Production of turf on plastic sheet

Turf or grass is an important element in landscaping, erosion control, development of golf courses and football fields, among others. The common type of grasses used for these purposes are the carpet grass (*Axonopus compressus*), Bermuda grass (*Cynodon dactylon*), and Zoysia grass (*Zoysia matrella*, *Z. japonica*, and *Z. valvata*).

Turf is commonly produced by the open field method. The grass seeds, grass stolons, or grass plug or sods are planted in the open field and are managed with proper agronomic practices. However, this method is found to be troublesome, especially in terms of managing the weeds and harvesting. In Malaysia, a new way of producing turf or grasses on plastic sheet was developed and proved to be successful and efficient.

**The technology**

Basically, this new method involves planting of turf on the compost medium, spread on a layer of black polyethylene plastics (Fig. 1). The materials used are: black polyethylene plastics (1 m wide) as mat; compost; wooden plank (1 x 3 in); and rooted (grass) stolons, 10-15 cm long as planting material.
The procedure

1. Prepare a planting bed with an area of 1.0 m x 15 m. Level the area and make the bed a bit concave to allow water draining.
2. Spread the polyethylene plastic on the leveled bed.
3. Place the wooden plank (1 x 3 in) as a boundary on both sides of the plastic.
4. Spread the compost evenly on the plastic to form a layer of about 1.5 cm thick.
5. Erect a temporary shed structure for the bed to avoid direct impact of heavy rain. This shed should be removed after 1.5 months.
6. Spread the grass stolon uniformly on the compost layer (sprigging technique).
7. Spread another layer of compost, about 1.5 cm in depth, to cover the stolons.
8. Compact the compost layer.
9. Water the bed after planting.

Maintenance of turf bed

1. Water the turf bed 2-3 times a week with mist spraying. Avoid saturating the compost with water.
2. Apply 350 g of NPK 15:15:15 or Urea per 15 m² or per bed every 2 weeks. Water the bed after fertilizer application.
3. Weed if necessary.
4. Trimming needs to be done 2-3 months after planting.
5. Turf is ready to be harvested or transplanted 2-4 months after sprigging, depending on the type of turf planted (Axonopus, 2-3 months; Zoysia sp., 3.5-4 months; and Bermuda, 2.5-3.5 months).
6. To ease transportation for transplanting, harvesting is done by rolling the turf mat (Fig. 2).