

# OIL PALM FLAT PARTICLEBOARD

by: MOHAMAD HUSIN; WAN HASAMUDIN WAN HASSAN;  
ANIS MOKHTAR and YAP KIM AIK

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**M**anufacturing of flat particleboard from oil palm biomass was envisaged a long time ago and the research work started over 20 years ago. A few companies attempted to manufacture particleboard especially from empty fruit bunches (EFB) but without much commercial success. With the recent economic downturn and the decline of price of panel products in general, successful commercialization of oil palm particleboard appear remote. The popularity and instant acceptance of medium density fibreboard (MDF) in the panel product market further weaken the chances of the industrialization of oil palm particleboard. However, recently a local company in collaboration with MPOB succeeded in manipulating the situation in favour of oil palm biomass.

At the palm oil mill, EFB are available in abundance. The oil palm mill itself generates excess steam and electricity to provide the energy needed by oil palm particleboard plant. Therefore, the establishment of particleboard plant should be near an oil palm mill to exploit the resources available.

## PROCESS

The process flow for the manufacture of flat particleboard is as shown in *Figure 1*. The specialty of the flat particleboard produced from EFB using this process is that it has high screw withdrawal strength that is essential for the manufacture of quality furniture.

## ECONOMICS

For a 24 000 m<sup>3</sup> per annum production of flat particleboard, generally the following investment is

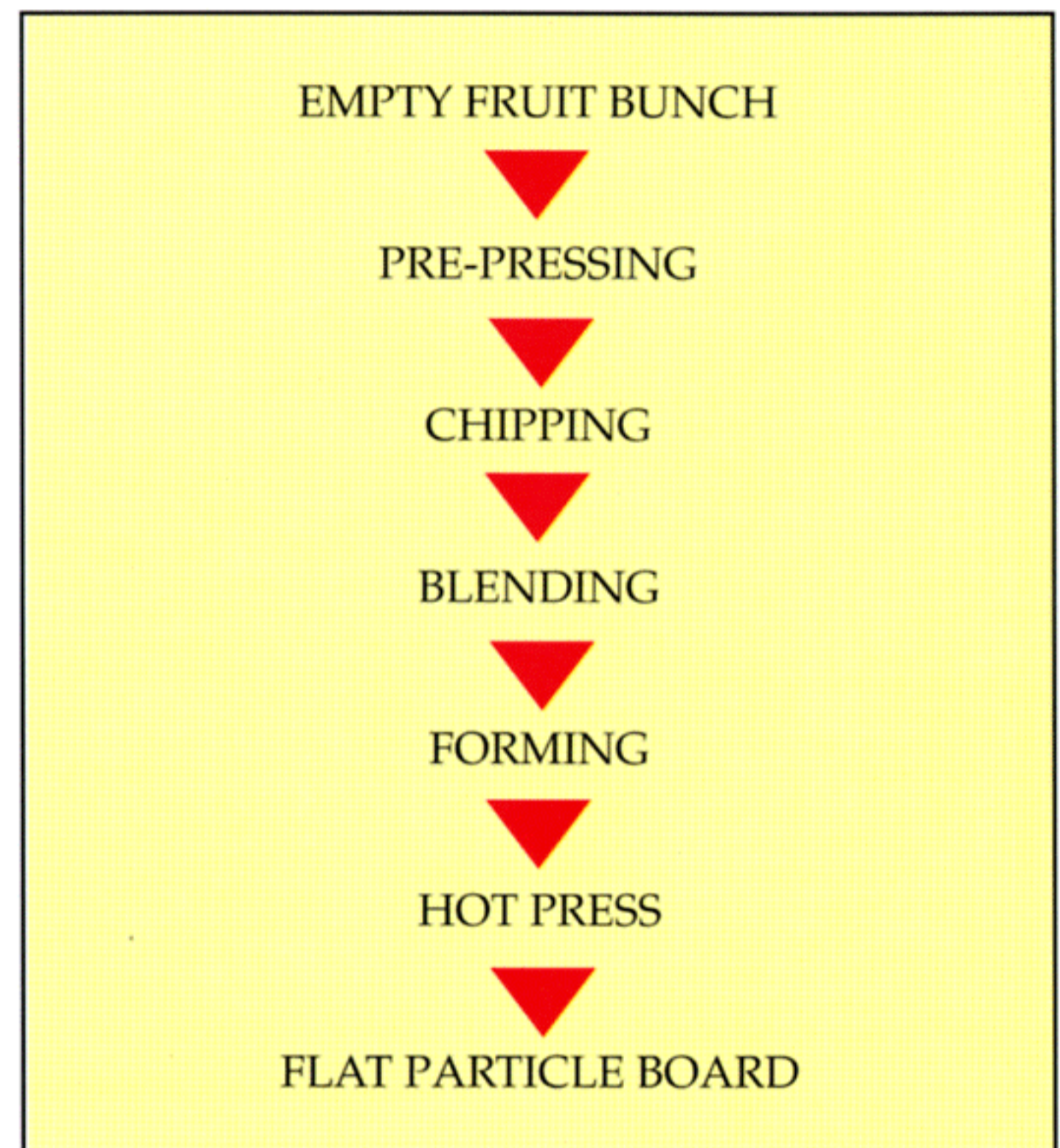


Figure 1. Flat particleboard process flow.

required:

|                             |                          |
|-----------------------------|--------------------------|
| Machinery                   | = RM 26 000 000          |
| Price of flat particleboard | = RM 600 m <sup>-3</sup> |
| IRR                         | = 20%                    |

## CONCLUSION

A good quality particleboard can be manufactured using oil palm biomass especially EFB. To exploit the available resources for economic advantage, the plant should be constructed near a palm oil mill.

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Malaysian Palm Oil Board, Ministry of Primary Industries, Malaysia

P. O. Box 10620, 50720 Kuala Lumpur, Malaysia. Tel: 03-89259155, 89259775, Website: <http://mpob.gov.my> Telefax: 03-89259446



MPOB



For more information kindly contact:

Director-General  
MPOB

P. O. Box 10620

50720 Kuala Lumpur, Malaysia.

*Tel:* 03-89259155, 89259775,

*Website:* <http://mpob.gov.my>

*Telefax:* 03-89259446