

RESEARCH ARTICLE :

Potato production through telecounselling mode of extension education

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SUMMARY : There are several modes are available for teaching to the farmers through distance training system, out of which telecast of video programme, broadcast of audio programmes, telecounselling etc. are eco-friendly modes, solving the farmers problems. The telecounselling is a eco-friendly and easy system of distance training, which is available in rural area in the form of mobiles and landline. The experiment on telecounselling for improvement of potato yield was tried in the villages Bhawanipur and Daipur of district Kannauj and Rajpura, Baghauli, Jasharau and Shaidpur of district Mainpuri for the first time. The soil of experimental site was sandy loam with poor fertility. There is certain drawback in the cultivation of potato. The farmers are not using the recommended agronomic practices, resulting in, the low yield obtained from potato. The farm families of potato growers were linked with C.S.Azad University of Agriculture and Technology, Kanpur and KVK, Kannauj. The growers put up their problems of potato cultivation before the scientists through telecounselling mode of distance training as and when required. The scientists solved their problems immediately with same mode of distance training. The cultivation of potato was recommended with three varieties *i.e.* Kufri Bahar, Kufri Pukhraj and Kufri Pushkar through telecounselling mode. Cultivars Kufri Bahar, Kufri Pukhraj and Kufri Pushkar gave tuber yield by 331.55 q/ha, 354.22 q/ha and 383.71 q/ha, respectively. The growth and yield traits were concordant to yield obtained from potato cultivars. The highest net return Rs. 123569/ha and BCR 1:2.15 were obtained from adoption of cultivation of cultivar Kufri Pushkar closely followed by the net return Rs. 106031/ha and BCR 1:2.00 available from the cultivation of Kufri Pukhraj.

KEY WORDS :

Dissemination, Effective media, Mass media, New horizon, Telecounselling mode

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BACKGROUND AND OBJECTIVES

Agriculture journalism came into existence five decade ago. It has emerged as a new horizon recently in India. It is how gaining importance, particularly after the

establishment of agricultural university in India, technical information needs to be provided to the farmers at the right time and in the right way, so that the productivity can be increased. Print media has acquired a greater role in dissemination of information on improved

agricultural practices to the farming community in particular and public in general. India has farm magazines published mostly in local languages in every state. The coverage of different subject matter by radio, television, newspaper and farm magazine are almost similar with regard to agriculture, horticulture, animal husbandry, agricultural marketing, agricultural engineering and co-operatives.

The success of agricultural development programmes in developing countries largely depends on the nature and extent of use of mass media in mobilization of people. The planners in developing countries realize that the development of agriculture could be hastened with the effective use of mass media. Radio, television have been acclaimed to be the most effective media for diffusing the scientific knowledge to the masses. In a country like India, where literacy level is low, the choice of communication media is of vital importance. In this regard the television and radio are significant, as they transfer modern agriculture technology to literate and illiterate farmers alike even in interior area, within short time. In India farm and home broadcast with agricultural thrust were introduced in 1966, to enlighten farmers with the adoption of various technologies to boost agricultural development.

Singh and Agarwal (2007) conducted the research work on telecounselling mode to improve the flowers yield of heena, a famous medicinal and aromatic crop. There was certain draw back in the cultivation of henna in the selected pilot area, located in catchments of Kali river at Kannauj district. The growers put up the problems of henna cultivation before the scientists through telecounselling mode of distance education as and when required. The scientists solved their problems immediately with same mode of distance education. Therefore, the yield of henna flowers increased from 95 q/ha to 155 q/ha. Keeping the above points in view, the present study was under taken to enhance the quality production of potato tubers in remote areas, where the farming majority could not approached to the scientists easily.

RESOURCES AND METHODS

The present study was carried out during autumn season of 2005-06 to 2014-15 at Mainpuri and Kannauj districts of Uttar Pradesh. The soil of both experimental sites was sandy loam. Kannauj district soil, having pH 8.0, organic carbon 0.23 per cent, total nitrogen 0.02 per

cent, available phosphorus 9.0 kg/ha and available potash 273 kg/ha. Similarly, Mainpuri district soil contain pH 8.3, organic carbon 0.45 per cent, total nitrogen 0.04 per cent, available phosphorus 10 kg/ha and available potash 270 kg/ha, therefore, the fertility status of both sites was poor and soil of both locations has almost similar nature. The pH was determined by Electrometric glass electrode method (Piper, 1950), while organic carbon was determined by colorimetric method (Datta *et al.*, 1962). Total nitrogen was analyzed by Kjeldahl's method as discussed by Piper (1950). The available phosphorus and potassium were determined by Olsen's method (Olsen *et al.*, 1954) and Flame photometric method (Singh, 1971). The three cultivars of potato *i.e.*, Kufri Bahar, Kufri Pukhraj and Kufri Pushkar were suggested to the cultivation for higher tubers production.

The thirty farmers were selected for availing the telecounselling service. The recommended doses of NPK was given to potato @ 120 kg N, 60 kg P₂O₅ and 60 kg K₂O/ha. The potato was planted between 15-25 October every year to harvest the medium crop of potato after 90-95 days after planting. The recommended package of practices were provided to the farmers through telecounselling mode. The net return and BCR were calculated after finalization of trial.

OBSERVATIONS AND ANALYSIS

The results obtained from the present investigation are summarized in Table 1. The highest tubers plant⁻¹ (9.45) were recorded in Kufri Pushkar over the Kufri Bahar (8.95) but Kufri Pukhraj produced almost equal tubers plant⁻¹ (9.20) to Kufri Pushkar. Cultivar Kufri Pushkar yielded tubers by 475.50 g plant⁻¹ followed by Kufri Pukhraj (450.00 g plant⁻¹). The test cultivar Kufri Bahar displayed lowest tubers weight plant⁻¹ by 428.50 g plant⁻¹. The variation in the yield parameters of different cultivars of potato was due to genetic constitution. The variation in the tubers plant⁻¹ and tubers weight plant⁻¹ was also reported by Singh *et al.* (2013 a and b).

It is clear from the data available in Table 1 that the cultivar Kufri Pushkar registered higher tuber yield (383.71 q ha⁻¹) compared with Kufri Pukhraj (354.22 q ha⁻¹) and Kufri Bahar (331.55 q ha⁻¹). Thus, Kufri Pushkar gave higher yield of tubers by a margin of 29.49 q ha⁻¹ or 8.32 per cent and 52.16 q ha⁻¹ or 15.73 per cent over Kufri Pukhraj and Kufri Bahar, respectively. The sowing of Kufri Pushkar on light soil in both situations

Table 1 : Yield traits, tuber yield and economics as affected by different cultivars of potato

Sr. No.	Variety	Tubers/plant			Weight of tubers/plant (g)			Yield (q/ha)		
		Kannauj	Mainpuri	Average	Kannauj	Mainpuri	Average	Kannauj	Mainpuri	Average
1.	Kufri Bahar	8.80	9.10	8.95	425.00	432.00	428.50	330.91	332.20	331.55
2.	Kufri Pukhraj	9.00	9.40	9.20	448.00	452.00	450.00	353.45	355.00	354.22
3.	Kufri Pushkar	9.10	9.80	9.45	471.00	480.00	475.50	382.42	385.00	383.71
		Net return (Rs./ha)			BCR					
1.	Kufri Bahar	92306	92630	92468	1:1.86	1:1.87	1:1.86			
2.	Kufri Pukhraj	105830	106232	106031	1:2.00	1:2.00	1:2.00			
3.	Kufri Pushkar	123212	123926	123569	1:2.15	1:2.16	1:2.15			

Sale price of potato tubers – Rs. 600/quintal.

had higher number of tubers plant⁻¹ means it possessed high sink capacity to utilized the photo assimilates translocated from source. It, resulted in, higher weight of tubers plant⁻¹ and more average tubers yield (q ha⁻¹). These results are commensurable to the findings of Panwar *et al.* (1986); Shrivastava and Bharadwaj (1986); Pachpor and Shete (2010) and Singh *et al.* (2015 a and b).

The highest net return of Rs. 123569 ha⁻¹ was achieved from cultivar Kufri Pushkar followed by Rs. 106031 ha⁻¹, available from Kufri Pukhraj. The lowest net return of Rs. 92468 ha⁻¹ and BCR (1:1.86) were recorded by the cultivation of Kufri Bahar. The BCR in Kufri Pushkar was computed 1:2.15, while it was recorded by 1:2.00 with the adoption of Kufri Bahar. The good return with Kufri Pushkar was due to equal size and bright tubers, which attracted to the consumers and purchasers and provided good market rate, resulted in, it gave higher net return over other two tested cultivars. The similar results have also been reported by Singh *et al.* (2013 a and b).

Feed back :

- Farmers accepted the use of telecounselling technology in potato cultivation.
- The reduction in biotic and abiotic problems has been noted.

Farmers reaction :

- Appreciated to the efforts of scientists.
- The technology was transferred to the needy area from donor area.

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