

spore load of 28 spores / 10g soil and 49 % frequency of root colonization. However, it was observed that species diversity increased with the number of intercrops. *Funneliformis mosseae*, *Rhizophagus fasciculatus*, *Funneliformis geosporum*, *Glomus macrocarpum*, *Glomus aggregatum*, *Glomus multicaule*, *Glomus glomerulatum* and *Acaulospora bireticulata* were the AMF species associated with different crops in arecanut cropping systems. The relative distribution of AMF spp. varied between cropping systems as well as among intercrops. Studies indicated that *Funneliformis geosporum* was most abundant (29-50 %) followed by *Glomus macrocarpum* (9.4 - 29%) and *Glomus multicaule* (11.9 - 29.38 %) and least relative abundance (0-2.93%) was observed in *Acaulospora* sp. Mycorrhizal association showed an inverse relationship with available phosphorus content of basin soils. The study reveals the extent of AM colonization and spore distribution and diversity in main crop, arecanut and the component crops in arecanut based cropping systems.

A
15

A study on sprouting, sprout elongation rates and seedling characters in selected coconut varieties

N. Yashashwini, V. Niral, B. Augustine Jerard, K. Samsudeen and K. Devadas
Central Plantation Crops Research Institute, Kasaragod 671124

A study on germination, sprouting character and seedling characters was undertaken in selected varieties and parental lines of coconut in order to identify discriminate characters for characterisation of varieties and evaluate their utility for DUS testing in coconut. A minimum of fifty seed nuts of six varieties viz. West Coast Tall (WCT), Chowghat Orange Dwarf (COD), Kalpa Pratibha, Kalpa Mitra, Kera Chandra, Chandra Kalpa were sown in the nursery beds at a spacing of 30 cm x 30 cm. The time taken for sprouting of seed nuts after sowing in the nursery was recorded. The colours of the emerging sprouts were also recorded. The length and the girth of the seedlings of the seedlings and number of leaves were recorded on sprouting seedlings, at the 6th, 9th and 12th month after sowing. Further, for identification of new discriminating traits for DUS characterisation in coconut, observation on length of emerging sprouts and its rate of elongations at five days intervals were recorded. Significant difference on days to germination, seedling traits and sprout characteristics were observed among the varieties. Kera Chandra and Kalpa Pratibha were the earliest to germinate with robust seedling characters. COD was late germinating unlike dwarfs, but was comparable to the other tall varieties (except Kera Chandra and Kalpa Pratibha) for this trait, indicating the effectiveness of days to germination to discriminate between varieties to a certain extent. Initial sprout length and sprout elongation rates appear to be promising as discriminating traits and need to be explored further for utilisation as descriptors for DUS testing in coconut.