

## Polygon sawing : an optimum sawing pattern for oil palm stems.

### ABSTRACT

The shortage in wood supply makes the effort to find alternative for wood material become more and more important. It was reported that the outer parts of oil palm stems could be used as solid wood after being properly treated. Being a monocotyledon, oil palm stems have a contradictory characteristic to the conventional hardwoods and softwoods and thus the sawing patterns suitable for hardwoods and softwoods should not be suitable for the oil palm stems. Two modified sawing patterns (polygon sawing and cobweb sawing) plus one ordinary sawing pattern (life sawing) were compared in the sawing of oil palm stems. The purpose of this study was to find the most suitable sawing pattern for oil palm stems. The cobweb sawing provided the highest outer lumber recovery (35%) followed by polygon sawing (27%) and life sawing (23%). The polygon sawing provided the highest occurrence of wide lumbers, followed by the cobweb sawing and life sawing. The cobweb sawing need more than twice effective sawing time (15.4 min) than the life sawing and polygon sawing. In overall, the polygon sawing was the most suitable pattern for the sawing of oil palm stem.

**Keyword:** Oil palm wood, life sawing, polygon sawing, cobweb sawing, the outer lumber