



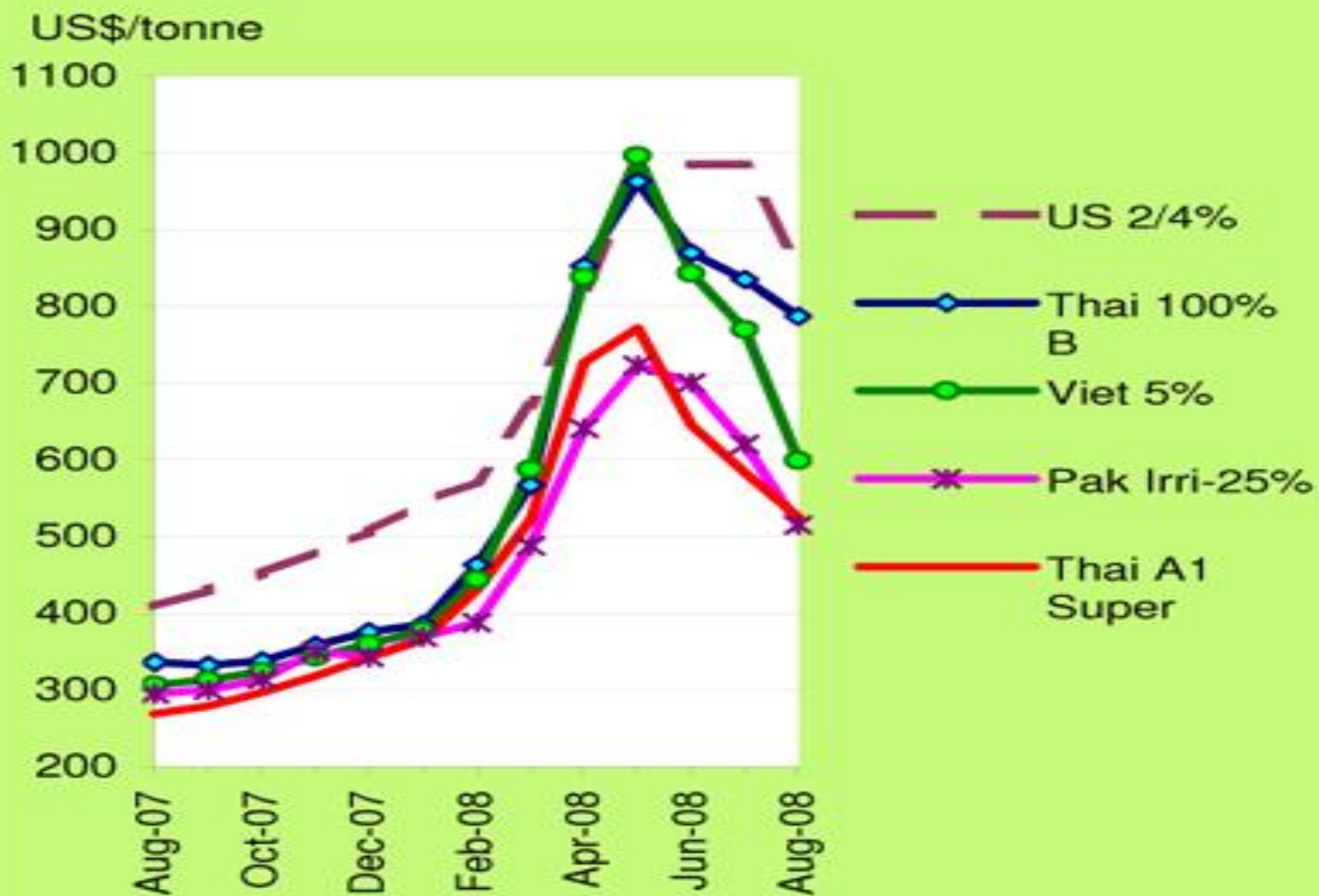
REALIZATION OF YIELD POTENTIAL



PRODUCTION & IMPORTS

	1990	2000	2006	2007	2008	2009	2010	2011	2012	2013	2014
PRODUCTION – MT	1.22	1.38	1.38	1.53	1.52	1.62	1.64	1.67	1.70	1.67	1.67
SSL(%)	78.7	70.0	62.2	65.7	58.2	58.9	63.8	62.5	63.0	62.5	60.3
IMPORT - MT	0.33	0.59	0.84	0.80	1.09	1.13	0.93	1.0	1.0	1.0	1.1

Export Prices for Rice



WORLD TOTAL RICE

Areas : 160 Million Ha +
Production : 750 M MT (Paddy) (500 M MT RICE)
TRADED : 42 MILLION MT/YEAR

Main exporters : Thailand, Vietnam, India, Pakistan,
USA,

Main Importers : China, Nigeria, Iran, Iraq, Philippines,
Saudi Arabia, Malaysia

FOOD SECURITY



ECONOMIC ACCESS

+

PHYSICAL ACCESS



**NUTRITIOUS and SAFE
FOOD TO MAINTAIN
HEALTH**

FOOD SECURITY

INCREASE SSL

IMPORT : 1,000,000 MT RICE
(400 US\$/MT, 1\$ = 4.315))

(COSTING about RM1.726billion EXCLUDING TRANSPORT COST)

NEED TO PRODUCE EXTRA 1600000 MT PADDY

PLANTED AREA PER YEAR 6700000HA

NEED TO INCREASE YIELD BY 2.47T/HA

MALAYSIA

AREA PLANTED: WET PADDY

1. MAIN SEASON:	PENINSULAR:	265000 HA	Av. Yield	: 4.72 t/ha
(2013/14)	SARAWAK	: 66000 HA		: 2.85 t/ha
	SABAH	: 22000 Ha		: 3.51 t/ha
2. Off Season	: PENINSULAR	: 236000 HA	Av. Yield	: 4.85 t/ha
(OS 2013)	SARAWAK	: 424 Ha		: 3.17 t/ha
	SABAH	: 9851 Ha		: 2.66 t/ha

DRYLAND PADDY: MS 2013/14

SARAWAK	: 57098 HA	Av. YIELD	0.76 T/Ha
SABAH	: 6434 HA	Av. YIELD	2.76 T/Ha

YIELD POTENTIAL OF RELEASE VARIETIES

Y. Pot. T/Ha

TRADITIONAL VAR: 2.0

MAHSURI 4.0

RIA, JAYA ETC 5.5

SETANJUNG 6.5

MR 84 8.0

MR 219 (LATER VAR.) 10.0

2 HYBRID : 10 +

(SIRAJ AND HS 98)

**(aromatic and pulut
lower potential)**



UPSCALING – PILOT PROJECT

**YIELD: 10.7 MT/HA
(MS 1999)**

MUKPTI
13683

MR 219

GRANARY AREAS (MS 2013/14)

	AV. YIELD T/HA	AREA HA	HIGH YIELD T/HA
MADA	5.54	94780	23% HIGHER THAN 6 T/HA 0.5% HIGHER THAN 8 T/HA
KADA	4.41	25130	7.3% HIGHER THAN 6 T/HA
KETARA	5.99	4876	50% MORE THAN 6T/HA 7% MORE THAN 8 T/HA
IADA P.PINANG	5.69	12780	33% MORE THAN 6 T/HA 2% MORE THAN 8 T/HA
IADA KRIAN	4.39	20970	3% MORE THAN 6 T/HA 0.6% MORE THAN 8 T/HA
IADA S. PERAK	4.63	13800	4% MORE THAN 6/HA
IADA PBLIS	6.25	18920	47% MORE THAN 6 T/HA 7.5% MORE THAN 8T/HA
IADA K SEMERAK	3.82	4760	
IADA PEKAN	2.34	4320	
IADA ROMPIN	3.59	2520	30% MORE THAN 6 T/HA
GRANARY AREAS	5.17	202900	

GRANARY AREAS (OS 2013)

	AV. YIELD T/HA	AREA HA	HIGH YIELD T/HA
MADA	5.57	95366	25% HIGHER THAN 6 T/HA
KADA	3.86	12362	2% HIGHER THAN 6 T/HA
KETARA	5.51	4876	27% MORE THAN 6T/HA (8% MORE THAN 8 T/HA)
IADA P.PINANG	5.86	12780	35% MORE THAN 6 T/HA (1% MORE THAN 8 T/HA)
IADA KRIAN	4.66	20972	2% MORE THAN 6 T/HA
IADA S. PERAK	4.61	13843	7% MORE THAN 6/HA (1% MORE THAN 8 T/HA)
IADA PBLIS	6.36	18934	53% MORE THAN 6 T/HA (13% MORE THAN 8T/HA)
IADA K SEMERAK	3.18	748	
GRANARY AREAS	5.17	202900	HIGHEST YIELD 10.04 T/HA (OS 2013)

POTENTIAL TO INCREASE PRODUCTIVITY

Potential Average yield increase in granary areas based on Pilot Projects

Granary Areas	potential Ach. Yield (m.t/ha) os 2010	Current Av. Yield (m.t/ ha) OS 2010
MADA	7.0	4.72
KADA	6.0	3.97
SEBERANG PERAI	8.0	5.60
PBLs	7.5	5.61
SEBERANG PERAK	6.5	4.37
KETARA	6.5	5.35
KEMASIN/SEMARAK	6.0	3.35
KRIAN SG. MANIK	6.0	3.28

PILOT PROJECTS-YIELD RANGE

	AV. YIELD t/ha	HIGH YIELD
MADA	7.0	20% achieved yield higher than 8t/ha
KADA	6.0	5% achieved yield higher than 7 t/ha
KETARA	6.5	15% achieved yield higher than 7 t/ha
IADA KS	5.5	30% achieved yield higher than 6 t/ha
IADA KRIAN	5.0	15% achieved yield higher than 6 t/ha
IADA S. PERAK	6.5	15% achieved yield higher than 7 t/ha
IADA BLS	7.5	10% achieved yield higher than 8 t/ha
IADA P. PINANG	8.0	25% achieved yield higher than 9t/ha, 10% more than 10t/ha
IADA ROMPIN	4.5	15% achieved yield higher than 5 t/ha

POTENTIAL TO INCREASE PRODUCTIVITY IN NON-GRANARY AREAS (based on Pilot projects)

	POTENTIAL Av. YIELD T/HA	%HIGH YIELDING FARMERS
SABAH: 1. PAPAR 2. KOTA BELUT	4.0 5.5	20% MORE THAN 5t/ha 20% MORE THAN 6 T/HA
SARAWAK: 1. T. Purun 2. B. Lupar	4.5 4.5	15% MORE THAN 6 T/HA 15% MORE THAN 6T/HA
PENINSULAR – NON GRANARY	6.0	10% more than 7 t/ha

JADUAL B15: KLASIFIKASI PURATA HASIL PADI BERSIH (SEHEKTAR)
MENGIKUT KAWASAN JELAPANG PADI, SEMENANJUNG MALAYSIA, MUSIM UTAMA 2013/2014
Table B15: Classification of average yield of cleaned paddy (per hectare)
by granary area, Peninsular Malaysia, Main Season 2013/2014

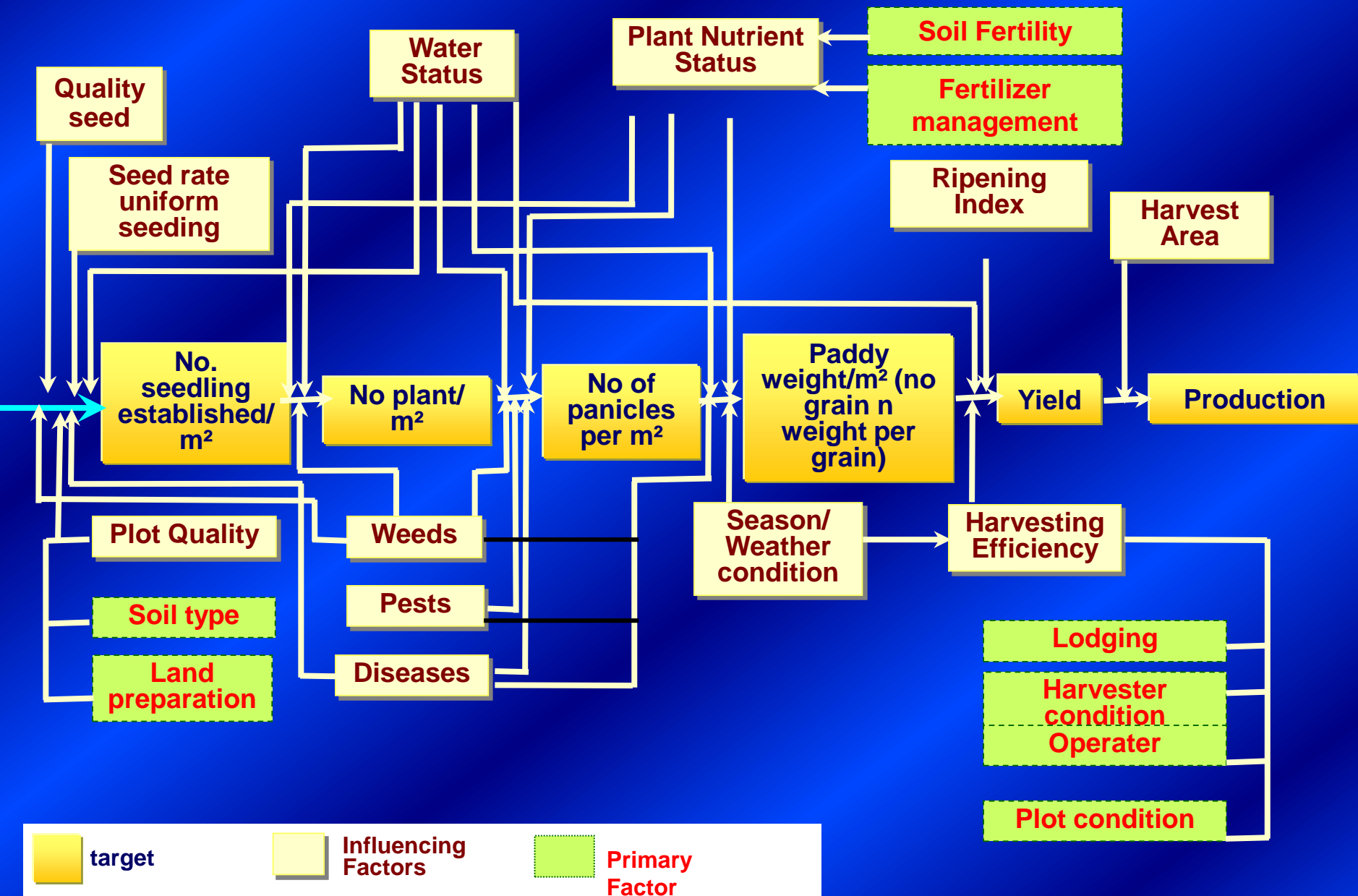
JELAPANG PADI Granary Area	BILANGAN SAMPEL DIANALISIS Number of samples analysed	< 2 TAN METRIK < 2 Metric Tonnes		2 - 4 TAN METRIK 2 - 4 Metric Tonnes		4 - 6 TAN METRIK 4 - 6 Metric Tonnes		6 - 8 TAN METRIK 6 - 8 Metric Tonnes		> 8 TAN METRIK > 8 Metric Tonnes	
		BILANGAN SAMPEL Number of samples	%	BILANGAN SAMPEL Number of samples	%	BILANGAN SAMPEL Number of samples	%	BILANGAN SAMPEL Number of samples	%	BILANGAN SAMPEL Number of samples	%
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
MADA	675	1	0.1	23	3.4	498	73.8	150	22.2	3	0.4
KADA	273	3	1.1	98	35.9	152	55.7	20	7.3	-	-
IADA KERIAN	156	1	0.6	54	34.6	96	61.5	4	2.6	1	0.6
IADA BLS	110	-	-	-	-	50	45.5	52	47.3	8	7.3
IADA P. PINANG	108	-	-	-	-	70	64.8	36	33.3	2	1.9
IADA SEB PERAK	97	1	1.0	24	24.7	68	70.1	4	4.1	-	-
IADA KETARA	61	-	-	1	1.6	28	45.9	30	49.2	2	3.3
IADA KEM SEMERAK	51	-	-	26	51.0	25	49.0	-	-	-	-
IADA PEKAN	45	18	40.0	25	55.6	2	4.4	-	-	-	-
IADA ROMPIN	9	-	-	5	55.6	1	11.1	3.0	33.3	-	-
JUMLAH Total	1,585	24	1.5	256	16.2	990	62.5	299	18.9	16	1.0

HOW TO GET MORE
FARMERS TO OBTAIN HIGH
YIELD – CLOSE TO
POTENTIAL

REASON FOR LOW YIELD

1. **LOW PLANT NUMBER**
2. **WEEDS INCLUDING 'PADI ANGIN'**
3. **PESTS AND DISEASES**
4. **HARVESTING LOSES AND POST HARVEST LOSES**

FACTORS INFLUENCING PADDY YIELD



SOIL:



- **CLAY SOIL: ABLE TO HOLD WATER**
- **pH - 5 AND ABOVE**
- **CEC – 20 AND ABOVE**
- **ORGANIC MATTER \pm 2%**
- **HARD LAYER: 30 cm**



LOW Ph soil – iron toxicity

The image shows a wide expanse of a rice field under a clear blue sky. The water in the field is a distinct reddish-brown color, which is a sign of iron toxicity (iron plaque) in the soil. Several clumps of green rice seedlings are planted in the field, some standing in the water and others on the exposed soil. In the background, there is a line of trees and a few utility poles. The foreground shows some dry, yellowed grass.

BROWN SPOT IN ORGANIC SOIL



Quality Plot



Membajak dan meratakan tanah





GOOD LEVELLED PLOT















FIELD INFRASTRUKTUR



FIELD DRAIN/ CANAL

GATE

SIPUT GONDANG EMAS







Brown planphopper

4hb Oktober 2001





Sheath blight





NECK BLAST:

NECK BLAST













1. Increase average yield through productivity

- **Crop Management**

Land preparation: Level plot and good tillage

- * **Variety, seeds supply and quality, seed rate**
- * **Water management (water timing, depth)**
- * **Crop management (timing of herbicide & fertilizer application etc)**
- * **Service providers (land preparation, inputs application & harvesting)**
- * **Monitoring crops growth and pest/disease incidence**

1. Increase average yield through productivity

- **Crop Production System**

- * **Develop larger small holder operators**
- * **Group farming with central management**
- * **Mini-estate – central management**
- * **Establish large estates through consolidation**

1. Increase Average Yield Through Productivity

- **Crop Monitoring System - DSS**
 - * **Integrate disease and pest model, forecasting model with long range weather forecast**
 - * **Fertilizer model/needs of crops**
 - * **Monitoring system for early signs of pest and disease & nutrient deficiency – remote and ground sensors**
 - * **Forecast economic loss and recommendations**
 - * **GPS and information dissemination system**

Effective rice technology transfer and promotion

- 1. Pilot projects and demo plots**
- 2. Modules/manual for high yield rice production technology; training**
- 3. Entrepreneur development for selected rice technologies:**
 - i. High yield/specialty rice/organic rice/aerobic rice/feed rice**
 - ii. selected rice products/by-products**



HARVEST WHEN: 85-90%

MOISTURE CONTENT: 20-22%

OVER-RIPEN: CRACK RICE –

- HIGHER BROKEN

- SHATTERING





The image shows a large industrial facility, likely a rice mill or drying plant, with a high ceiling and green structural beams. In the foreground and middle ground, there are several large, conical piles of wet paddy. The rice has a yellowish-green hue, indicating it is not fully dried. In the background, a red truck is partially visible, and the facility opens up to a lush green landscape. The text is overlaid in the lower center of the image.

**DELAYED DRYING OF WET PADDY:
- YELLOW RICE**





THANK YOU