KEMENTERIAN PERUSAHAAN PERLADANGAN DAN KOMODITI

MPOB

27th MPOB TOT 2021
TRANSFER OF TECHNOLOGY
SEMINAR & EXHIBITION



MPOB OIL PALM BREEDING MATERIALS

Research Focus Area : Yield Performance
Program : Planting Materials

MPOB with its collection of 100 000 accessions of oil palm germplasm, has developed a series of oil palm breeding materials, known as Palm Series (PS) which exhibit economically important trait.



TT No. 42: PS3 High Kernel

TT No. 222: PS8 High Vitamin E

TT No. 313: PS12 High Oleic

TT No. 400: PS13 Low Lipase

TECHNOLOGY HIGHLIGHTS





DESCRIPTION:

PS3 Planting material with high kernel to bunch ratio.
PS8 Breeding material with high vitamin E content.
PS12 Breeding material with high oleic content.
PS13 Breeding material with low lipase.

ADVANTAGES:

PS3 Source of lauric oil for the oleochemical industry.
PS8 Source of antioxidant and for use in stabilization of oils and fats.
PS12 Use in liquid cooking and salad oils market in temperate regions.
PS13 Retention of oil quality in fresh fruit bunches after harvesting.

NOVELTY/HIGHLIGHTS:

PS3 Kernel to bunch ratio of 10%-15% *vs.* 4%-8% for current DxP.
PS8 Vitamin E content of 1300-2400 ppm *vs.* 600-1000 ppm for current DxP.
PS12 Oleic content of more than 48% *vs.* 37%-40% for current DxP.
PS13 Lipase of less than 10% *vs.* 22%-73% at low temperature (4°C) for current DxP.

ECONOMIC ANALYSIS:

PS3 Net gain of RM52 326 $ha^{-1}\,yr^{-1}$ (marginal soil) to RM61 047 $ha^{-1}\,yr^{-1}$ (coastal soil).
PS8 Expected income of RM42 856 $ha^{-1}\,yr^{-1}$.
PS12 Expected income of RM5749 $ha^{-1}\,yr^{-1}$ (75% purity) to RM9204 $ha^{-1}\,yr^{-1}$ (95% purity).
PS13 Additional value as premium oil at RM741 $ha^{-1}\,yr^{-1}$.

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Sawit ANUGERAH TUHAN