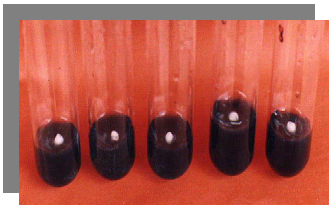




Makapuno nuts have a soft solid endosperm and jelly-like liquid endosperm



Extracted embryos are inoculated into Y3 culture medium



Growing seedlings are subcultured every 4 weeks

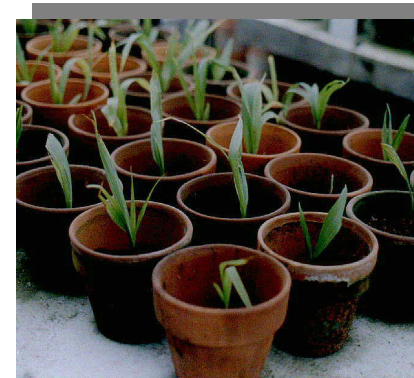


Seedlings with at least 3-4 leaves and well developed roots are ready for transfer to screenhouse conditions

The coconut embryo culture technology is now being successfully applied in the rescue of Makapuno embryos. The Makapuno embryo does not develop normally because the endosperm, which supports the germination of the embryo, is abnormal and rots when the nut matures. The embryo culture technique is the only means known to germinate the Makapuno embryo to produce a pure bearing Makapuno palm.

Successfully grown Makapuno palms produce from 75-100% Makapuno nuts if planted together and/or isolated from other coconut palms by a pollen barrier. In contrast, palms grown from normal nuts of a Makapuno-bearing palm can produce only 2-20% Makapuno nuts because they are heterozygous for the Makapuno character.

With financial assistance from PCARRD/DOST, several embryo culture satellite laboratories have been established to mass produce Makapuno seedlings for interested coconut growers. These are located in Albay, Pangasinan and Cavite (in Luzon), Leyte (in the Visayas) and Davao and Zamboanga (in Mindanao).



Seedlings are gradually subjected to natural light, humidity and temperature

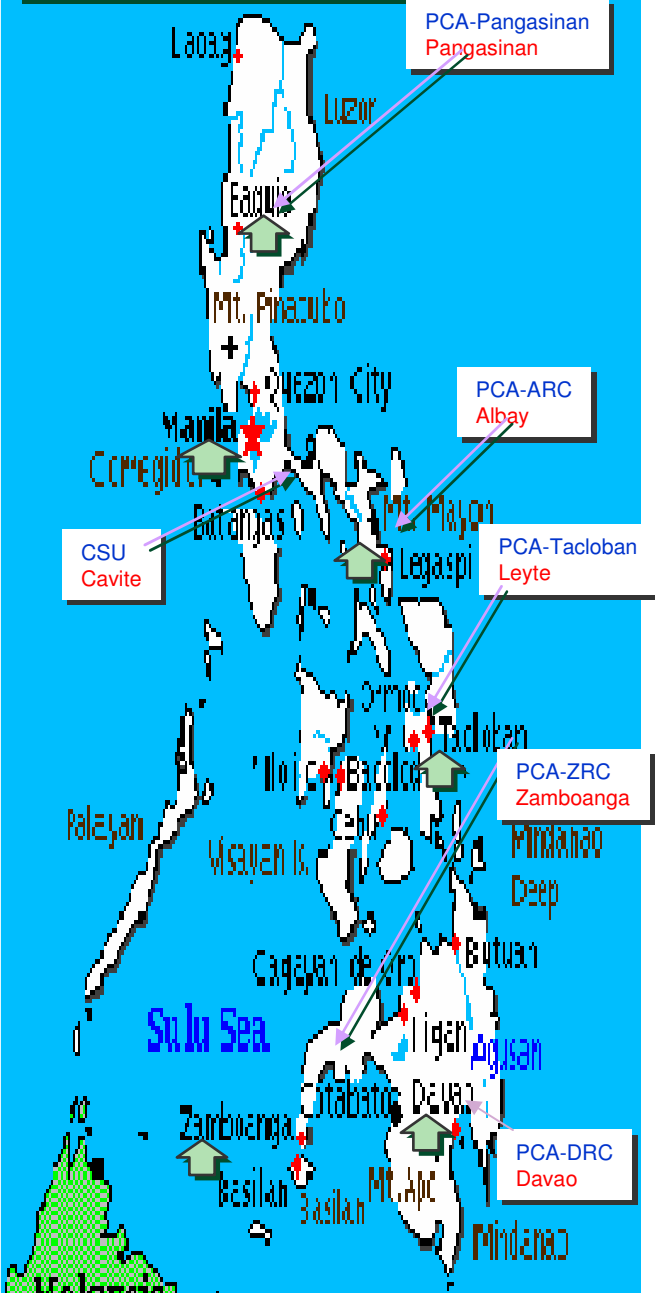


Developing seedlings are transplanted to garden soil and kept in partial shade



Seedlings are exposed to full sunlight prior to field planting

**DOST-Assisted
Makapuno Embryo
Culture Laboratories**



For more information contact:

Gerardo A. Santos

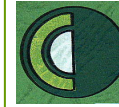
Department Manager III

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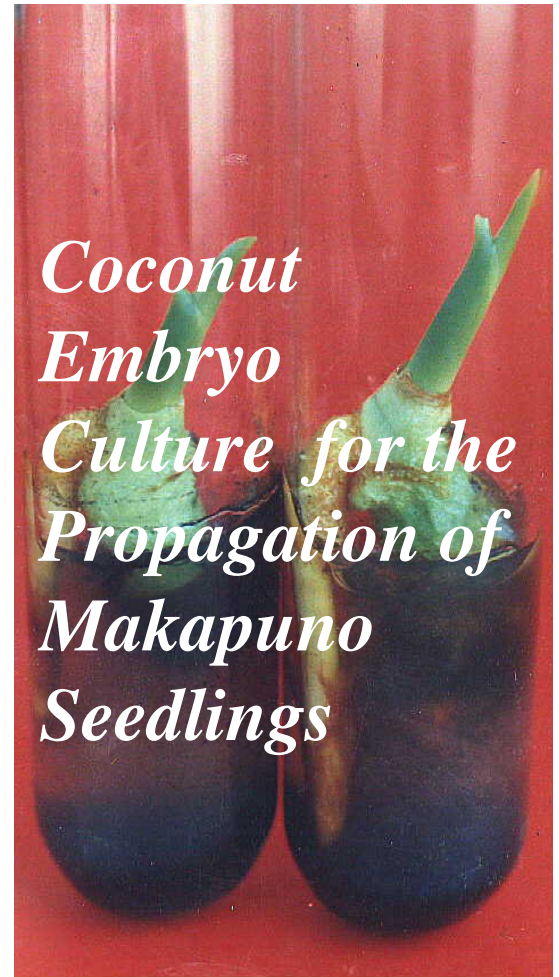
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PHILIPPINE COCONUT AUTHORITY

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