Contract Vegetable Seed Production Program: A Case Study in Nikawaratiya Seed Region

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INTRODUCTION

Vegetable sector is one of the major agricultural sub-sectors in Sri Lanka and a wide variety of vegetables ranging from temperate to tropical are grown in the country. Approximately 60,000 ha lands are under cultivation by 53 vegetable varieties of 18 crops recommended by the Department of Agriculture (DOA). Basic seed production of vegetables is handled by the 19 Government Seed Production Farms (GSPF) of the Seed and Planting Material Development Center of the DOA and standard seed production is in the hands of both public and private sector seed producers through a contract grower system.

Seed and Planting Material Development Centre (SPMDC) of the Department of Agriculture coordinates a contract vegetable seed production program through the 16 Deputy Director of Agriculture (Seed) regions in the country in collaboration of Seed Certification Service (SCS). SPMDC provides basic seeds to the contract farmers in a reasonable price. SPMDC and SCS guide the contract farmer to produce quality seeds. Quality assured seeds were purchased by SPMDC in an agreed price.

Contract farming is defined as a system of production and supply of agricultural and horticultural produce by farmers under forward contract agreements. The essence of such arrangements is being a commitment to provide agricultural and horticultural produce, at a specified price and in a specified quantity to a known buyer (Sarkar *et al.,* 2011).

The general objective of this study was to assess the contract vegetable seed production program and the specific objectives were to assess the present level of performance and potential challenges in contract vegetable seed production, to identify difficulties faced by contract growers and to institutional framework required for success of contract vegetable seed production.

***** Short Communication***

METHOD OF DATA COLLECTION

A primary survey was conducted among contract vegetable seed farmers in Nikawaratiya Deputy Director of Agriculture (DDA) Seed Region. Firstly, the list of the vegetable seed growers was obtained, who have produced seeds during the last five years in both *Yala* and *Maha* seasons, in the Nikawaratiya DDA region prepared. The list contained 45 farmers and all of them were interviewed using a structured questionnaire. Key informant discussions were also conducted, Central Bank reports, DOA Administrative reports, SCS field records, and DOA seed lab reports were reviewed and personal observations were made to triangulate the results. Statistical Package for Social Sciences (SPSS) was used to obtain descriptive statistics, percentages,mean and frequencies.

RESULTS AND DISCUSSION

Socio-Economic Characteristics/General Information

The age range of farmers surveyed varied from 28 to 64 years. The highest percentage (48.9%) of farmers was in the range of 45-54 years category. The distribution shows that the youngest age range of 25-34 is the lowest (8.9%). According to gender contribution for seed production, male involvement is much higher (93.3%) than female's contribution (6.7%). Majority of the farmers (82.2%) are in the secondary education level and the least percent of 4.4% is in the primary level education. 13.3% respondents are having diploma and degree level educational background.

Majority of farmers (73.3%) are involved fulltime in seed production. The type of participation seed producers can be categorized as; continuous 33.3%, intermittent 31.1% and dropout 35.6% during the last five years (2013-2017).

Family incomes of the respondents are in the range of Rs 9,000 to Rs 75,000 per month. Result shows that the majority of farmers' (46.7%) average family income ranges between Rs 10,000-20,000.

With respect to farming experience, around 42.2% of the population has more than 30 years of farming experience, while 15.6% of the population has less than 10 years of farming experience. Nearly half of the population has less than 10 seasons of seed production experience. Nearly half of respondents have identified that the time limitation due to paddy cultivation activities is the most influencing factor for not cultivating the arable lands in *Maha* season. Approximately 60% of respondents have identified that the water scarcity is the most influencing factor for not cultivating the arable lands in *Yala* season.

Situational factors

The results show nearly half of the respondents use agro well as the source of irrigation whilst less than 10% has used the improved technology micro irrigation as the method of irrigation for seed production.

The distance to the Deputy Director of Agriculture (Seed) regional office ranged between1 to 55 kms. It was found that around half of the respondentswere more than 25 km away from the DOA regional seed office.

Production Factors

During the last five seasons, a few training classes were conducted by the DOA, although 93% identified further technical advice needed from DOA on quality seed production.It was found that around half of the population has identified DDA (Seed) office as their first source of information, while around half of the respondents have identified SCS officers as their second source of information. Nearly half of the contract seed producers, who are involved in seed production for the government, also produce seeds for private companies.

When considering the overall sample, seeds of approximately 40% of respondents were rejected at least once during the last five years, due to not satisfying the standards of DOA. The farmers have responded that the major reasons for the rejection of the produced seeds were unfilled seeds, discoloration and poor germination. Among those, the unfilled seeds were the prominent reason as informed by DOA.The average target achievements of the farmersranged from 0 to 84%. Nearly one fourth (26.7%) of the population has not produced any amount of seeds to DOA, even though registered as contract seed producer. Around 33.3% has achieved the target yield beyond 50%. Most of respondents (97.8%) indicated that, the DOA took more than one month time period to pay for the produced seeds.

Problems and suggestions

Nearly 62.2% of the respondents agreed that they had problems with the basic seeds they received for multiplication and around 35.6% of the farmers responded that they did not receive the basic seeds on time. Majority of farmers found (40%) high cost of production as the major problem faced in vegetable seed production. Among the given suggestions to improve seed production program, 37.8% of the respondents suggested incentives/subsidies.

CONCLUSIONS

The study identified the constraints and difficulties faced by the growers of the seed production. It was found that the main constraints are high cost of production, high production risk and pest and disease attacks. This study also found the organizational contribution influencing the success of the vegetable seed production. Lack of technical training, delay in basic seed supply and longer payback period are the problematic conditions related to the institutional constraints. It can be concluded that the overall effectiveness of the seed production program is low, due to higher giving up membership percentage (35.6%) and low mean target achievement percentage (36.27%).

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REFERANCES

Sarkar, M.A.R., M.A.H. Rashid and M.R. Sarker. 2011. Contract Farming in Tomato Seed Production in Rangpur District of Bangladesh: A Financial Analysis. Progress Agriculture. 22(1 & 2): 169 – 179.