

Impact of Information and Communication Technology On Marketing Of Rice: A Study**Of Uttar Pradesh****Dr.Asha Singh****Assistant Professor****Department Of Geography****Abhinav Pragya P.G. College****Sarlia****Hamirpur****(Received:1August2024/Revised:25 August2024/Accepted:29August2024/Published:2September2024)****Abstract**

Information technology is becoming increasingly important to the marketing and production of agricultural products. Farmers can reduce time on orders, delivery, and feedback by using information technology. It's imperative to quickly draw in new clients and hold onto current ones in the current competitive market. Poor agricultural commodity marketing in India is said to be mostly caused by improper market information transmission. By providing farmers with the necessary marketing information, the application of information and communication technology (ICT) can close this information gap.

This essay aims to investigate how information and communication technology has affected rice marketing in Uttar Pradesh, one of India's largest northern states. Since rice is Uttar Pradesh's main crop, research has been done on how ICT affects the net price received (NPF) by the state's rice producers. Furthermore, through efficient social media practices, the application of digital marketing tactics has been demonstrated to improve customer satisfaction in the B2B sector, notably in ICT enterprises. Additionally, by automating procedures, cutting expenses, and improving business operations, the use of digital marketing tools has given businesses a competitive edge. There is a noticeable difference in the NPF of farmers who use ICT and those who don't. The type of land owned and education level both positively and significantly influence ICT use. There is a dearth of research on the effects of ICT on agricultural marketing in Uttar Pradesh and in India. ICT has had an impact on life in practically every aspect. It is anticipated that the use of ICT will have a significant effect on farmers' income levels. This study will provide guidance in this area. Primary data and the authors' original work serve as the study's foundation.

Keywords:- Information And Communication Technology (ICT), Logistic Regression, Agricultural Marketing, Dummy Regression, Net Price Received, Uttar Pradesh.

Introduction

The majority of rural India's livelihoods come from agriculture. To improve the financial security of farmers, new and improved technology must be continuously applied in the agricultural industry. The insufficiency and inefficiencies in the transfer of pertinent information to the farming sector are the plague of Indian agriculture, not a lack of technology or research and development activities. Consequently, information technology in agriculture has the potential to propel progress.

Agroprocessing, distribution, packing, transport, storage, harvesting, growing, distribution plan, and selling are the first steps in the process of agricultural marketing. In particular, "agriculture" and "marketing" are the two concepts that make up agricultural marketing. If the nation want to grow its agricultural industry, effective marketing is essential. The attempts to boost agricultural productivity are largely ineffective if an effective system of agricultural marketing is not developed. Successful agricultural marketing plays a major role in improving the lot of farmers and agriculture. The marketing of agricultural products in India faces several obstacles: there is restricted admittance to showcase data, the proficiency level among the ranchers is below the public normal, and there are numerous channels of appropriation that eat from the pockets of the two ranchers and customers . The absence of legitimate dispersal of suitable market data is the fundamental explanation of unfortunate showcasing of the horticultural produce according to the rancher's point of view. Web empowered arrangements could empower ranchers to develop their exhibition as they become more powerful and effective, subsequently expanding the size of their tasks . Fitting opportune got market data is a compelling gadget in the strengthening of ranchers in the present changed promoting framework. An efficient organization of horticultural business sectors assists with conquering the trouble that the rural area faces due to the proper areas of the ranches. Ranchers need simple admittance to significant, exceptional and satisfactory agrarian promoting data. Rural showcasing data frameworks assume an essential part in ranchers' dynamic cycle underway and promoting of homestead produce. The most major problem in this present reality is the food supply. Over the past 35 years, the demand for food has increased at more than twice the rate of population growth. As a matter of fact, as indicated by a report by the Food and Horticulture Association (FAO), around 10% of the worldwide populace, or 815 million individuals, are malnourished and need more food to

carry on with dynamic and sound existences. The utilization of current innovation in the farming area is far and wide. It has helped the ranchers in numerous ways. Reception of better than ever advancements has expanded the creation and efficiency of yields. This has additionally assisted in lessening the creation with costing. The utilization of innovation has likewise made the method involved with cultivating simpler and more proficient.

Some of the popular technologies used in the agriculture sector are:

1. Soil Detector: Soil sensor is utilized to quantify soil dampness level, temperature and different variables influencing crop development. The farmer receives the data gathered by the sensors wirelessly, allowing him to adjust his farming methods accordingly.

2. GPS Innovation: GPS innovation is broadly utilized in accuracy cultivating. It assists with figuring out the limits of the field and apply composts, pesticides and herbicides accurately. This decreases wastage and increments productivity.

3. Weather Surveillance: Ranchers can now get to constant climate information that can assist them with choosing when to plant, how to flood and what sort of yield to develop. This data can be gotten through climate applications or sites, or through devoted weather conditions stations on the homestead.

4. Automation: Computerization has been broadly embraced in farming cycles like planting, relocating, reaping and so forth. This has diminished the reliance on physical work and expanded effectiveness.

5. Drones: Drones are being utilized widely for planning, studying and harvest observing. They aid in the collection of information that can be used to plan and carry out agricultural activities.

6. Agrarian Robots: Agrarian robots are being created to perform different errands on ranches, for example, draining cows, picking products of the soil, and, surprisingly, cutting grass. These robots can work for extensive stretches of time without getting drained and can frequently improve than human laborers.

7. Satellite Symbolism: Satellite symbolism is utilized for weather conditions gauging, crop checking and yield examination. It assists ranchers with taking ideal choices in regards to water system, editing design and so on.

The rise in agricultural output can be attributed in large part to technological advancements. Mechanization, for instance, has reduced the need for human labor, thereby increasing productivity and efficiency. The presentation of water system frameworks has likewise helped support creation by making it conceivable to develop crops in any case dry regions.

Likewise, present day innovation has made it conceivable to foster high-yielding harvest assortments that are impervious to bugs and illnesses. The utilization of innovation in horticulture emphatically affects food security. Expanding creation has guaranteed that more individuals approach nutritious and reasonable food. Production and productivity in agriculture have increased as a result of modern technology. This thusly has further developed food security and pay for ranchers. Moreover, it has made new positions and work on the personal satisfaction for provincial networks.

Information And Communication Technology And Marketing

Information and communication technology (ICT) has made its presence felt in each and every walk of life. ICT sometimes referred to as "Information Technology" (IT), has remarkable potential to increase the flow of information, thereby creating a potential tool for empowering agricultural markets. Some of the activities that can be addressed scientifically by ICT are pricing, virtual trading floors, holistic trading services, etc. Improved communication system of agricultural information can help poor farmers to remain informed about the opportunities and challenges associated with the agricultural development strategies (FAO, 1998). The role of ICT in agriculture was identified as a key action line during the World Summit on the Information Society held in 2003 and 2005. Government, co-operative sectors, private entities and NGOs have already started working in this field with different objectives toward the idea of modernization of agriculture sector in India. National Commission on Farmers viewed that Indian farmers are facing the problem of knowledge deficiency, which can only be addressed with proper implementation of ICT tools specially devised for this sector. One of the most important factors for agricultural development is the marketing of agricultural products. Information, as the most important facilitator and main core of the marketing system, has an effective role in increasing the marketing efficiency. Today, farmers need access to updated and exact information in order to improve the quality and quantity of the agricultural marketing. The use of ICT results in fast and efficient accessibility to the market, increasing selection power, improving communication, identifying markets, saving time and energy, improving marketing and reducing business costs. The potential of ICTs to support the farmers to access reliable information about agricultural technologies and markets is enormous. Most of the developing countries using ICT in agricultural marketing face problems such as developing infrastructures, inadequacy of experts, lack of information about government policies, illiteracy of people in rural areas, high cost of hardware, and lack of sufficient support from private sector for more participation in agricultural marketing. Along

with the existing technology, the future agricultural technology will also be information intensive, mostly. Thus, technology adoption is urgent in all sectors of life in general and agriculture in particular. The Government's digital initiatives for improving agricultural marketing in India include launching of Agrisnet, Agris, Agmarknet, Dacnet, Vistarnet, Aphnet, Fishnet, Hortnet, Seednet, Ppin, Coopnet, Fertnet, Arisnet, Afpinet, Arinet, Ndmnet, etc., with their independent websites. The problem of Indian agriculture is not the lack of technology, but it is the inadequacy and inefficiencies in the dissemination of relevant information to the farming sector. Despite several policy initiatives to promote rural ICT penetration, growth intensity continues to be skewed heavily in favor of urban India (TRAI, 2012).

Benefits Of Agritech

Agritech's part in the agribusiness business is basic in helping ranchers to defeat difficulties and work on their activities. Basically, the upsides of agritech range from expanded crop efficiency to decreased ecological effect. It additionally assists with working on the functioning states of little ranch laborers. They comprise of, however are not restricted to:

Enhanced Crop Production: Through precision agriculture methods, agritech aids farmers in increasing crop yield, reducing waste, and increasing operational efficiency.

Diminished utilization of water, compost, and pesticides: Agritech assists ranchers with settling on additional educated conclusions about when and the amount to apply. Along these lines, they can lessen squander and natural effect.

Fewer Negative Effects On Natural Ecosystems: By diminishing the utilization of destructive synthetic compounds and further developing productivity, agritech lessens the adverse consequence of agribusiness on the climate.

Reduced Chemical Runoff Into Groundwater And Rivers: Agritech helps farmers keep track of and control how they use chemicals, lowering the chance that waterways will be contaminated. This essentially affects the climate and general wellbeing.

Better Offices To Give Laborers: With the utilization of innovation, agritech gives better working circumstances to cultivate laborers, expanding their solace and wellbeing.

More Prominent Efficiencies And Lower Costs: By further developing effectiveness and lessening waste, agritech prompts lower costs for ranchers, making their activities more practical.

Environment/Climate Forecast Through Computerized Reasoning: Agritech assists farmers in choosing the best times to plant and harvest their crops. It gives an obvious sign of

the job of weather conditions estimating in cultivating. They reduce the likelihood of crop loss as a result of unpredictability in the weather this way.

Versatile Harvests Created By Means Of Biotechnology: Agritech assists ranchers with making crops that are more impervious to illness, bothers, and ecological circumstances. Thus, it decreases the gamble of harvest misfortune and increments yields.

Agribusiness Sensors: Agritech gives ranchers continuous information on soil dampness, temperature, and different variables that effect crop development. This permits them to settle on informed conclusions about when and how to water, treat, and care for their yields.

More Secure Developing Circumstances And More Secure Food Sources Accessible On The Lookout: By working on the effectiveness and maintainability of horticulture, agritech prompts more secure developing circumstances and better food varieties for shoppers.

Decrease Natural And Biological Effect: By decreasing waste and the utilization of hurtful synthetic substances, agritech diminishes the adverse consequence of horticulture on the climate and nearby biological systems.

About The State Of Uttar Pradesh

Uttar Pradesh, situated in North India, will be India's second biggest state as per economy and the fifth biggest as per region. Uttar Pradesh is fundamentally an agrarian economy with in excess of 60% of the populace reliant upon agribusiness for its job. In addition, Uttar Pradesh is home to one fifth of the nation's farmers . The state has a diverse agricultural climate that is ideal for agricultural production and is India's largest producer of food grains. In any case, there is restricted admittance to the market data, the education level among the ranchers is low and there are different channels of circulation that destroy from the pockets of the two ranchers and buyers in the state. NSSO 59th Unit Level information show that the ranchers of Uttar Pradesh are chiefly utilizing ICT gadgets like TV, radio and papers for getting creation related data. These ICT gadgets are utilized, 1.9, 1.2 and 8 percent, individually, for getting the market data by the state ranchers. The public midpoints are higher than Uttar Pradesh. Punjab is shown, as per similar information, as the most elevated client of ICT for market data in India. The current review attempts to examine the effect of ICT on the ranchers' pay of Uttar Pradesh. Rice, being the predominant food yield of the state, is considered for the current work.

Impact of Agricultural Technology on Consumers

Consumers have been impacted by agricultural technology in numerous ways. The utilization of present day innovation has assisted ranchers with expanding the creation of yields and

animals. The products' quality has also improved as a result of this. The utilization of new innovation has additionally diminished the expense of creation. The reception of new innovation has likewise prompted the advancement of new techniques for advertising and appropriation of agrarian items. This has assisted the ranchers with arriving at a more extensive market for their items. The utilization of innovation has additionally helped in making new positions in the agribusiness area.

Effect of Agrarian Innovation on Farmers

Lately, rural innovation altogether affects ranchers all over the planet. Farmers are now able to produce more crops than ever before and increase their yields thanks to technology. By utilizing less labor and other inputs, they can also cut costs. However, using technology in agriculture also has some drawbacks. One of the principal issues is that it can prompt exorbitant reliance on machines and synthetic substances, which can be costly to keep up with. Aside from this, on the off chance that it isn't utilized as expected, it can likewise hurt the climate.

Existing literature

In this segment, the current writing chips away at the ICT are talked about under four unique subsections, in particular various methods of ICT commencements, advantages of ICT commencement, factors impacting utilization of ICT and difficulties of ICT commencement. GbêtondjiMelaineArmelNonvide et.al.(2023) concentrated on Data advancements are vital to change the agrarian area and work on monetary execution. In any case, does the utilization of data and correspondence advances (ICT) work on agrarian families' government assistance? To respond to this, the review utilized a broadly delegate family overview, the Thorough Food Security and Weakness Examination (CFSVA) completed in 2017 in Benin. The review covered an example of 15 000 families, be that as it may, the examination zeroed in on the 6502 rural families. An endogenous exchanging relapse model was utilized to control for choice predisposition and endogeneity issues. Results showed that the utilization of ICT builds families' utilization use by 89.6%. This infers that the utilization of ICT works on farming families' government assistance. Different factors that influence rural families' government assistance incorporate age, conjugal status, ranch size, admittance to credit, responsibility for, enrollment in a rancher based association, and locale of home. Besides, the choice to involve ICT in rural families relies upon the degree of schooling, age, sex, conjugal status, ranch size, admittance to credit, responsibility for, participation in a rancher based association, and area. According to these findings, policies that encourage the use of ICT are

essential to enhancing the well-being of Benin's agricultural households. These approaches should think about segment, financial, and institutional attributes of households.^[1]

Rajeev Kumar Singh et.al.(2021) concentrated on Advertising productivity in channels is fundamental to find out the edge acknowledgment and financial additions acknowledgment for little land holding rice cultivators. In setting of territory of Uttar Pradesh this converts into a famer"s dependence on six general classifications of channels that work with reach of rice to a definitive buyer. The degree of number of mediators sorts out as the standards that decides the degree of edge acknowledgment by rice cultivator. The review sent the relapse demonstrating and noticed the channel three as most proper channel with greatest edge realization.^[2]

Ashish Kumar Awasthi et.al.(2020) The overview was doneout in the field of country area of Sitapur region of Uttar Pradesh, India. The review shows the hole between expected yield and existing yield (neighborhood and high yielding assortments) of rice paddy crop creation in the Sitapur locale, Uttar Pradesh, India. It has seen that natural and financial obstructions morely affect genuine creation figures than an absence of exploration. The yield hole was bigger in the event of nearby assortments (57.4%) than high yielding assortments (HYV) (52.4%). In the case of HYV, the gap widens as the holding size decreases. The examination of information use showed that overall ranchers were involving more than the recommended pace of seed in both neighborhood HYVs. This exploration manages the subtleties of the examination region, the testing strategies utilized, the method of overview, the nature and wellsprings of information and the different apparatuses and procedures utilized in dissecting the information. In this study an endeavor has been made to depict the exploration technique utilized for the review viz. determination of region, Block, ranchers and promoting of paddy and technique for information assortment utilized for the investigation of the gathered information.

Conclusion

Modern agriculture is critical to global food security because it feeds a growing population while minimizing environmental impact. By providing funding, supplies, cultivation, and marketing services, Jiva helps farmers all over the world overcome the significant obstacles they encounter on a daily basis. Technological developments in agriculture are critical because they result in increased agricultural productivity and more environmentally friendly methods. Modern technology has significantly raised agricultural productivity. It is, in fact, one of the few fields where labor-saving technology has been applied to its full potential.

With the use of machinery, a farmer may now perform the tasks performed by numerous men and women. In addition to saving time, this lowers expenses and boosts output. The study concluded that, in comparison to larger holdings, the tiny property grows more food crops. The cost breakdown by factor revealed that labour costs, manure and fertiliser, labour from bullocks, tractor-powered irrigation, and seeds accounted for half of the total cost. The majority of the sample farmers' sales in Universal have gone through charge agents. Less than one-fourth of the consumer rupee went towards restricting marketing expenses and middlemen's edge in rice fields, while the producer's portion of the rupee was higher. Due to a lower price increase and a larger percentage of farmers in the consumer rupee, control III for paddy was more efficient.

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