E_l$  = Number of Pages/literature indicating the statements contribution as 'low'

$E_n$  = Number of Pages/literature indicating the statements contribution as 'not at all'

- ii) Constraints index score was calculated to highlight the hindrances affecting the potential of Facebook

A Constraint Index (CI) for each 24 selected constraints was computed using the following formula:

$$\text{CI} = (C_h \times 3) + (C_m \times 2) + (C_l \times 1) + (C_n \times 0)$$

Where,

$C_h$  = Number of Pages/literature indicating the constraint as 'high'

$C_m$  = Number of Pages/literature indicating constraint as 'moderate'

$C_l$  = Number of Pages/literature indicating constraint as 'low'

$C_n$  = Number of Pages/literature indicating constraint as 'not at all'

## Results

### Critical Analysis of Published Literature

Table 1 Analysis of printed literature regarding information delivery (N=14)

Possibilities disseminated via published literature relevant to Social Media	Information delivered				EI*	Rank
	H	M	L	No		
Information and training on various agricultural, social technologies and livelihood enterprises	-	5	9	-	33	5
Technology demonstration	-	6	8	-	34	4
Farm and business advisory services	-	3	11	-	31	6
e-Extension services through e-learning courses	-	8	6	-	36	3
Information regarding scholarship program for students	-	-	-	14	-	
Provision of market information	-	5	9	-	33	5
To promote sense help among farmers	-	10	4	-	38	2
Dissemination of motivational messages	-	7	5	2	31	6
Gaps identification regarding role of social media	-	12	2		40	1

*EI\*=Effectiveness index score/ Information dissemination index*

Aspects enlisted in Table 1 regarding published literature showed some extraordinary qualities on specific themes in the form of statements that are published identical to the existing gap in the role of social media information delivery pertinent maximum score and standing at the 1<sup>st</sup> among all statements. It is quite obvious that the gaps identified is a helpful a lot in modifying, rectifying and updating the subject matter etc. On the other side it becomes critical also when the gaps remain persisting that is unsolved for a long time. Whereas, statement promoting for the self-reliance among the farmers ranked 2<sup>nd</sup> which expecting and importance of creating awareness among farming community as it is beyond expectation that the farmers can solve their problem at their own end and they are needy to be helpful from ex-extension services through social media. E-learning through social media appeared at 3<sup>rd</sup> which clearly depicted its dire importance for new information based on trainings and development gap for

dissemination of production technology etc. Training in all sphere of life has an importance in accepting innovation and deleting outdated information, so training aspect in various avenues of agriculture knowledge is helpful through social technologies for livelihood enterprise and market entrepreneur respectively stood at 4<sup>th</sup> and 5<sup>th</sup> position. Market information is more significant aspect which unfortunately slightly back in the scene in the literature. Farmers have been seen at the back foot on innovated, oriented information with special prospect to market in the world. As farmers are desirous to fetch maximum price and physically it seems impossible if farmers have know-how with business advisory services and dissemination of motivational messages it will not only be helpful for good profits but the importance seems in the literature at 6<sup>th</sup> rank. Therefore, the present extension advisory services are inadequate to serve the purpose. Hence, equipping agents with social media tools could have better results.

**Analysis of Facebook Pages Subject**

**Matter:** Various pages belonging to numerous organizations were analyzed keeping in mind the questions that how these pages are helping the information seekers and how these pages are engaging stakeholders under one umbrella. Pages showed varied concepts and focus. Subject matter was relevant to the students, teacher, researchers but focus on farming communities was seen as fractional. Though mission and objective mutually analyzed of these pages was to create the Agricultural Information at any time at anyplace and at free of cost to every stakeholder part of

agricultural system. Now a day, when population pressure is increasing, resources are depleting, cost of production is increasing, productivity is under threat due to agricultural risks, middle man monopoly is affecting the farming communities and farmers are getting poor net return. Resultant, their livelihood is dwindling. In the light of these questions, mission and objectives set on face pages were quite well to foster the development process. However, these objectives appeared theoretical depicting lags in performing practically.

Table 2 Analysis of Facebook pages activities (n=46)

Activities	High	Moderate	Low	Not at all	Index Score*	Rank
Does pages are promoting agricultural knowledge for farmers?	29	11	6	0	115	2
Does pages are linking academia with research and farmers?	10	21	15	0	87	3
Does pages are engaging marketing element?	4	7	13	22	39	9
Does pages are promoting existing agricultural challenges?	26	17	3	0	115	2
Does pages are asking to empower farmers	16	15	6	9	84	5
Does pages are being updated regularly	31	7	8	0	85	4
Does pages are focusing on sustainable agriculture	35	9	2	0	125	1
Does contents are focusing on female farmers	9	7	20	6	61	6
Does pages are connecting farmers with each other	5	2	8	29	60	7
Does pages are helping farmers to avoid middleman	0	2	13	31	17	11
Does farmers are being aware of agricultural risks and their management	0	9	16	21	34	10
Does pages are promoting Good Agricultural Practices (GAP)	4	6	17	19	41	8
Does pages are focusing on farmers to bring them on Facebook	0	1	9	36	11	12

To assess the role of Facebook in information dissemination few statements were constructed and analyzed. Analysis showed that, most significant aspect appeared was pages were emphasizing on

building sustainable agriculture getting maximum score of 125. Pages were representing that for the future survival and long term benefits adoption of sustainable agriculture is obligatory. Similarly, pages

were also promoting agricultural knowledge standing on 2<sup>nd</sup> rank to identify the myths and challenges for sustainable future. Adoption of innovation does matter in development process and each grower is not capable of it. Technological dissemination could help in fostering adoption probabilities. Research and academia work together for farmers uplift engaging extension advisory services as bridge to reduce the information gap. In this regard, pages were focused towards linking research and academia with farmers on social media. However, this effort was found descending high to low level. Few pages were working more with big touch while some were lagging with minute touch. Updating farmers is essential to make them innovators; likewise, updating Facebook pages regularly is equally important to update information absorbers. Pages were performing that duty gained index score of 85 and 4<sup>th</sup> rank. Updated knowledge attracts the information seekers and purpose of this update knowledge was also to engage farmers on Facebook to share information. That is why most of pages were claiming to empower farmers for their uplift and rights. Farming communities are suppressed from ancient times due to multidimensional plights, but complain on these pages for empowerment could be a good wake up call. Endorsing that golden issue stamen got the 5<sup>th</sup> rank among all stamen claiming 84 index score. 9 pages showing no dissemination about farmers' empowerment created bit disappointment.

When empowerment is discussed, idea of women empowerment comes in mind at first glance. Globally, women empowerment is also being discussed as one of the major challenges. Likewise, farmers empowerment, pages were emphasized on women empowerment particularly gaining 6<sup>th</sup> rank among statements. Pages were posting posters, snaps and documentaries pointing dire need of women empowerment and equalize their rights in society. Connecting progressive and resources poor farmers could enhance the information delivery and diminish information gap. Facebook pages presenting one umbrella can be most suitable platform, but, unfortunately, about 29 pages were having zero activity in this regard. Pages were emphasizing more upon professional discussion and engagement of professional experts. However, in spite, that got 7 rank getting 60 index score.

Today, farming patterns are changing, yields are declining and cost of production is increasing under the severe conditions created by climate change. Mitigating these severe aspects Good Agricultural Practices (GAP) are sound options. Physically, extension agents are working globally to deliver these good agricultural practices. Likewise, pages were also performing the publicity and content analysis of the pages document huge potential of extension work through Facebook. In this way, Facebook could happen as viable and cost effective utility for extension professionals for information dissemination among farmers.



Table 3 Problems hindering the effectiveness of Facebook (n=46)

	High	Medium	Low	Not at all	CI*	Rank
Technical language issues as using only English	9	7	19	11	60	8
Highly technical terms/ no translation available in other languages	31	8	4	3	83	6
No season wise information delivered/information delivered is general	36	10			128	1
Mostly focused on new researches	28	8	2	8	102	4
Inadequate linkage address between research, academia & farmers	11	19	12	4	83	6
Most of the pages are working for their own publicity and achievements	18	11		17	76	7
Promotion of expensive technologies	21	19	6		107	3
Traditional Audiences	17	9	20		89	5
Does not substitute for offline contact	37	5	4		125	2

Analysis also showed few limitations of Facebook that may hinder in effectiveness of the Facebook as information delivery utility. It is obvious that geographical locations and socio-economic attributed of the farmers are different globally. Farmers may possess differing frame of references. farmers cultivate crops seasonally and on Facebook partial dissemination of season wise or crop wise was seed standing as most significant factors affecting effectiveness (CI\*=128). Moreover, there is no substitute for offline contact. Somewhere, farmers doesn't own internet facility or may face connectivity constraints; users don't have any other option to obtain information. Users can use Facebook on android cell phone but affordability is major concern. Facebook also send notifications of mobile number but it is inadequate. No substitute for offline contact got the 2<sup>nd</sup> maximum constraint index. Affordability is major concern globally as about 96% farmers in the world are small farmers being unable to purchase expensive technologies. Similarly, on Facebook promotion of expensive technologies was prominent that was not possible to buy by the farmers. Promotion

of expensive technologies rather than farmers' friendly technologies is prominent. These new updated technologies are result of extensive research and documented as innovations. Therefore, to promote these new innovations Facebook is being used extensively which reduced the focus to concentrate on demand driven technologies. For example "Use of Biochar" is being promoted to mitigate climate change, it is efficient but small and resources poor farmers are unable to adopt it. These farmers just needs new methods how they can manage their already posed resources in efficient way". This persisted situation uplifted Promotion of expensive technologies and focus on new research on 3<sup>rd</sup> and 4<sup>th</sup> rank respectively. Traditional Audiences with less concern about agricultural uplift and inadequate linkage between research farmers and academia was seen obtaining 5<sup>th</sup> and 6<sup>th</sup> rank. Few of the farmers might be progressive and large farmers were having connectivity to the Facebook but lesser to the agricultural relevant pages. Few successful farmers were also seen who were selling their produce through Facebook through sharing

market prices and good qualities with other purchasers. Simply these farmers were acting like entrepreneurs. On one side some pages were working to connect farmers on other side majority of pages was also working for their own publicity through uploading their achievements and projects to attract new audiences and donor agencies. Globally official language

prioritized is “English” often used to communicate and on Facebook entire activity is English. Each audience seems indispensable to understand English and difficult terms used to communicate. This technical barrier stood on 8<sup>th</sup> rank pointing a need of translation facility.

## Discussion

Extension Services are considered to be an easy access for farming communities to get awareness of certain prescribed goals. Extension services although playing their essential role yet, a lot of criticism is usually heard as these services are not in position to cater each and every individual. IFPRI-World Bank (2010) had reported the limited coverage of extensions services to cope up the challenges of agriculture and best adaptations of technology packages. At present, most of the extension advisory services are being provided through technical trainings and visit as per model of contact farmers. Henceforth, technical training is being uplifted through farm demonstrations, farmers’ field days and in-service training courses (Benor *et al.*, 1984). As the decentralization and privatization has been main theme and this vary scenario indicated affective information delivery as specified by Swanson (2008) who highlighted the transfer of specific decision making in functionalities of district and other co-organizations through decentralization or privatization. Despite all efforts the extension advisory services are under tremendous criticism. Infact, extension services evolve inadequate budget, persistent weaknesses in the governance mechanism and ineffective management and information system for getting constant feedback from the end

users (Poniah *et al.*, 2008). Moreover, access to information is major issue particular to farmers living in remote areas. In addition, ignorance of small farmers by the extension agents due to excessive population of farmers per officer is also highly debatable issue. Gender disparity is one of the constraints to effective extension work. Whereas, as per reported by Ashworth (2005) there is used to be less attention paid to gender in extension work. On the other hand, Buchy and Basaznew (2005) emphasized otherwise as women-focused extension is limited and gender considerations are missing at all level of extension system. Furthermore, India, Ghana and Ethiopia are exposed to huge gender gap in extension services because the females have limited participation in extension advisory gatherings due to lack of funds availability on expenditures (IFPRI–World Bank 2010). Quisumbing and Pandolfelli (2009); Swanson and Rajalahti (2010) also favored above mentioned statements that EAS provision in the agricultural sector has been more often biased against rural women farmers as they often lack access and control over productive resources and technologies that are affordable and appropriate to their needs. It is inevitable to say that gender parity is necessary for the development especially in farming because agriculture is

anticipated as backbone of economy in majority of the countries around the globe. No doubt, several efforts have been exercised to lift extension services delivery. Several new approaches like Information communication technologies, web based services and mobile based services have been developed. However, their effectiveness is still undergoing. GFRAS (2010); Meinzen-Dick *et al.* (2012) endorsed that various initiatives are underway to improve the rural EAS delivery emphasizing on equity and social inclusion. However, a lot of work is still to be needed for innovative strategies within the limits of time to reach the farmers right to their door step. Facebook could be the most viable media to engage all stakeholders for seeking, sharing, learning information and its requisite process as Facebook has potential to connect millions of peoples particularly farmers within shortest possible time under one umbrella. Working output of Facebook and Extension Advisory Services are of same nature. Both plays their role for dissemination of information as per interest of the masses and engage them at one platform for mutual

understanding and benefits. For EAS electronic /print media likewise correlated technologies are required. Therefore, to cater the global challenges like scarcity of food, rapid increase in population extension advisory services have a very important role to play. As effective technologies can be practically demonstrated by extracting all merits at the spot. Change agents by using extension methods can motivate farmers to come up at page of Facebook and persuade them to remove their doubts though discussions and sort their information as per their taste. This process may enhance farmer's innovative interests and efficiency of information delivery. Thus the information delivered this process will not only be unbiased but also accessible, approachable to each and every farmers. Therefore, Facebook has potential to promote effective learning and developing skills through agricultural advisory services. It is the extension experts who are in position to contact motivated farmers with market for their better returns. This would be the beginning of farmer-to-farmers extension and farmers-to-farmers marketing concept.

### **Conclusion & Recommendation**

Social media is a power of future endeavors evolving multidimensional benefits and social media deem to evolve similar power for information dissemination function to strengthen agricultural systems. Facebook is most significant element among social media tool kit possessing tremendous potential for extension function. Significance of Facebook is widely accepted in past studies showing potential to disseminate information about marketing, innovation, self-help and farm and business advisory services. However stud fond the effectiveness less than medium level. On

other hand, Facebook pages owned by public and private sectors were disseminating multiple information with least impact as emphasis was made on promotion of organization, expensive technologies and sweeping information rather than site specific. Element of farmers engagement on single platform appeared narrowed. Potential of Facebook to engage stakeholders on single platform is yet to be explored. To be the beneficiaries of the concept, all stakeholders like Extension Advisory Services providers, academia, research organizations, farmers and masses

must be at one page. Presence of 3G/4G technologies along with android cell phones at affordable prices has made the task easier. Facebook must be added in extension tool kit to disseminate information to all the stakeholders for prompt solution of problems that are

promoting stunted crop productivity. Facebook pages/blogs must be updated on regular basis and site specific farmers' friendly techniques should be posted. Special focus should be paid to bring literate farmers on the page for discussion in the light of their practical experiences.

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