

Short Communication

Acuity analysis of the vegetable experts to determine the priorities in sustainable vegetable production technologies

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Vegetables are short duration and profit-making crop for the farmers especially small and marginal one. By adopting vegetable-based cropping system, farmers can earn more profit from smaller piece of land by enhancing the cropping intensity. Efficient production technologies are very important to utilise scarce natural resources and minimize the cost of production. Several researches on the production aspects are being carried out by research organizations, agricultural universities and other agencies. But research studies are not systematic. Many duplicities found in researches. To overcome this problem prioritizing in the research issues (Roy et al. 2015) in vegetable production sector is very important as Roy et al. (2016) identified priority areas in agribusiness and marketing in vegetable sector and conservation of vegetable germplasm (Roy et al. 2016).

This study was conducted through online survey. The survey questionnaire had been sent purposively to 50 scientists of ICAR institutes, 50 teachers of different State Agricultural Universities (SAUs) and 50 subject matter specialists of Krishi Vigyan Kendras (KVKs) who deal with vegetable crops, for their response. Among them 75 respondents replied from 22 different states representing different agro-climatic regions of India (Table 1). The questionnaire contained multiple choice type questions related to problems in production aspects of vegetable sector and the respondents were asked to score each problem in a five-point continuum ranging most important (5), important (4), undecided (3), less important (2) and not so important (1) as they perceived. The total score for each problem was obtained by summing the scores given by 75 respondents and rank of the problems was calculated. Linear Regression

analysis was done among the problems considering ranked 1 problem as dependent variable while others as independent to know in what proportion (R^2 value) (Table 3) the independent variables represent the dependent variable. The $\hat{\alpha}$ -value represents 1 unit change in the corresponding independent variables will change the dependent variable equal to the corresponding $\hat{\alpha}$ -value.

The results have been depicted in Table no 2. The most important problem identified is extensive and indiscriminate use of pesticides in vegetable cultivation which may lead to severe health hazards in long run (score 340; rank 1). The deleterious effects of chemical pesticides on human health and eco system have forced agriculturist even the proponents of modern agricultural technology to look for integration of cultural practices, plant product-based formulation and bio agents for lessening the quantum of deadly pesticides. Of late, there is an increased acceptance of integrated pest management strategy and practices (Wason et al, 2009), (Roy et al., 2017). The second important problem is regarding protected cultivation. Though protected vegetable cultivation is very beneficial but due to high cost involvement, farmers could not adopt it in desired scale (score 336, rank 2). According to Kaur et al, 2018, 34.48% vegetable growers in Punjab were willing to increase the area under protected vegetable cultivation while maximum number of vegetable growers (45.98%) wanted to keep the area constant under protected vegetable cultivation due to non-availability of land to increase the area and unable to handle protected structures on more area. The third problem is disease pest infestation and water stress at the initial stage of crop growth (score 322; rank 3) which require proper nursery management and weed infestation (score 316; rank 4) which has become severe problem in vegetable cultivation. Jaganathan et al. (2009) reported that the farmers of Thiruvananthapuram district of Tamil Nadu had favourable attitude (64%) and most favourable attitude