

Hybrid Seeds and Vegetable Cultivation in Sri Lanka: Local vs Imported

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EXECUTIVE SUMMARY

High yield of the imported varieties is considered the most important factor when seeds are selected by imported variety growers as opposed to local varieties. Several factors come into play in seed variety selection. Most probably vegetable growers seem to consider the gross income received from their cultivation but net income is the actual income of the crop cultivation. However, the difficulty of calculating the cost of cultivation stems from the non-cash cost and the poor record keeping of the farmers, therefore, farmers are generally unaware of the actual cost of cultivation.

In this background, this study attempted to examine the determinants of farmers' preference for the selection of seed varieties (local or imported) and comparing costs and benefits of local and imported seed varieties, in addition to suggesting strategies to strengthen the vegetable seed supply sector in Sri Lanka.

The study locations were Anuradhapura, Kurunegala, Badulla, Nuwara Eliya, Moneragala and Hambantota districts with a total sample of 319 farmers interviewed by using convenience sampling technique. Primary data was collected in the 2015 *Yala* season and secondary information was gathered through key informant interviews and the literature review.

According to the findings, yield, land size, source of access to seed, seed cost, seed quality, distance and resistance to pest and disease are significantly influenced by the decision of variety selection according to the estimated Logit Model. There is a 70 percent probability to choose imported varieties and 30 percent of selecting local varieties.

There is a 50 percent probability to select varieties considering the yield factor. Farmers cultivating small lands plots are less likely to select imported varieties when compared to large scale farmers. When purchasing seeds at private sales centres, there is a greater chance to select imported varieties (99 percent probability). Seed cost and probability of seed selection show a positive relationship. High quality seeds of imported varieties were most preferred (70%) by imported variety growers. With regard to resistance to pest and disease quality there was less probability (13%) to choose imported varieties over local varieties.

Seed price varied with different varieties and area in which the crop was cultivated as well as the season. Majority of the farmers purchased seeds from the private seed sales centres. One fifth of the total commercial level farmers cultivated their own seeds.

Tomato variety growers had a 3800 kg/acre yield compared to local variety cultivators. Pumpkin local variety growing farmers have obtained a yield of 2000 kg/acre than imported variety growers. On the other hand, there is no significant difference in the bitter-gourd yield irrespective of the type of seed cultivated.

Usually, farmers have applied agro-chemicals based on their experience (51%) with a certain percentage of farmers being guided by the agro-chemical seller (14%). Around 24 percent farmers have followed the advice of the Extension Officers. The seed cost is always higher of the imported varieties compared to local varieties. Farmers applied more pesticides for controlling insects and fungus. Majority of imported variety growers have applied more synthetic fertilizer compared to local variety growers except for pumpkin.

A few recommendations have been proposed based on the findings in this study. To strengthen vegetable seeds breeding programme, private sector intervention or investment would be obtained as a collaborative task via public-private partnership. Encouraging small scale farmers producing their own seeds may lead to protect local varieties and also be a better solution for the increasing seed price. Government should intervene/facilitate to establish the small scale seed enterprises in ASC level. Price controlling of the imported vegetable seeds should be observed by imposing a maximum price for the seeds on sale.