



INDONESIA AGRICULTURAL MECHANIZATION STRATEGY

IAARD, MINISTRY OF AGRICULTURE

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STRATEGIC ROLE OF INDONESIA AGRICULTURAL



Provide food for 245 mil. people

Provide 87% of raw material for small and medium scale industry

Contribute 14,7% of PDB

Foreign exchange income (US\$ 43,37 M)

Provide 28,3% employment

70% source of income for rural people



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TARGET OF INDONESIA AGRICULTURE DEVELOPMENT



ACIEVING SUSTAINABLE FOOD SELF SUFFICIENCY



INCREASING FOOD DEVERSIFICATION



**INCREASING ADDED VALUE,
COMPETITIVENESS AND EXPORT**



INCREASING FARMER WELFARE



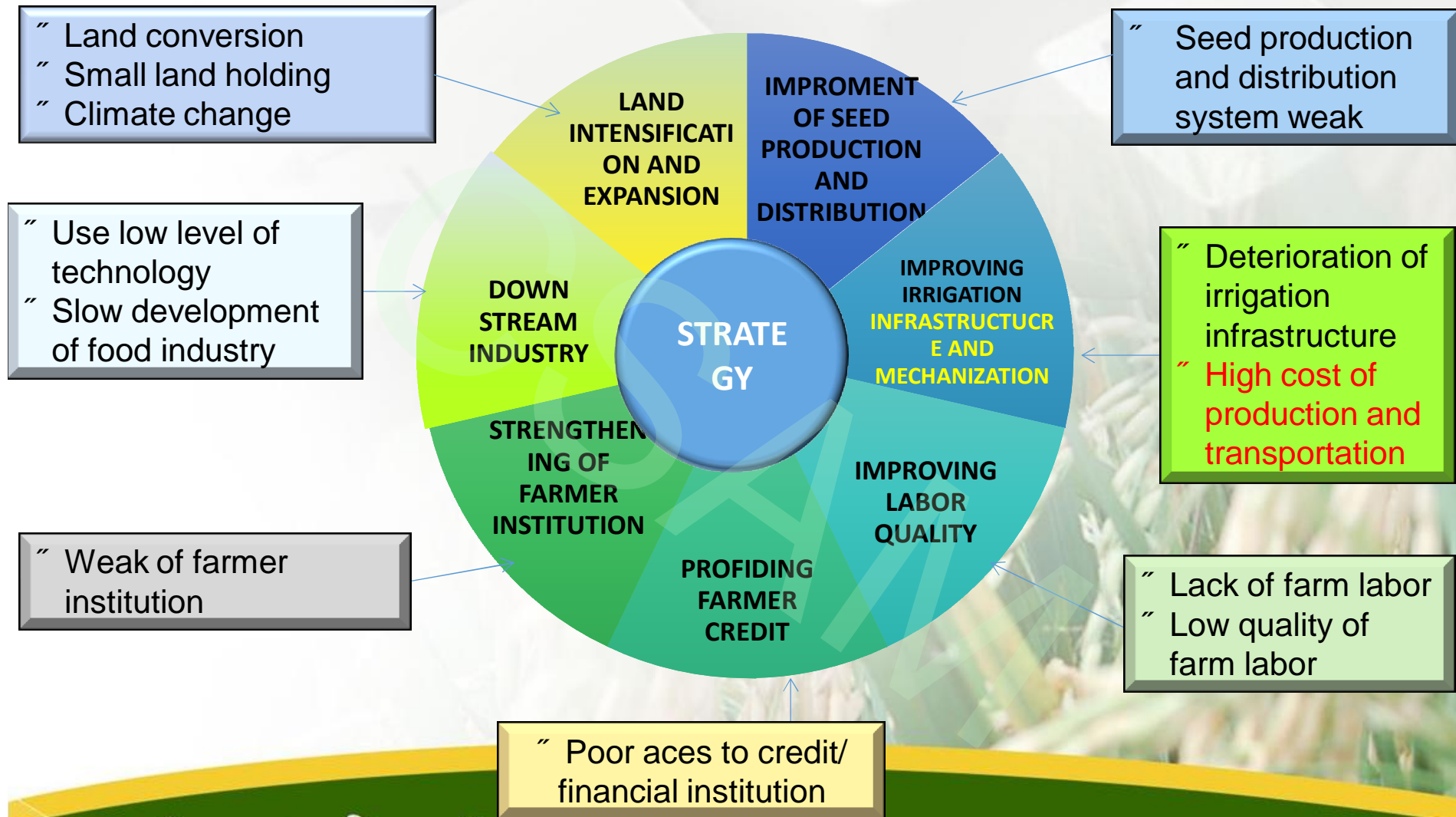
TARGET OF PRODUCTION FOR 5 MAIN FOOD COMMODITY

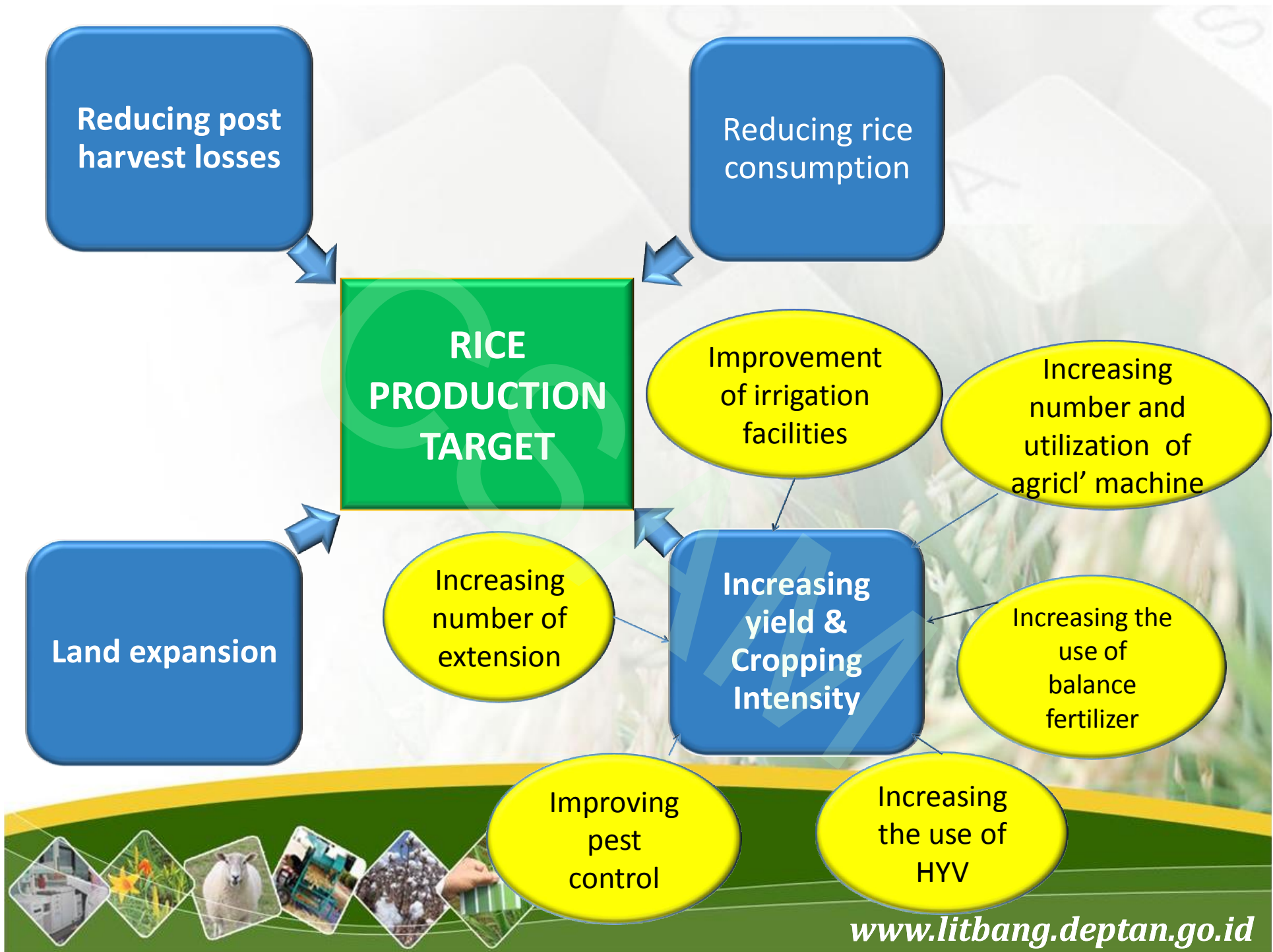
COMMODITY	TARGET OF PRODUCTION 2014 (Million ton)
Rough rice	76,57
Maize	29,00
Soybean	2,70
Sugar cane	3,1
Beef meat	0,51



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PROBLEM AND STRATEGY OF AGRICULTURE DEVELOPMENT 2010-2014







Role of Agric. Mechanization in Indonesia

- “ **Contributing target of production through:**
 - . Increasing cropping intensity
 - . Reducing post harvest losses
- “ **Improving quality of product**
- “ **Increasing added value and competitiveness of agricultural products**
- “ **Reducing cost of production by increasing labor efficiency**
- “ **Increasing farmers’ income**
- “ **Attracting young generation work in agricultural sector**



Mechanization Utilization Index for Rice Production in Indonesia (%)



Activity	Year			
	2004	2009	2010	2011
Land preparation	48	55	60	65
Seeding	0	1	2	4
Planting	04	5	6	7
Weeding	02	5	8	12
Pest control	100	100	100	100
Harvesting	5	10	18	26
Threshing	45	55	60	65
Drying	25	30	34	38
Milling	100	100	100	100

Source: ICAERD, 2009

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Number of Agric. Machinery used in Indonesia.

NO	Type of Agric. Machinery	2006 (Unit)	2010 (Unit)
1	Pump irrigation	185.322	187.801
2	Tractor 2-wheels	116.016	126.453
3	Tractor 4-wheels	2.853	2.969
4	Thresher (manual)	150.224	151.284
5	Power thresher	41.192	49.957
	Box Dryer	1.416	1.436
6	Continuous Dryer	1.388	1.421
7	Mini RMU	58.512	68.386
8	Stationer RMU	39.267	40.495

Sources : BPS-Statistics Indonesia, 2007; dan Direktorat Alsintan, 2010)

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Agric. Mechanization Development Problems & Constraints



- ➡ Poor skill of operator for operation, maintenance and management of agric. machinery
- ➡ Poor capability of farmer institution (Business Service Unit of Agril' Machinery)
- ➡ Lack number of extension worker
- ➡ High cost of farm machinery & equipments and difficult to access credit
- ➡ Lack of machinery suitable for specific agro ecosystem → Need R&D
- ➡ Short life time of agricultural machinery
- ➡ Poor farm road facility,
- ➡ Poor irrigation and drainage facility
- ➡ Lack of rural workshop facilities and spare parts



Strategy of Agricultural Mechanization Development



- **Agricultural machinery grand and loan from Government to FARMER GROUPS**
- **Improving access to credit/ bank (credit for rural business/ KUR)**
- **Strengthening Agricultural Machinery Business Service Unit**
- **Training for agricultural machinery operator**
- **Establishing demonstration plot of farming using agricultural machinery**
- **Capacity building for extension worker**
- **Establishment of mechanization center at provincial and district level**
- **Strengthening R & D on agricultural engineering**
- **Strengthening partnership between R&D, agricultural machinery industry /trader and user/farmer**



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Closure

- Although utilization index of agricultural machinery in Indonesia is low, Agricultural machinery have been used widely and significantly increased yield and quality of agricultural product
- Indonesia strategy to develop mechanization has been set up to increase crop production, quality and added value of agricultural product.
- Synergy between Government, Research Institution, University, Business, Industry is essentially needed to support the development of mechanization in Indonesian





THANK YOU

