

Option for solar drying systems : perspective in Malaysia

Deskripsi Lengkap: <https://lib.ui.ac.id/detail?id=20439646&lokasi=lokal>

Abstrak

Solar drying provides an alternative to the use of fossil fuel. Solar drying system is one of the most promising applications of crop drying. However, there are problems associated with the intermittent natural of solar radiation and the low intensities of solar radiation. The problems can be remedied by the use of heat storage, auxiliary energy source, control system, larger surface collector and hybrid system. However, this will result in a high capital investment. Economic indicators such as cost of maintenance, payback period, internal rate of return can be used to calculate the economic of it application. This paper presents the experience in Malaysia on crop drying. We also present the performance of four solar assisted drying systems for crop drying using different collector types, (a) V-groove solar collector with cabinet dryer, (b) double-pass solar collector with porous media in the lower channel and a flat bed drying chamber, (c) Solar dehumidification system and (d) Photovoltaic-thermal solar drying system.