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RESEARCH PAPER

Transfer of technologies for cultivation, constraints and its adoption of cumin in Barmer district

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Abstract : Cumin (*Cuminum cyminum*) is an important low volume high value seed spices crop grown in India. India is the largest producer and consumer of cumin seed in the world. In India, Gujarat is the leading state in cumin production while Rajasthan in acreage. Cumin is the major *Rabi* crop of Barmer district. It is grown in 104828 ha area with an annual production of 28410 tones (*Rabi* 2010-11). Average productivity of cumin is 348 kg/ha while in Gujarat it is 749 kg/ha. The yield of cumin crop is adversely affected by incidence of wilt and blight diseases and attack of aphid. To increase the productivity of cumin, high yielding cumin variety RZ 19 was evaluated at farmer's field during *Rabi* 2010-11. Thirty demonstrations were conducted at farmer's field. Grain yield of cumin variety RZ 19 under improved practices was 5.15q/ha, increased significantly by 20 per cent over farmers practice (control). In terms of monitory return the net gain per hectare was Rs. 60150/- and was Rs. 11000/- higher by investing additionally Rs. 1900/-. Improved package of practices fetched a higher B:C ratio of 3.5 while farmers practice gave 3.2. The yield range in improved practice was 3.10-7.30 q/ha while under farmers practice it ranged from 2.54 - 4.50 q/ha. In improved package of practices, inputs supplied to farmers were improved seed, seed treatment by chemicals and bio fertilizers. During crop period and after harvest the reaction of farmers about critical input supplied under demonstration was asked and they replied variety showed vigorous plant growth, gave good seed yield than other local seed available in the region, seed treatment with carbendazim, *Trichoderma* resulted in less incidence of wilt. While the farmers suggested wilt resistant varieties should be developed and major constraints were the unavailability of newly released seeds and plant protection chemicals in time.

Key Words : Transfer of technology, Cumine, Constraints and adoption of cumin cultivation

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INTRODUCTION

Cumin (*Cuminum cyminum*) is an important low volume high value seed spices crop grown in India. India is the largest producer and consumer of cumin seed in the world. In India, Gujarat is the leading state in cumin production while Rajasthan in acreage (Table 1). Cumin is the major *Rabi* crop of Barmer district. It is grown in 104828 ha area with an annual production of 28410 tones. Average productivity of cumin is 348 kg/ha while in Gujarat it is 749 kg/ha. Out of the total production, about 90 per cent of the total is produced by five contiguous districts of this region *i.e.* Barmer, Jalore, Nagaur, Pali and Jodhpur. The yield of cumin crop is adversely affected by incidence of wilt and blight diseases and attack of aphid. Cumin seeds have an aromatic fragrance due to an alcohol, cuminol. The seeds are largely used as condiments in the form of an essential ingredient in all mixed spices and in curry powder for flavouring, vegetables, pickles, soups etc. Besides, it has medicinal properties and is used as a carminative, stomachic, astringent and is useful against diarrhea. Cumin is largely exported in form of seed. Some quantities are also exported in form of cumin seed oil, cumin powder and cumin oleoresin.

MATERIALS AND METHODS

A study of 30 frontline demonstrations on cumin as a

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