



KEMENTERIAN PERTANIAN
DAN KETERJAMINAN MAKANAN



PRECISION AGRICULTURE IN RICE FARMING

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TASHKENT, UZBEKISTAN

PRECISION AGRICULTURE

(MARDI CSP 2021-2030)

Thrust 2: Generating and adopting new and modern technologies to transform agriculture and agrofood industry to become more sustainable and competitive

Strategy 5: Increasing efficiency in the whole agricultural value chain through IR4.0 technologies

Action Plan 35: Developing an integrated and cost-effective precision farming technology for increased productivity through optimizing nutrient, labor and water use

NAP 2.0 (MAFS)

Policy Thrust 1:
Embrace
Modernisation & Smart
Agriculture
(4 Strategies & 14 Action
Plans)

**National Food Security Policy
Action Plan 2021-2025 (MAFS)**

Strategy 1:
Enhancing The Adoption
Of Technology In The Food
System

**NATIONAL SCIENCE,
TECHNOLOGY AND INNOVATION
POLICY (MOSTI)**

Thrust 3:
Local Technology-
Based Industry.
STIE Game Changer
Programmes: Precision
Farming/Smart
Agriculture

**NATIONAL FOURTH INDUSTRIAL
REVOLUTION (4IR) POLICY (MoE)**

Policy Statement:
The agricultural sector is a
key sector in the 4IR Policy
for the mission of
leveraging technological
advancements

12th Malaysia Plan (MoE)

Strategy Paper:
Expanding the Use of
Modern Technology
Applications

MARDI R&D PROJECTS RELATED TO PRECISION AGRICULTURE (12TH MALAYSIA PLAN)

**Development of an Integrated Modern, Smart, and Precise
Agricultural Production System Based on IR 4.0
Technology**

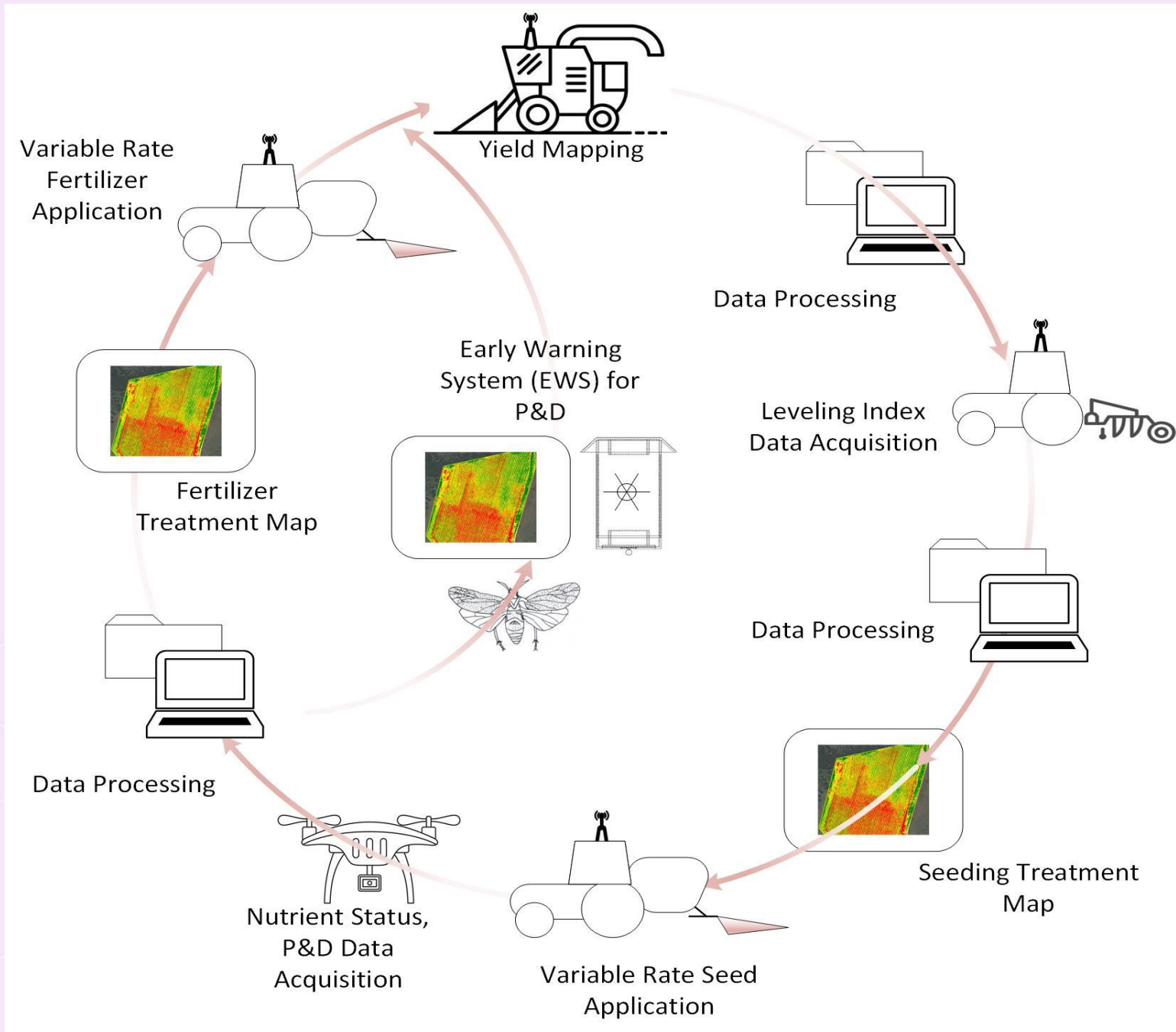
**Development of Water and Soil Conservation Technology
for Problematic, Degraded Lands & Smart Fertilizers for
Increased Production of Selected Crops**

**Enhancement of Quality and Sustainability of Local Cattle
and Goat Genetic Resources to Empower the National
Ruminant Industry**

PRECISION AGRICULTURE - COMPONENTS

Proper management of variability

- Right Place
- Right Time
- Right Amount



Precision Agriculture for Large Scale Rice Production

PAKEJ TEKNOLOGI PERTANIAN TEPAT DALAM PENANAMAN PADI



PERATAAN TANAH



PENABURAN BENIH



SISTEM PEMBAJAAN

VRT SEED APPLICATION SYSTEM



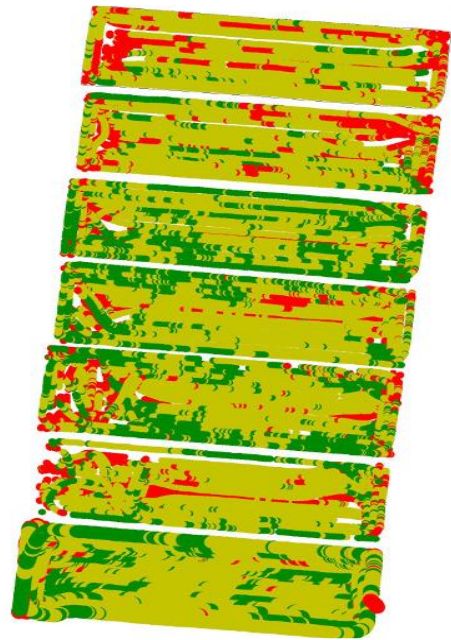
SISTEM PEMBAJAAN SECARA KADAR BOLEH UBAH
VRT FERTILIZER SYSTEM

VRT FERTILIZER APPLICATION SYSTEM

Fertilizer operation	VRT	Conventional
Operation time (min/ha)	15 – 20	40 – 50
Application efficiency (%)	90- 95	70 -75
Tank capacity(kg)	300 - 400	25

ADVANTAGES OF PA

YIELD MONITORING SYSTEM



2999.1 - 4634.9 kg/ha
1499.1 - 2999.0 kg/ha
0.0 - 1499.0 kg/ha

Yield Map



24.1 - 31.5 %
18.1 - 24.0 %
Below 18.1 %

Moisture map of
harvested rice





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TERIMA KASIH
THANK YOU

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谢谢