

assisted drying system is one of the most attractive and promising applications of solar energy systems. Direct sun drying are subjected to many issues including availability of drying areas and exposure to birds, insect and rodents which has consequences with regards the quality of the products.

Other limitations were given by the availability of appropriate drying equipment which is technically and economically feasible and the lack of knowledge how to process agricultural products. Up to now only a few solar dryers who meet the technical, economical and socio-economical requirements are commercially available. Most solar dryers are simple, low power, short life, and comparatively low efficiency-drying system. The solar assisted drying systems presented in this paper are high efficiency, high power, long life and expensive drying systems. However, deciding factor for any solar driers should be based on economics. Economic decisions are about choices among possible alternatives of action in the future. The approach is to minimize input (cost) for a give output (benefits), or to maximize the output (benefits) from a given input (cost). The simple solar will have lower output compared to the more sophisticated solar drying systems. Hence, the payback period for such higher efficiency and productivity solar dryers should be much lower that the simple solar dryers. In addition, the solar dryers presented in this paper have very stable output temperature and higher performance. Materials for construction for these solar are also available locally.

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NOMENCLATURE

Symbol	Meaning	Unit
A	area	(m ²)
COP	coefficient of performance	
Dr	driving ratio (pressure ratio between the generator and the evaporator)	
L	length	(mm)
P	Pressure	(Pa)
T	Temperature	(K)
□	Tilt angle of solar collector	
φ	Latitude angle	
w	Entrainment ration	