B –71

The effect of solidifying agents on seedlings of *Phaius tancrvilleae* Bank (ex L' Her.) Blume germinated under aseptic conditions

Phaius trancrvilleae is a terrestrial orchid belonging to the Orchidaceae family.
Plants collected from the wild, in numbers for local sales has depleted natural stocks.

With the objective of producing plants for Orchid growers as well as reintroduction to natural habitats flowers of P. tancarvilleae were self pollinated by hand in the wild Seed pods produced were used for establishing in vitro seedlings.

Mature seed pods were harvested 28-30 weeks after pollination, prior to dehiscence. Seeds were cultured on a basal Knudson C medium supplemented with 2% sucrose and 50g/L Banana pulp. Media were solidified with two different compounds i.e. Agar Agar and kithul (Caaryota urens) flour, Extracted from stems of mature trees.

The same medium was used until rooting was observed. Once rooted, seedlings were transferred to a potting medium of tile pieces, charcoal, sand and coir dust crushed into fine particles and mixed in a ratio of 1:1;1:2.

Seed germination took 4-5 weeks in both media. On germination, seedlings in media with agar showed faster growth and were planted out in 10 months, while those germinated in Kithul flour took 12 months to reach the same size. However, plants germinated in the former were softer and fleshier, leading to low survival rates of 20%. Plants germinated in the latter media were hardy and showed higher survival rates of 70% when transplanted to potting medium.

Kithul flour is relatively cheaper, making media preparation economical. Thus Kithul flour as a solidifying agent is more advantageous than agar agar.