



land. Landless farmers can grow yams on fallow land owned by the Government or others after being granted access.

- Cultivation of six to eight yam plants by a household allows weekly harvests between May/June and November/December. One plant produces about 0.8 kg of yam per month.

Figure 1. Yams growing on non-fruit trees



Photo: Maamun, NETZ Bangladesh

## Technological aspects

- For maximum yield, yams should be grown in shaded soil as a shorter period of daylight tends to favour tuber formation while a longer period favours vine growth (Visayas State University, 1987). Water-logged soils must be avoided.
- Yam plants with no possibility of climbing for a better exposure of their leaves to sunlight, have lower yields (Visayas State University, 1987). Therefore, the use of non-fruit trees, trellis or thatch to provide climbing support to the vines, is recommended.
- In Bangladesh, yams are sown after winter (February-March). In Sri Lanka, most gardeners plant yam setts at the start of the inter-monsoonal rains in March but for all gardeners interviewed, the planting time ranged from late November to early April (Sangakkara and Frossard, 2014).
- Pits of 1 x 1 x 1 m are dug close to the support (a non-fruit tree, trellis or thatch). Pits should be spaced 1 m apart.
- The planting material is known as setts, which are whole small yam tubers or bigger tubers cut into not more than three pieces of between 60 and 250 g each. Setts should be selected from healthy tubers of healthy plants. "As a rule, the bigger the sett used, the higher is the expected yield although the increase in yield for every unit increase in sett weight decreases" (Visayas State University, 1987). The sides of the cut pieces are treated with ash and air-dried to prevent fungal infection. Dried setts can be planted directly or pre-sprouted before planting. For pre-sprouting of setts, see Visayas State University (1987).

- Setts are planted in the pits, which are refilled with 1 kg of compost mixed with soil. In Sri Lanka, gardeners add approximately 1 kg of wood ash into the planting pit (Sangakkara and Frossard, 2014).
- The crop needs minimal care once planted but occasional weeding, mulching or application of compost is recommended. Yam can remove about 128 kg N, 17 kg P and 162 kg K from the soil per hectare of land and the nutrients should be added again to the soil (Visayas State University, 1987).
- When the creeper is long enough, a bamboo twig is used to support it.
- To facilitate the growth of creepers, the tree canopy should be pruned.
- The soil around the tuber can be piled up into mounds, two to three months after planting. Uncovered tubers should be covered with soil to prevent greening.
- One production cycle is possible per year with weekly harvests of creeper-borne yams between May/June and November/December. Creeper-borne yams can be harvested, starting 90 days after planting. Four to eight kg of creeper-borne yams can be harvested within 6 months.

Figure 2. Creeper-borne yams



Photo: Maamun, NETZ Bangladesh

11/12/2012

- In Bangladesh, root-borne yams are harvested once a year in December/January or about 200 days after planting. In Sri Lanka, underground yam is harvested nine months after planting (Sangakkara and Frossard, 2014). On average, 6.4 kg of root-borne yams can be harvested per plant per year in Bangladesh.
- Yams are hardy plants and so far have contracted only a few diseases. However, nematode infestations have been observed.
- In the Bandarban area of the Chittagong hills in Bangladesh, yam is locally known as 'Mo-o-Pome' (Miah *et al.*, 2004). For a list of the 18 species of *Dioscorea* in Bangladesh, including their local names, see Islam *et al.*, 2011, page 606; and Rahman *et al.*, 2001, cited in Islam *et al.*, 2011.



