Intercropping in arecanut gardens of 'Maidan' areas of Karnataka

B. NAGARAJ

Central Plantation Crops Research Institute,
Regional Station, Vittal, S. Kanara Dist., Karnataka.

In Karnataka State arecanut is cultivated in two distinct tracts, one comprising of the heavy rainfall districts of South Kanara, North Kanara, Shimoga and Chickmagalur called the 'Maland' area and the other consisting of Tumkur, Chitradurga, parts of Hassan, Mandya and Mysore known as the 'Maidan' part which receives rainfall less than 750 mm annually. The cultivation practices in 'Malnad' are markedly different from the methods adopted in 'Maidan' tracts. The gardens in 'Malnad' are situated in valleys and foothills of Western Ghats which receive the torrential rains of the south-west monsoon. The areca gardens in 'Maidan' districts occupy open and level lands. The gardens are situated on lands commanded by irrigation tanks or wells.

These 'Maidan' arecanut gardens are mixed plantations with mango, jack, coconut, banana and other crops. Betelvine is also another crop commonly grown as an intercrop in these arecanut gardens, either using the areca palms as the standards or on separate standards in one or two rows in between the rows of arecanut palms. Though the primary objective of growing betelvine is to get some income especially during the initial years of establishing the areca gardens, the practice has certain additional benefits.

The cultivation practice of betelvine as intercrop varies with the age of areca garden. In young and newly established gardens, vines are planted in rows in between rows of areca palms using standards of either *Erythrina* or *Sesbania grandiflora* raised for the purpose. When the areca palms have attained sufficient height of stem i. e., when they are about six or seven years old, vines near to their base are separated from the original standards and trailed over the areca palms. The remaining vines and standards are uprooted to minimise the competition with the main crop. In established older gardens of above 15 or 20 years, the vines are planted about 30 cm away from the base of areca palms in pits of 45 cm cube. The pits are well manured and on receipt of first showers in May, three or four cuttings of about 45 cm length are planted in each pit with their growing ends trailed towards the palm. At the end of one to three years, the vines are lowered and the lower portion (about half to one metre length) is coiled and buried in the pit and the growing apical portion allowed to trail on to the palm. In either case, drainage is a very important factor considered in the cultivation of betelvine. In about 18 months after planting, picking of leaves is commenced. The vines are manured and watered frequently and regularly. The additional income from betelvine is estimated at Rs. 1000 to 1500 per hectare.

Besides the additional income from betelvine, the cultivation has other indirect benefits. The palms with betelvine trailed are less exposed to sunscorch. Secondly the clean cultivation and heavy organic manure and frequent watering given to the betelvine keeps the garden in excellent condition and the palms grow well.

In order to find out if other crops like banana, tapioca and pineapple can be grown as intercrops with arecanut, experiments were initiated at the Central Plantation Crops Research Institute, Sub-station, Hirehalli of Tumkur district in 1968 using areca garden from the prebearing stage. The observations hitherto made did not reveal any adverse effect of the intercrops on either the growth or the initial performance of areca palms. The additional income from different intercrops are given in table below.

Crop	Additional income/ha Rs.
Betelvine	1,500.00
Banana	1,000.00
Tapioca	620.00
Pineapple	500.00