

Krc 34 - Cocoa. Mantled Seed Gardens

Aim :- To establish a block of trees resistant to dieback ^{for use as a} ~~which would be a~~ source of ^{open-pollinated} ~~resistant~~ seed.

Method :- Material ~~of~~ ^{from} pods & cuttings from trees ^{apparently} resistant to dieback were collected from cacao-growing areas around ^{near} ~~the~~ ^{Guinea} ~~country~~ which had a history of vascular-streak dieback. The cuttings were placed in the propagator at LAES Keravat and later transferred to the field in ~~the~~ ⁱⁿ Blocks 408 & 409. ~~The~~ ^{indicated below.} pods were planted into ~~Blocks 408 and 409~~ in pod rows, 15 positions per row and 2 seed per position. The spacing used was ^{1.80m} ~~6 ft.~~ between rows and ^{1.80m} ~~6 ft.~~ between positions. This spacing was chosen as the intention was to ~~remove any~~ ^{remove any} progenies that proved to be susceptible to dieback and thin the remainder to produce a stand at approximately normal density.

~~most~~ Planting took place between July 1967 and May 1969. ~~The~~ ^{408 & 409} Blocks, originally had been used for trial Krc 11 and the trees remaining from this trial were retained as a source of infection. As a result of ~~some~~ regular ~~dieback~~ dieback pruning these Krc 11 trees re-established to the point where they were interfering with the growth of the Krc 34 plants and were therefore removed in April 1971. ~~The~~

Dieback recordings ~~was~~ ^{were made in} ~~carried out~~ the Block 408 section of Krc 34 on four occasions between Nov. 1968 and Nov.

1969 and in the 409 section on 9 occasions between Nov. 1968 and Nov. 1970. At the end of the recording period all material of the most susceptible progenies was removed from Block 408. In the case of Block 409 all ~~the~~ plants were removed as the block was required for ~~for~~ another trial. ^{In December 1970,} prior to ~~the~~ removal, all surviving progenies were evaluated on agronomic criteria (vigour, uniformity and percentage survival) and the following lines selected as being worthy of more precise dieback resistance testing than was possible in Krc 34:-

KEE8 x KA2-101

K23-108

KEE10 x K21

Kt 320

Kt 8 x Kt 181

Kt 341

K20-101

Kt 409

Over 15,000 seeds were planted into the two blocks from 90 field selections and 36 hand crosses produced by hand-pollination. ~~seedlings~~ seedlings were checked regularly after planting of the seed and seedlings transplanted as required to make the plantings continuous. ^{within each line} Saps ^{at the rear of the lines} so created were filled with cuttings from the ^{range of} same selections.

In August 1971 the vacant lines were replanted using seed from the trees left in place after the initial roguing. This process of replanting and roguing on the basis of field resistance will continue until ^a the complete stand of resistant trees has been established.

Following assessment of this material up to
November 1970 a number of the selections in
these blocks were ^{primarily} tested for resistance to
vascular-streak dieback in trials KTC 52.

~~The material originally planted into KTC 34
is tabulated on Station file KTC 34.~~