Improving lives through agricultural research

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The Caribbean Agricultural Research and Development Institute (CARDI), continues to play a major research and development role in St. Lucia. The CARDI Unit in St. Lucia is located in the Mabouya Valley at La Resource in Dennery and has developed appropriate technological packages, trained Extension Officers of the Ministry of Agriculture and farmers, provided agricultural information and much needed planting material to farmers for increasing sustainable food crop production. Such initiatives have complemented the Ministry of Agriculture crop diversification programme.

The CARDI UNIT BRIEF is an attempt to sensitise CARDI’s stakeholders on a monthly basis of some of the Units activities and their impact on the agricultural sector. This month’s Brief focuses on spinach production and training in post-harvest handling.

Spinach (Basella alba) is a viney perennial plant with dark green fleshy leaves (Plate 1) which can be eaten raw or cooked. Nutritionally, it is a rich source of calcium and vitamins (A, B and C). The spinach plant is a climber and is traditionally grown in backyards on trellises or fences to support their climbing habit (Plate 2). The edible leaves are periodically harvested by hand off the vines allowing plant to continue to grow to produce more leaves. However as the plant continues to grow and age, leaf size is reduced and the plant goes into its reproductive stage, flowering and producing purple seeded fruits which are used as a source of planting material (Plate 3).

CARDI has developed and demonstrated an improved and more manageable production system which involves cultivating the spinach crop as an annual without the use of support (Plate 4). Seedlings are raised in seed trays containing peat moss and transplanted in rows spaced 1.0 metre apart and 0.5 metres along the row. The first harvest of the crop is carried out at 6-8 weeks by cutting off the young...
shoots with attached leaves from the mother plant. Subsequent harvesting is carried out at weekly intervals over a period of 8-10 weeks. Frequent harvesting in this manner induces the plant to generate multi-shoot growth which increases shoot and leaf production for subsequent harvests (Plates 5, 6 and 7). Fertiliser high in nitrogen or well rotted pen manure is regularly applied to the crop to sustain shoot and leaf growth over the production period. Over eight farmers have adopted the new production method expressing their satisfaction with the yields obtained.

The CARDI Unit has conducted a number of training exercises in appropriate post-harvest handling practices for fruits, roots and vegetables. The training focussed on various aspects of post-harvest operations such as harvesting, field handling, pack-house operations, transportation, storage and food safety issues.

Various groups (Plates 7 -14) benefited from the training exercises which included 65 farmers, 20 extension officers
of the Ministry of Agriculture, 12 processors of the Fond Assor Processing Unit, staff of two marketing outlet, and 35 students from Sir Arthur Lewis Community College. Training was also provided at the CARDI DTC to 20 extension officers of the Ministry of Agriculture under the Farmer Field School (FFS) programme funded by Food and Agricultural Organisation (FAO) in collaboration with MALFF.
**CARDI** is the leading Agricultural Research and Development organization in the Caribbean. It was established in 1975 to serve the agricultural and development needs of the member states of CARICOM. CARDI is governed by the Ministers of Agriculture of CARICOM Member States. This body approves the budget and provides the Board of Directors with general guidelines concerning policy and programmes. The Board of Directors is composed of representatives of Member States, Universities of the West Indies and Guyana, the Caribbean Development Bank, the Food and Agriculture Organization of the United Nations, Inter-American Institute for Cooperation on Agriculture and CARICOM Secretariat.

**CARDI Mission**

To contribute to the sustainable development of Caribbean people by the generation, transfer and application of appropriate technologies through agricultural research for development.

**Website:** [www.cardi.org](http://www.cardi.org)