

Economic Analysis of Front Line Demonstrations on Cumin: A Case in Arid Zone of Rajasthan

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Abstract: Cumin is a predominantly *rabi* crop in arid zones of Rajasthan. The crop accounts for 32.21 and 18.09% of area and production, respectively, in Rajasthan. The average yield of the crop is 776 kg ha⁻¹ in Pali district, which is substantially lower than the national average (1245 kg ha⁻¹). Considerable scope for enhancement in productivity exists, especially in Pali district, which is an important agro export zone for cumin in the country. The paper draws upon the data from 65 Front Line Demonstrations (FLDs) organized by KVK, CAZRI, Pali, between 2005-06 and 2009-10 at five locations under actual farm situations. The economics and cost benefit ratio of both control and demonstration plot was worked out. An average net profit of Rs. 92,700 ha⁻¹ was recorded under recommended practices whereas the net profit was Rs. 61,606 ha⁻¹ under farmer's practice. The range of cost benefit ratio was 2.02-3.94 under demonstration, while it was 1.49-2.86 under control plots. The results showed that adoption of improved technology can enhance productivity of cumin in arid region while increasing the profitability of cultivation for the farmers.

Key words: Technology, impact, FLD, cost benefit ratio, cumin.

Seed spices are becoming more popular due to their profitability, short duration and greater potential to grow in low rainfall areas. They are cultivated mainly in the arid and semi-arid regions of North India. The major seed spice crops are cultivated extensively in the states of Rajasthan, Gujarat and to a smaller extent in Madhya Pradesh, Punjab, Haryana, and Maharashtra. Rajasthan and Gujarat contribute more than 82% of the total seed spices production in the country. These states can, therefore, be called as "seed spices bowl" of the country. There are great prospects for seed spices development in this region of the country.

Cumin is an important ingredient of human diet throughout the world. It is used in large number of processed foods as well as in daily food recipes due to its pleasant flavor and aroma and also used in bakery products such as bread and cake. Besides, it has medicinal value and is used as a stimulant, carminative, stomachic, astringent and useful against diarrhea and dyspepsia. Cumin seeds are also used in number of veterinary medicines.

India is the largest producer of cumin seed and it is cultivated on 6.32 lakh hectares land

with a production of 4.46 thousand tons in year 2009-10. The cumin seed was exported to the tune of 14860 tons valued worth Rs. 1219 million during the year 2009-10 (Anonymous, 2009-10). The main markets for cumin are Japan, USA, UK, Canada, Singapore, Saudi Arabia and UAE.

The state of Rajasthan has a unique place in seed spices map of the country with a production of .41 Mt from .48 Mha area. Among the arid zone districts in Rajasthan, Jalor district had the maximum area (69.9 thousand ha) and production (49.6 thousand tons) of seed spices. The area under seed spices/cumin was 30.7, 22.1 and 20.9 thousand ha with a corresponding production of 19.0, 130.0 and 14.5 thousand tons in Pali, Jodhpur and Barmer, respectively.

The main objective of FLDs is to demonstrate newly released crop production and protection technologies and their management practices in the farmers' fields under different agro-climatic regions and farming situations. While demonstrating the technologies in the farmers field, researchers collect information on the factors contributing to higher crop production, field constraints of production and thereby generate feedback information on the demonstrated technologies. FLDs are

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