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CARIBBEAN FOOD CROPS SOCIETY

PROCEEDINGS



**ELEVENTH ANNUAL
MEETING**

ONION GROWING IN JAMAICA

by

J. H. Donaldson

ONIONS (*Allium sepa*)

Records available go back to only 1927. It reveals that a Rev. Ward of a St. Mary address (a parish in Jamacia) made application to the then Director of Agriculture for funds to be provided to the Jamaica Agricultural Society to purchase onion seeds in order that he may undertake experimental work on onion production. So as not to leave you in suspense wondering whether these funds were provided, let me say now that the request was refused.

To my knowledge, the next effort was made by yours truly about 1954. The idea arose due mainly because of a frequently asked question, namely, why did not the small onions purchased in the local shops produce bulbs when planted? Another question was, why don't we grow our own onions? I was not sure I knew the answers and so I got myself some onion seeds.

There may be some who will sympathise with what I say next. The first efforts were very indifferent. The spacing was bad, the soil type was stony and the water was always insufficient, and a novice was in charge. Meanwhile, it was recalled that Eskallion was a thriving business on the soil types in St. Elizabeth, i.e., South-West Jamaica, and maybe on these soils would be a good place to do some trials.

Beginning about 1963, seeds of three varieties, namely, Texas Early Grano 302, Granex Hybrid Yellow, Red Creole, were obtained and in co-operation with a farmer, who was persuaded by the man's own wife, a small project was started by providing the seeds, fertilizer, chemicals for pest and disease control, a sprayer, and remuneration for his labour. Except for token amounts as samples to provide positive proof, the farmer was allowed to retain and dispose of the crop to his own benefit.

Each month a small area was planted out and for well over a year this practice continued.

At the end of this period, it was decided that onions would prosper in St. Elizabeth and the project was handed over to the Agricultural Development Corporation. This ended only the St. Elizabeth phase of the onion-growing activity. Attention was transferred more seriously to the Muck and Peat areas of South-West Jamaica, i.e., the Springfield, Westmoreland.

The first season showed some success but subsequently rains caused the water-table to rise so high that the crop failed due to flooding. This happened twice.

Further activity was confined for a time to the Research Station itself and gradually to a number of growers in selected areas. These persons were given the seed, chemicals and everything necessary. Some did not participate for long.

A scheme developed whereby the Agronomy Division, more particularly the speaker, was required to produce all seedlings and these seedlings in turn were distributed to farmers. This was done for some 3 years, after which the following change was made. Instead of producing all seedlings at the one nursery, namely, Lawrencefield, other nurseries were introduced at Yallahs Valley, Falmouth and Santa Cruz Land Authorities.

Orders for seedlings were always at short notice. It took at least 100,000 seedlings to have 1 acre transplanted. This could not be counted, so representative samples of 1,000 seedlings were harvested and weighed in order to enable a reasonable estimate to be obtained.

Even with 15 to 20 persons harvesting seedlings, it took the best part of a day to bring in 100,000 seedlings and weigh. Pulling the seedlings 24 – 36 hours before delivery resulted in a drying out even though the seedlings were placed on wire-bottom trays in amounts of 6,000.

A Land Rover could take only 12,000 at a time, and when a bigger vehicle was used the economics required that as much as 400,000 were taken. At such time the trays were not sent along, as experience showed the previous ones were not returned. The larger vehicle always turned out to be a stone truck or dump truck with a deep body.

The seedlings were set in layers with sheets of old news-paper between each layer, and where possible a fixed number of seedlings were separated from each other. These large quantities of seedlings usually had to travel one hundred miles even if the vehicle left in the afternoon hours, by the time they reached their destination, some 24 hours later, invariably half of the number of seedlings had gone bad.

The procedure to produce seedlings was as follows:

The land was cleared of the remains of cane cultivation. This was best done by burning the debris above ground and so lessen the trash that would foul the seeders. Next, the land was ploughed then harrowed. A rotavator was employed to replace the harrow subsequently.

Fertilizer 11-11-11 ratio mixed with 20 lbs. Zinc Sulphate per acre is applied at the rate of 5 cwt. per acre. The herbicide Eptam 6E at 2-2/3 qts/acre is sprayed on the soil with a boom sprayer. As it is

being sprayed on, a harrow or rotavator follows behind in order to incorporate the herbicide.

It is important that the Eptam be applied on fairly dry soil. The treated area is allowed to remain undisturbed for 5-6 days after which the land is again harrowed or rotavated in order to release any fumes that may have been entrapped. As soon as possible after this second rotavation, the seed is planted. The seeders (four in number) are set 15½ inches apart so that they fit between the wheels of the tractor. The tractor used is a Massey Ferguson 135 high clearance. The front tyres are 600 x 16 and the rear wheels are 600 x 48, both sets of wheels are set 72 inches apart.

The seeders are Planet Junior mounted on a bed-shaper which throws up soil so as to provide a raised bed some 5ft. 6inches at the upper surface. If a nursery to produce seedlings is required a set of narrow-row Planet Junior seeders are used. Each of these seeder units sets down 3 rows two inches apart using the plates with a number 6 hole. These plates use 40 lbs. of seed per acre. If only the normal field planting is to be done, the single-hole plate – this time No. 7 or No. 8 – is used. This uses 6-7 lbs. of seed per acre, depending on the speed of the tractor and size of the seed.

The seeded field is wetted as soon as possible and when it becomes sufficiently dry to accommodate a tractor the field is sprayed with the herbicide Tok E 20 at the rate of 1 gallon per acre. The surface is kept moist for as long as it takes the seedlings to break through the surface as the soil forms a crust when dry. The germination requires five days. Two weeks after planting the seedlings are again sprayed with Tok E at the same rate. It is suggested that Dacthal would be kinder to the seedlings at this stage, but we have not tried it as it has been found any departure from accustomed practice results in a difficult situation, sometimes disaster, due to poor mixture by the operator.

Two weeks after the seedlings emerge the irrigation frequency is reduced to alternate days then later twice per week.

Regular weekly applications of insecticides mixed with fungicides are made, and may be Malathion, Gardona, Dipterex or Sevin mixed with Dithane M45, Manzate D or some other fungicide

Thrips are the main problems and Tip Browning the only other affliction of the growing plants so far.

Invariably each year the same area has to be planted twice as rain damage is high at some places. The bed arrangement has helped to reduce this loss.

Late September/October and November are the months during which this onion-planting venture is undertaken.

Harvesting, if any, is possible in March following. At this time it is inadvisable to leave the bulbs out in the field due to the likelihood of rains and praedial larceny.

Prior to 1963, little attention was paid to the production of the crop locally, although a few farmers had started growing it on a small scale in the Pedro Plains area where virus infection had prevented the usual production of tomatoes.

As of 1963, however, attention was given to the crop, particularly in the Pedro Plains area. The varieties grown at this time were Red Creole and Granex hybrids, and these were grown on red bauxitic soils.

Between 1963 and 1970, several onion varieties were tested, and as a result of these tests Texas Early Grano, Granex F1 hybrid, Yellow Excel, Red Creole and Tropicana Red varieties were found satisfactory in bulbing potential and acceptability for quality and flavour. (See list of varieties tested).

1967: Early Lockyer White
Early Flat White
Early Grano Brown
Red Globe
White Globe
Hybrid Granex White
Extra Early Flat White
Crystal Grand White
Hybrid Granex Brown
Red Creole
Elite
Eclipse
Hybrid Granex White
Crystal Grand Brown
Byn Shemen?
Saemak?
White Silverskin
Extra (?) Yellow Rio Grano

1968: White Globe
Silverskin Shino
New Mexico White Grano
Granex Brown
Granex White

1968:
Cont'd. Crystal Grand White
Early Lockyer White
Lockyer Brown
Lockyer White
Silverskin?
Haemak
Silverskin B
Benshemen
Hybrid Grano White
Hybrid Yellow
Grano Brown
Early Yellow Leo Grano
Imperial White Spanish
Extra Early Flat White
Early? White
? Grano Brown
Yellow Creole
Alamo White
New Mexico Yellow Grano
Excel 986
Eclipse
Early Bermuda
Dessert.