

Editorial

Can the speed breeding technique take care of the food crises in the underdeveloped countries?

The major crises before the world are tremendous change in population across the continents, climate change and lost of diversity among the crop plants. The awareness among the people regarding the food quality and food preference is due to the changes in their lifestyle. Due to these changes a huge demand for nutritionally rich quality food but there is no assured supply. Hence, there is tremendous pressure on the plant breeders to produce not only high yielding varieties but also to develop nutritionally rich varieties and hybrids among all the crop plants. Today's breeders are targeting modern plant breeding techniques which will help them to develop varieties and hybrids as per their wish within the short period. Now a day the art of plant breeding is more of science and less of art. 'Speed breeding' technique is being targeted by most of the breeders from the developed countries in their research programme. They are behind the speed breeding techniques to shorten the breeding cycle and to fasten the generation advancement in less time. Practically researchers will use laboratory conditions or 'phytotron facilities' (Controlled condition facilities) to fasten the crop cycle. Artificial conditions for the crop growth which may include prolong exposure to light, controlled irrigations to induce flowering and early maturity, early harvest are some of the techniques which needs controlled environment. In case of the cereals, pulses, and mostly in the vegetable breeding in the private sector breeders are behind speed breeding techniques. Till date only few reports are available from the researchers working in the developed countries who are adopting these techniques in their research activity but hardly report is available from underdeveloped or developing countries. It may be due to the fact that initial investment required to build up the facility, infrastructure and their maintenance years together is difficult for the small countries where financial resources for the research are limited. Few of the questions before using speed breeding in controlled environment needs to be answered like on which crop researcher is interested to work, can speed breeding technique be used for tree and perennial crops? how much plant population he is interested in advancing, how much the financial resources are available with the researcher and lastly is there any specific protocols/procedures are required to follow while advancing crop generations? Hence, in the incoming years most of the breeders from the developing and underdeveloped countries will be interested to know about "The Speed Breeding Technique" and its effective utilization in the economically important crops. I anticipate that there will be larger participation in adopting these techniques from the small underdeveloped countries where larger food production from the limited resources is priority.