



ROLE OF ICT IN INDIAN AGRICULTURE SECTOR

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Abstract:

Agriculture is one among the foremost vital sectors in Asian country and will give tremendous profit in delivery changes to socio-economic conditions of poor in backward areas with the applying of knowledge and Communication Technology (ICT). Agriculture still constitutes a serious resource sector and contribute one fifth share in nation's value. Even once years of manufacture and growth in services, regarding sixty five p.c populations still depends upon agriculture for his or her resource. However agriculture in Asian country depends upon the downfall and atmospheric condition up to an oversized extent and most of the individuals residing in country earn their resource from rain-fed agriculture.

KEY WORDS:

Indian Agriculture Sector , socio-economic conditions , Communication Technology .

INTRODUCTION:

Farmers in rural areas ought to agitate unsuccessful crops and animal unhealthiness oft and attributable to restricted communication facilities, solutions to their issues stay out of reach. Info and Communication Technology is presently been employed in agriculture to grasp regarding the weather, soil condition and to grasp regarding market rates of crops, seeds and pesticides. Updated info regarding the market rates helps the farmers to require benefits of the costs|inflation|economic process} and to require necessary safeguards against the falling prices within the market. Filling the stomachs of regarding nine billion populations by 2050 is that the main challenge before this sector and this target may be achieved with the assistance of mechanized agriculture that is feasible with the intensive use of knowledge and Communication Technology in agriculture. info and Communication Technology (ICT) is presently getting used in agriculture to grasp regarding the weather, soil condition, and market rates of crops, seeds and pesticides. Filling the stomachs of regarding nine billion populations by 2050 is that the main challenge before the agriculture sector and this target may be achieved with the assistance of mechanized agriculture that is feasible with the intensive use info and Communication Technology in agriculture. Improved agriculture additionally encompasses a direct impact on hunger and deficiency disease, decreasing the occurrences of famine, kid aerobatics and maternal bad condition. Increasing size of population and decreasing size of productive space attributable to inflated use of productive land for urbanization and for industries create it necessary for mechanization of agriculture equipments with AI. the foremost bottlenecks in use of ICT square measure poor information measure, slow speed of net connections, lack of data regarding the employment of ICT among the farmers, tiny size of farms etc. a number of the on top of

Title: "ROLE OF ICT IN INDIAN AGRICULTURE SECTOR" , Source: Review of Research [2249-894X] Dr. Somprasad Rajaram Kenjale yr:2014 | vol:3 | iss:7

mentioned issues may be mapped out by providing correct coaching to farmers regarding the employment of ICT and initiatives of presidency to supply quick net connections and correct information measure in rural areas whereas different may be solved by awareness for pooling of land with different farmers to extend the dimensions of farms. The employment of ICT not solely empowers individual users rather it enriches their fashion & resource and boost the economy as an entire.

The share of agriculture activities in nation's GD Ranges from nineteen to seventeen.3 p.c throughout the amount 2004-05 to 2012-13 that was fifty one.8 p.c throughout the year 1950-51. Hence, there's substantial reduction within the share of agriculture and allied activities in value of the state. Agriculture accounts for the overwhelming majority of the poor's resource activities; it's additionally the world that holds the foremost promise for pro-poor economic process. In fact, agriculture is around fourfold more practical in raising incomes among the poor than different sectors (World Bank 2008). Improved agriculture reduces the hunger and deficiency disease a lot of chop-chop compared with the advance in industrial and repair sector. The agriculture sector is weighed down attributable to sharp increase in population. The marginal productivity of farmers is reducing attributable to restricted accessibility of productive land and stagnation within the productive capability of land. Total agriculture staffs are inflated from ninety seven.2 million to a pair of 63 million throughout the amount 1951 to 2011 that shows the inflated pressure of population toward land accessible for agriculture. Additionally the proportion of agriculture labourers is inflated from twenty eight.1 p.c to fifty four.9 p.c of total agricultural staff. With the rise in population, this pressure can increase in future similarly however the marginal productivity in agriculture is less than the marginal productivity in industries and repair sectors. Hence, there's AN imperative would like for ICT based mostly mechanization of agricultural activities to extend the per person productivity.

REVIEW OF LITERATURE

The comets have quite completely different origins and functions however all square measure involved with raising the delivery of knowledge to farmers and different rural dwellers. it absolutely was prompt by the researchers that efforts ought to be created to include ICT altogether endeavors associated with agricultural development. Shaik et al. (2004) in their study examined the performance of 3 ICT comes in Asian country. The organizations and departments involved with agricultural development got to understand the potential of ICT for the speedy dissemination of knowledge to farmers. Additionally the govt. at national and state level in Asian country has got to reorient agricultural policies so a full-fledged strategy may be fashioned to harness ICTs potential for helping overall agricultural development. As a part of this method, policy manufacturers ought to use the analysis of the ICT comes given in varied studies to know however such project functions. Kumar et al. (2012) in his study ended that the Indian Government is being created a motivating action particularly within the space of agriculture by giving varied facilities to the farmers {in that during which within which} the ICT services is one in every of those which square measure serving to the farmers to know the fashionable cultivation strategies, accessibility of agricultural inputs, irrigational sources, accessibility of pesticides and fertilizers for increasing the assembly and productivity of crops. Asian country may be a developing economy and agriculture forms the backbone of Indian Economy. Despite concentration of manufacture, agriculture remains during a place of pride. For an extended amount of your time, Indian rural communities particularly farmers face range of socio-economic issues. So, the planners and directors of the agriculture departments of the govt should contemplate the threats Janus-faced by farmers to shield the interests of farmers similarly because the interest of the state. By reducing the extent of issues Janus-faced by the farmers, the state as an entire can march towards a prosperous future. Sinha (2013) in his paper throw light-weight on the attitude use, scope and benefits of use of ICT in agriculture e.g. in forecasting, to grasp regarding the soil condition, to grasp regarding the prevailing market rates of crops and to use the synthetic intelligence for leveling & cultivation of crops etc. The author prompt the intensive use of ICT in agriculture sector to feed the big population base of Asian country and to supply employment to the overwhelming majority of population. The author additionally prompt for cybernation of records of all the landholding to grant the advantages of assorted schemes launched by the govt. of Asian country for the good thing about farmers.

OBJECTIVES OF STUDY

The current study is undertaken to grasp regarding the role of ICT in agriculture development of India. The expected benefits, scope, opportunities and challenges of use of ICT in agriculture sector in Asian country are studied within the gift paper.

RESEARCH TECHNIQUE

The information for the current study is taken from the secondary supply e.g. Yearbook of Central applied mathematics Organization, run batted in Hand Book and IAMAI information Book etc. additionally varied internet sites, journals and news papers have additionally been remarked notice the result of use of ICT in agriculture sector of Asian country.

GROWTH RATE IN AGRICULTURE

The table three shows that the annual compound rate of value was four.26 p.c throughout the amount 1951-2000 and seven.07 throughout the amount a pair of 000-13 whereas the expansion rate of agriculture and allied sectors was 2.59 and 2.97 p.c severally throughout the on top of mentioned amount. Hence, the expansion in agriculture and its allied sectors is far less than the GDP growth rate. Additionally the expansion rate in agriculture sector isn't consistent over the amount. a while it's equal or with regards to overall value rate and a few time it goes into negative. This trend shows the dependableness of agriculture and its allied sectors on different factors like downfall and atmospheric condition. However, the revolution inflated the assembly of wheat and paddy to a considerable level in {india|India|Republic of Asian country|Bharat|Asian country Asian nation} and India become autonomous to fill the abdomen of the prevailing and future population. However increasing size of population and decreasing size of productive space attributable to inflated use of productive land for urbanization & industries and uncertainty of weather together with warming create it necessary for mechanization of agriculture equipments with AI.

The employment of ICT may be created in farms for leveling of the farms, for cultivation of crops, to grasp regarding the soil condition & would like of water and to spray pesticides etc. through automatic machines equipped with international Positioning System and Remote Sensing facilities. Some ICT based mostly services has been started by some firms, NGOs and Government Departments to supply necessary info to farmers regarding the agriculture. a number of the most ICT initiatives in Asian country square measure as follows (Glendenning and Ficarelli 2012):

Reuters Market Light' (RML) may be a mobile-based service started by Thomson Reuters that has short-message service to subscriber farmers in eight native languages across thirteen states over signed farmers' phones.

Kisan' portal is launched by Department of Agriculture of Asian country that provides all mobile based mostly initiatives within the field of Agriculture and its allied sectors to assemble SMS (both Push and Pull), Interactive Voice Response System, Unstructured Supplementary Services of information, Mobile Apps and Services.

The 'Lifeline' project was launched by OneWorld.net in partnership with British medium and CISCO in 2006. The Lifeline platform may be a project supported a matter and Answer (Q&A) interactive voice-response system.

'IFFCO Kisan Sanchar Limited' (IKSL) may be a partnership between 'IFFCO' and cellular service supplier 'Airtel'. It delivers voice messages with some info like that sent by RML, but additionally it additionally works as a facilitate line. It provides 5 free daily voice messages to the subscribers of service.

'Agriwatch' was started by Indian Agri-Business Pvt. Ltd. to boost rural farm incomes by universalizing access to data & info regarding agricultural markets and technologies among farmers of Asian country by providing newsletters, analysis reports and SMS to them.

Agricultural portals
haritgyan.com
agmarknet.nic.in
mkisan.gov.in
krishiworld.net
hortnet.gov.in
dacnet.nic.in
dackkms.gov.in
agriwatch.com
acquachoupal.com

The present era is era of ICT and government will benefit of ICT in agriculture sector to boost the productivity. The agriculture sector will play its crucial role in economic condition obliteration and to cope up with the matter of state. However one will see that almost all of the on top of comes are started by non-public organizations, firms and not-for-profit organizations. Government has started solely a number of

programs to be used of ICT in agriculture that shows the apathy of presidency to require benefits of intensive use of ICT in agriculture and its allied activities. The ICT may be used for formulation of future plans for overall agricultural development by adopting the world's best practices enforced into agriculture sector.

SCOPE AND LIMITATIONS OF ICT

Out of total population, active mobile subscription is 886 million in Gregorian calendar month, 2014, that is seventieth of the whole population (active connections as a share of total population). Any at the moment 106 million persons square measure active social media users in Asian country. However the agricultural subscriber base is just thirty six p.c of total subscriber base in Asian country whereas regarding seventy p.c populations resides in rural areas. In urban areas {the p.cage|the share the proportion} of density is 168 p.c suggests that each subscriber has one and affiliation however the density in country is just forty six percent. Out of the population of one, 256 million there square measure 213 million net users in 2013 suggest that out of each five Indians only one is connected to the net. However the pace at that the net user's square measure increasing in Asian country is exciting. In last six months there square measure sixteen million new users that square measure 14 July of the whole net users. though' Asian country is seeing tremendous growth in user base of mobile net however the net speed is extraordinarily slow. in keeping with a study, Asian country has the slowest net in Asia. Net speed of 4Mbps or higher constitutes solely six p.c of total net users within the country.

The government has recognized the quality of applications of ICT at completely different levels of agricultural processes. The employment of ICT in agriculture has inflated the effectiveness and potency in production of assorted crops and agricultural fight. the data associated with value, atmospheric condition and different small and macro economic variables provides a plus over the peer farmers World Health Organization don't use the ICT in agriculture. The ICT may be employed in transferring the varied advantages like grant on fertilizers and bonus on agricultural product directly into their checking account. With the assistance of ICT, the data regarding the weather and downfall is provided to the farmers that square measure employed by the farmers in designing and management {of completely different of various} crops at different times. It provides {the information the knowledge the information} associated with expected demand of various crops and their expected market costs over the time by victimization the statistic data of previous years. Mobile phones may be used as an efficient tool for transmission data associated with agriculture as a result of mobile penetration is increasing day by day in Asian country and currently good Phones {are also also square measure|are} employed by farmers which might be preloaded with such forms of mobile applications that are useful in climate friendly agriculture. However the implementation of ICT is laid low with many factors like data of ICT tools among the farmers, poor net property, the standard and accessibility of appropriate info contents and limitations of media. Geographic info Systems (GIS) and Remote Sensing (RS) techniques may be wont to get the data associated with atmospheric phenomenon, expected downfall and expected temperature in coming back days etc. In future this info is going to be accessible during a single click on trendy good Phones though a number of the on top of mentioned options square measure already accessible in current generations of good Phones. However, the excessive use of fertilizers and pesticides adversely affects the existence of untamed life and folks and is harmful for his or her health and it may be avoided with the assistance of ICT. Global climate change and inexperienced growth square measure perpetually to be at high agricultural development agenda. Agricultural productivity shouldn't be achieved at the value of environmental adverse effects (Sinha: 2013).

OPPORTUNITIES AND CHALLENGES AHEAD

The ICT will equip the farmers with higher tools to earn their resource. The ICT may be transparency in agro market mechanism and to supply info associated with agriculture to farmers. It may be wont to cut back cost through on-line selling, will facilitate farmers by increasing their social contacts with different farmers of the state and world and might facilitate in taking selections regarding the longer term designing of crops. The ICT may be employed in implementation {of varied of assorted} economic condition obliteration schemes and various schemes launched for the advantages of farmers.

The shortage of use of ICT in agriculture connected data among farmers, poor property in rural areas, poor speed of net, high net usage charges and therefore the lesser accessibility of electricity in most of the village's square measure the foremost bottlenecks in depth use of ICT in agriculture. However the foremost downside is expounded to awareness among the farmers regarding the employment of ICT for

determination their varied issues which might be solved by organizing varied seminars and awareness programs in villages. the opposite issues are going to be solved only the farmers can become the users of ICT in agriculture.

CONCLUSION

ICT is extremely useful in Indian agriculture sector to realize the high pace of growth that is critical to satisfy the necessities of skyrocketing population and to supply employment to the agricultural dwellers. ICT may be employed in forecasting, watching of would like of water, to grasp regarding the soil condition and to use the delicate mechanized tools in leveling, cultivation and gather. With the assistance of ICT, the farmers will get the right costs of their crops. They create estimates of demand and provide of various agricultural products and might create an inexpensive estimate of costs of their crops. but the poor data of ICT tools, poor property and low speed of net in rural and much fling spaces is major obstacle during this area. Any the tiny size of farms is additionally another massive downside and obstacle in mechanization of agriculture. However, in spite of abovementioned issues, ICT may be employed in betterment of agriculture sector and government ought to target providing net facilities within the rural and remote areas of the state. the govt ought to additionally organize awareness programs regarding the utility of ICT in agriculture and will give correct coaching to farmers to use completely different ICT tools similarly to bring fruitful results.

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