

Trial of scented geraniums, *Vetiveria zizanoides*, *Eucalyptus citriodora*, *Beta vulgaris* (white), *Canna edulis*, *Mentha-piperata*, *Boehmeria nivea*, *Hibiscus sabdariffa* and Balsa, in different Agricultural Research Stations and the possibilities of increasing their production are given.

The Schemes now on hand to maximise the production of green-leaf for composting, cover crops for soil erosion and Clovers for pasture are indicated.

Production and Development of Improved Strains of Vegetable Seeds *

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Introduction : The role of vegetables in human nutrition needs no emphasis. As per latest standards of nutrition, each adult requires 6 oz. of non-leafy vegetables and 4 oz. of leafy vegetables per day. Therefore an annual per capita production of 228 lbs. is required to maintain normal health of the people and prevent malnutrition. But the present 'per capita' production in our State is miserably low, as low as 37 lbs. Thus we are confronted with a huge deficit which has to be made good by a more intensive and planned scheme of cultivation.

Importance of Good Seed: Among the various methods of increasing the production of vegetables, improved seeds play a vital part. Production of vegetable seeds has not been an organised industry

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in our State. Most of the vegetable growers are content with the seeds produced in their farm itself except in the case of some exotic vegetables where seeds do not set properly. It requires expert knowledge to select properly the best plants for seed production, to harvest at the right stage of maturity and cure the seed in such a way as to insure good germination.

Except perhaps a few of the well established seed firms, with a claim for long record of useful service, all others are only keen on making quick profits. Naick (1944) found out that the percentage of impurity in the vegetable seeds supplied by these firms ranged from 40 to 83 while the percentage of germination varied from 32—65 in brinjal, 59—81 in bhendi, 40—65 in beet, 40—80 in beans, 60—68 in cabbage and 20—95 in turnip. Such a pitiable state of affairs not only speak very bad of our vegetables seed trade but also involves huge national loss in the cumulative effect of such an unregulated seed industry. A system of guaranteeing purity, viability and disinfection is therefore urgently needed to safeguard the vegetable produces from the recurring loss due to the supply of useless, impure and unviable seeds.

Seed production in advanced countries like U. S. A. is a specialised industry centralised in localities which are peculiarly adapted because of soil, climate and often freedom from disease. The commercial production of seed is accomplished under very careful and expert supervision. Seed houses have trial grounds where the seed of each individual lot is tested for purity. But supply of quality seeds will go a great way to increase vegetable production.

Improvement of Vegetable Seeds: Our vegetable industry is still in the infant stage. We have a vast number of undefined heterogenous varieties of vegetables with poor performance. Thus many problems remain to be tackled before any improvement in the production of seeds could be effected. As in the case of other crops, varietal trial and introduction of both indigenous and exotic varieties with a view to study their comparative merits must be taken up. Detailed descriptions of species and varieties have to be made to facilitate identification. In view of the large number of varieties in cultivation, there is much scope for selection of promising varieties. Maintenance of purity at the original level of heredities by preventing cross or interfertilisation must of enforced through seed inspection services and field inspection of mother plants and control culture of daughter plants. It is widely believed that the South Indian climate is not congenial for seed setting in the case of a few exotic vegetables like cabbage, cauliflower etc. Work done at Coonoor Pomological Station has disclosed that there is no foundation to this belief. One of the well known imported cabbage varieties viz. 'Early Drumhead' was successfully induced to set seed

and a popular variety of cauliflower 'Pomocol' has also been found to yield good crop of seeds. Acclimatisation of desirable imported strains must be done before distribution. Hybrid vigor has been profitably employed not only to increase yield but also promote other desirable qualities like earliness, size and taste etc. The classical work Kakizaki and others lends support to this line work, though it has got its limitations. It may be quite easy in the case of vegetables like tomato, brinjal and some cucurbits. But care must be taken to see whether the performance of the F_1 hybrid is remunerative under varying climatic and soil conditions. It is also essential to prevent the collection of seeds from F_1 plants so that the hybrid vigour secured in the first generation. All these could be taken up only by State agencies with an elaborate research staff. In fact there must be a wholetime Specialist to look after all these items of research for the improvement of vegetable crops.

Summary and Conclusion: Home production of vegetable seeds has its limitation. The private seed trade must be regulated and controlled. Indiscriminate supply of seeds should be stopped and only selected and approved seeds must be issued. Guarantee certificates regarding purity and viability must accompany all consignments of seeds supplied to the Public. A scheme of elaborate research consisting of classification and nomenclature of vegetables, introduction and selection of desirable varieties and production and distribution of Hybrid seeds, must be launched. Such a scientific investigation holds out brighter hopes for our vegetable seed trade and consequent improvement in the quality and quantity of vegetables produced, accompanied by a welcome changes in the standard of our public health.

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