



UPM
UNIVERSITI PUTRA MALAYSIA
BERILMU BERBAKTI

DRUPE DEHUSKER

PATENT PENDING PI 2014700853, ID NO: 14-00447-0101



SUBJECTING OF DRUPES INTO DEHUSKER



DEHUSKING PROCESS



COMPLETE SEPARATION OF MESOCARP AND NUTS



Capacity: 15 kg/hr

- Anugerah Harta Intelek Negara (AHIN) 2015 Finalist
- Gold Medal (I-Envex 2014)
- Featured in Harian Metro (19/5/2015)

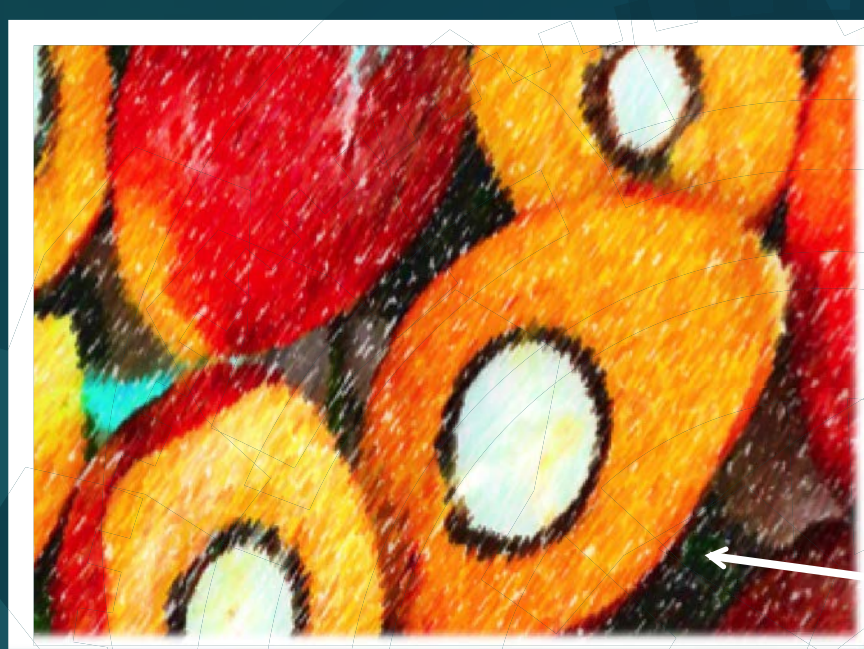


WHAT IS A DRUPE?

- A fruit consisting of outer fibrous layer or most commonly known as mesocarp, surrounding a central nut containing the seed or kernel
- Examples of fruits: Oil Palm fruit, Sarawak Dabai, Olive, Avocado.



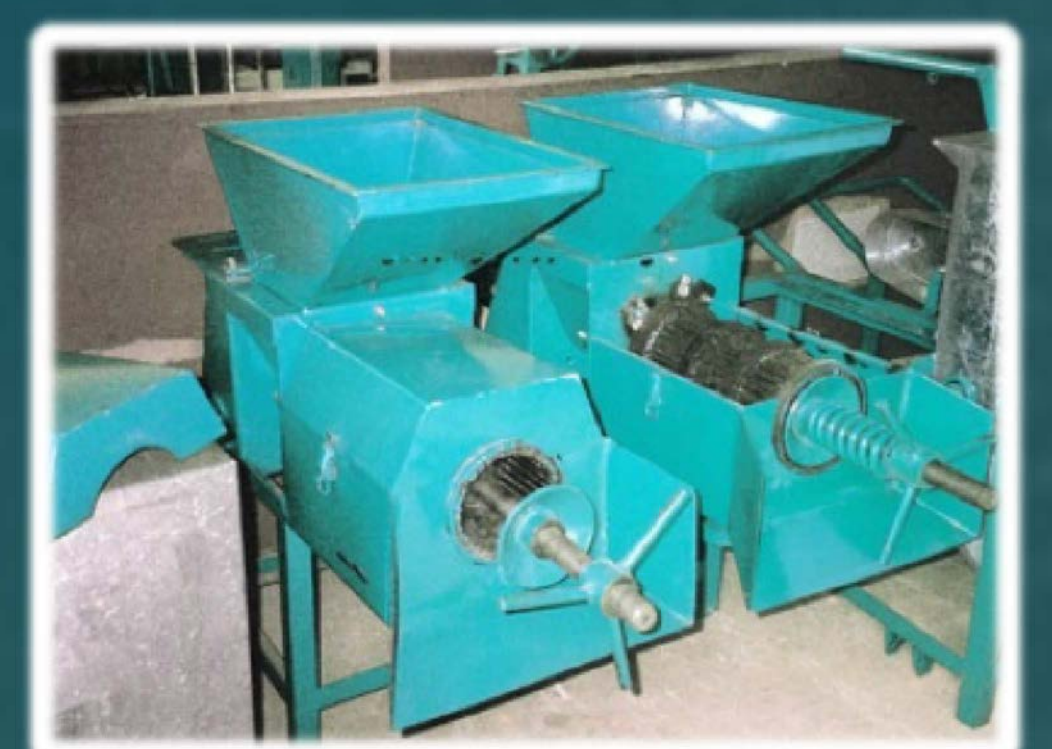
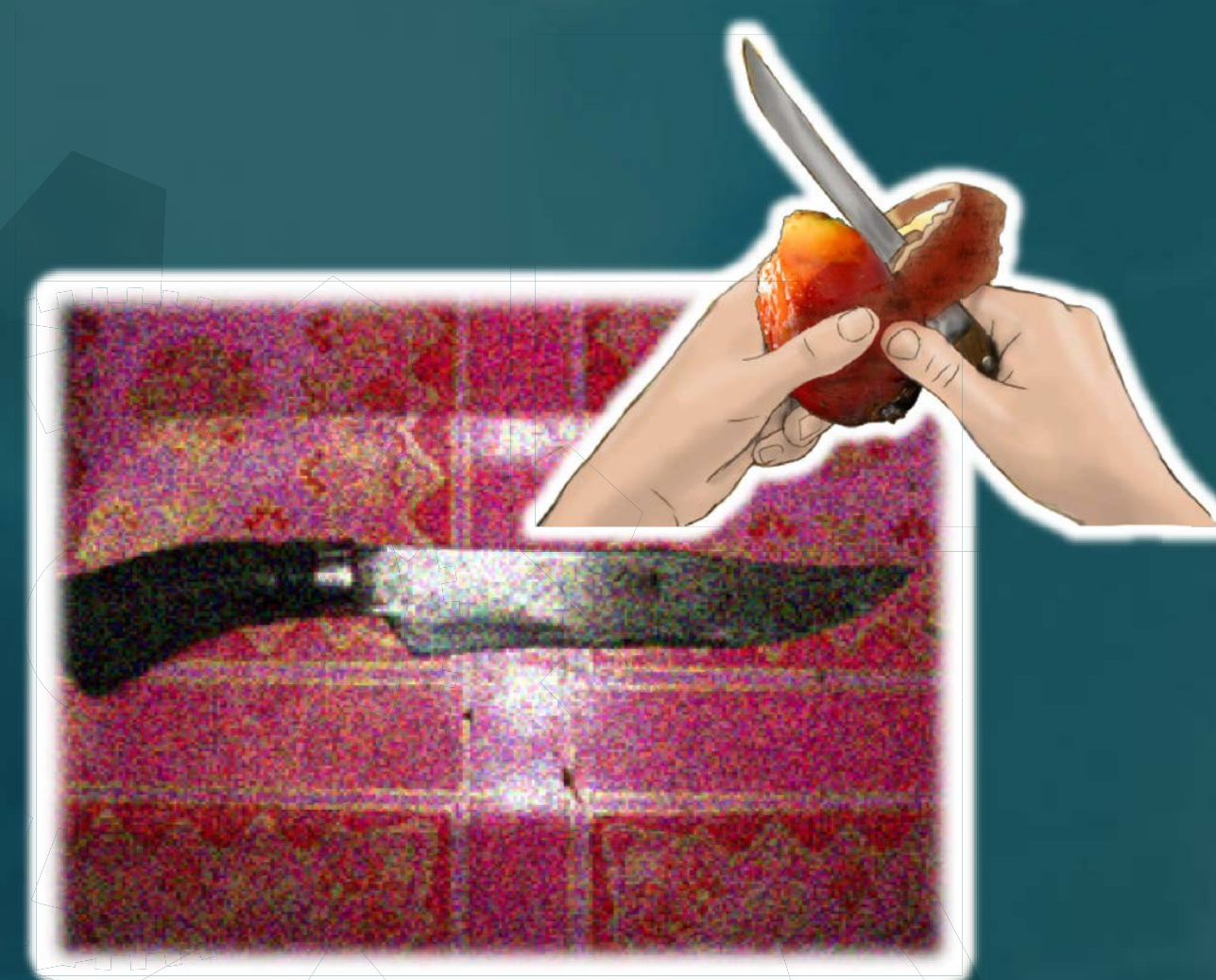
Oil Palm Fruit



Mesocar

Kornol

CURRENT PROBLEMS



BENEFITS

- Portable machine
- Save time and energy
- Easy handling
- Complete separation of mesocarp from fruit's nut
- Increase yield and quality of oil
- Simplify and a much efficient screw-pressing process to expel the oil out of the drupes
- Reduced in costs (labor, maintenance, process time)

RESEARCH CENTRES

- 8000 Oil palm fruitlets are being dehusked daily using knives by skilled laborers
- Tiring and cumbersome

PALM OIL INDUSTRY

- Oil palm fruitlets undergo screw-pressing process to expel the oil out
- Existence of the nuts would contribute to insufficient press (10% oil loss)
- Over-pressing would lead to nut breakage and hence oil contamination

Project Members : Christine Jamie Anak Vincent Eddy, Assoc. Prof. Dr. Rosnah Shamsudin, Dr. Azhari Samsu Baharuddin, Prof. Robiah Yunus

Faculty : Department of Process and Food Engineering, Faculty of Engineering

Email : rosnahs@upm.edu.my

Telephone : +603-8946 6366

