

on the stage at which bifurcation takes place in the development of leaf."

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### Polyembryony in Arecanuts (*Areca catachu* L.)

*Areca catachu*, the fruits of which are nuts, commonly known as arecanuts or betelnuts, is included in the Tribe Arecae of the family Palmae.

The nut essentially consists of a hard fibrous covering commonly called the husk, enclosing within it the endosperm which is the edible nuts. At the anterior end of the nut is located the embryo.



Fig. 1. Showing Seedlings—I & II; Roots—R. The Seedling II perished after about three months. (Natural size at 1½ months).

During the course of the studies on the problems of dormancy and germination of the

nuts the present author observed the germination of a polyembryonic nut in the summer of 1962 in a sample of nuts locally collected (fig. 1). In the course of the work the present author has planted 1200 number of nuts but so far this is the only instance of polyembryony observed. The percentage calculated is 0.08% occurrence of polyembryony in arecanuts so far examined.

Of the two seedlings shown in Fig. 1, the bigger and vigorous (Fig. 1, I) survived and became a mature seedling whereas the smaller seedling (II) perished after about three months.

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### FOOD TECHNOLOGY

#### Pectin in Guava during growth and maturity

Guava is the cheapest source of good quality pectin. Due to its high water-absorbing capacity it plays an important role during development and maturity of the fruit. Haller<sup>1</sup> determined soluble and insoluble pectin in apple while Jain *et al*<sup>2</sup> studied the preparation of high grade pectin from papaya, jack fruit and wood apple. Rongo and Quatson<sup>3</sup> obtained 3.4% of total pectic substances in the dry matter on Philippine guava. The pectin contents in the market samples of guava has been reported to be 1.5% by Verma<sup>4</sup>. The present experiment deals with the study of two commercial varieties namely safeda Allahabad and red-fleshed.

Three trees each of safeda Allahabad and red-fleshed which were in normal growth were selected for this study. For experiments, a fruit sample (100 gm.) was crushed and mixed with boiled water. The solution was then centrifuged and tested for the presence of starch with iodine solution. It was negligible. The observations were recorded over a period of two and a half months.

The variation in the total pectin content is presented in Table 1 from which it is apparent that the pectin content increases up to the 7th week of growth characterized by light colouration and firm texture. An abrupt fall in the pectin content occurs in an advanced stage characterized by light yellow colour and soft texture of the fruit. Both the varieties seem to behave alike. The results are in