Portable Dual-Pass Tray Dryer for Crops

TECHNOLOGY DESCRIPTION
This technology is a tray dryer used for drying agricultural crops.

TECHNOLOGY FEATURES
This technology contains a dual-pass heating mechanism by harvesting the dissipated heat from PV module plus absorbing heat energy from the induction heater. The dual-pass solar dryer is constructed in such a way that the air convection flows directly from these two heating source towards the crops for drying process. Apart from the heating mechanism, the portability feature enables user to dissemble and packed the equipment to be mobilise in remote area to preserve collected sample. The quantity of tray can be custom-made and easily attached. Apart from the green/sustainable resource, it is also designed as a multi purpose machine for electronic devices.

ADVANTAGES
• Dual-pass heating mechanism
• Fast drying
• Portable
• Custom-made and easily attached
• Halal & good manufacturing practice

INDUSTRY OVERVIEW
Prospect Industry: Food Processing Industry, Crop Producers, Food Exporters

World demand for agricultural equipment is expected to grow 6.8 percent per year. Growth will be driven primarily by sales gains in rapidly developing nations, particularly China, Brazil, and India, as these countries continue to mechanize their agricultural sectors. Population expansion and strong economic growth in these nations and in other developing nations will put increasing pressure on their farm sectors to become more efficient and productive, resulting in growth in machinery sales. Agricultural machinery demand in the Asia/Pacific region was more than twice that of any other region in 2011. China and India will be the primary nations fuelling future market advances in the region, although other smaller markets, including Thailand and Indonesia, will also expand rapidly. Central and South America will post strong sales gains as well, powered by growth in Brazil and other countries with large, increasingly mechanized agricultural sectors, such as Argentina.

Ir. Dr. Mohammad Effendy Ya’acob
Faculty of Engineering