Disruptive Technologies for Profitability
Rice farm consolidation and Cacao

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Piddig
Rice farm consolidation

Laoag to Piddig 58 km

THE HISTORICAL TOWN OF THE BASI REVOLT

Burnay where Basi stored

MARCH 19, 2020

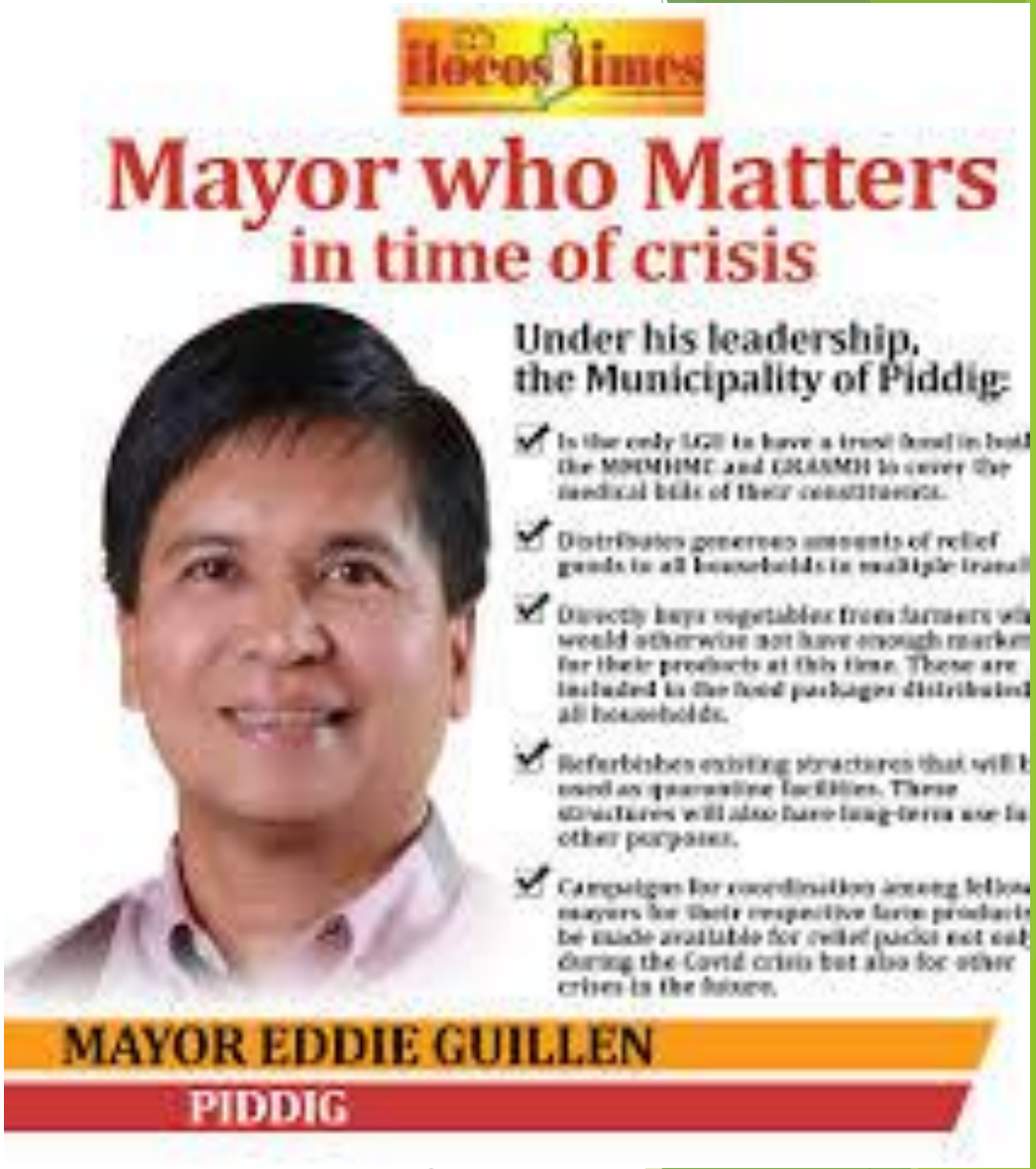
PIDDIG VISION

Piddig shall be a God-loving community anchored on inclusive and sustainable growth nurtured by excellent governance and active participation of the people

#PIDDIGANGGALINGMO

@LGUPiddigIlocosNorte

The Development Innovator



Piddig
Consolidated rice farms

Project Origin:
Drive for Convergence

- Mayor Eddie Guillen, a civil engineer, was first elected in 2010
- His focus was agriculture productivity to increase income and reduce poverty
- Lobbied government agencies for support
- DA provided a rice processing center and farm machines
- The DENR used the National Greening Program to start coffee production in public lands

4-Wheel Tractors

Rice harvester

Rice processing center

Project formulation

- The LGU organized the farmers into the Piddig Basi Multipurpose Cooperative (PBMC) to manage the rice processing center.
- The LGU felt without farm mechanization, productivity would be low
- Infrastructure support needed (FMRs, flood control dam) are support facilities

Acknowledgment: UP CIDS Discussion Paper

Project formulation

- Modest beginnings: 100 *zanjera farmers on 100 ha in 2011*
- Now: 1,000 farmers on 1,000 ha
- Piddig lobbied a flood control reservoir that can serve as supplementary irrigation.
- His ideas led him to an audience with the former DPWH Secretary Rogelio Singson. The flood control facility was the first of many projects he was able to bring in his municipality.

Acknowledgment: UP CIDS Discussion Paper Series

Small farm reservoir

Abucay flood control cum farm reservoir with spillway

Farm support services

Extension services (e.g. soil tests)

Organic fertilizer livelihood by women

Agriculture financing from coop

Cheaper consolidated crop insurance

Packaging and marketing

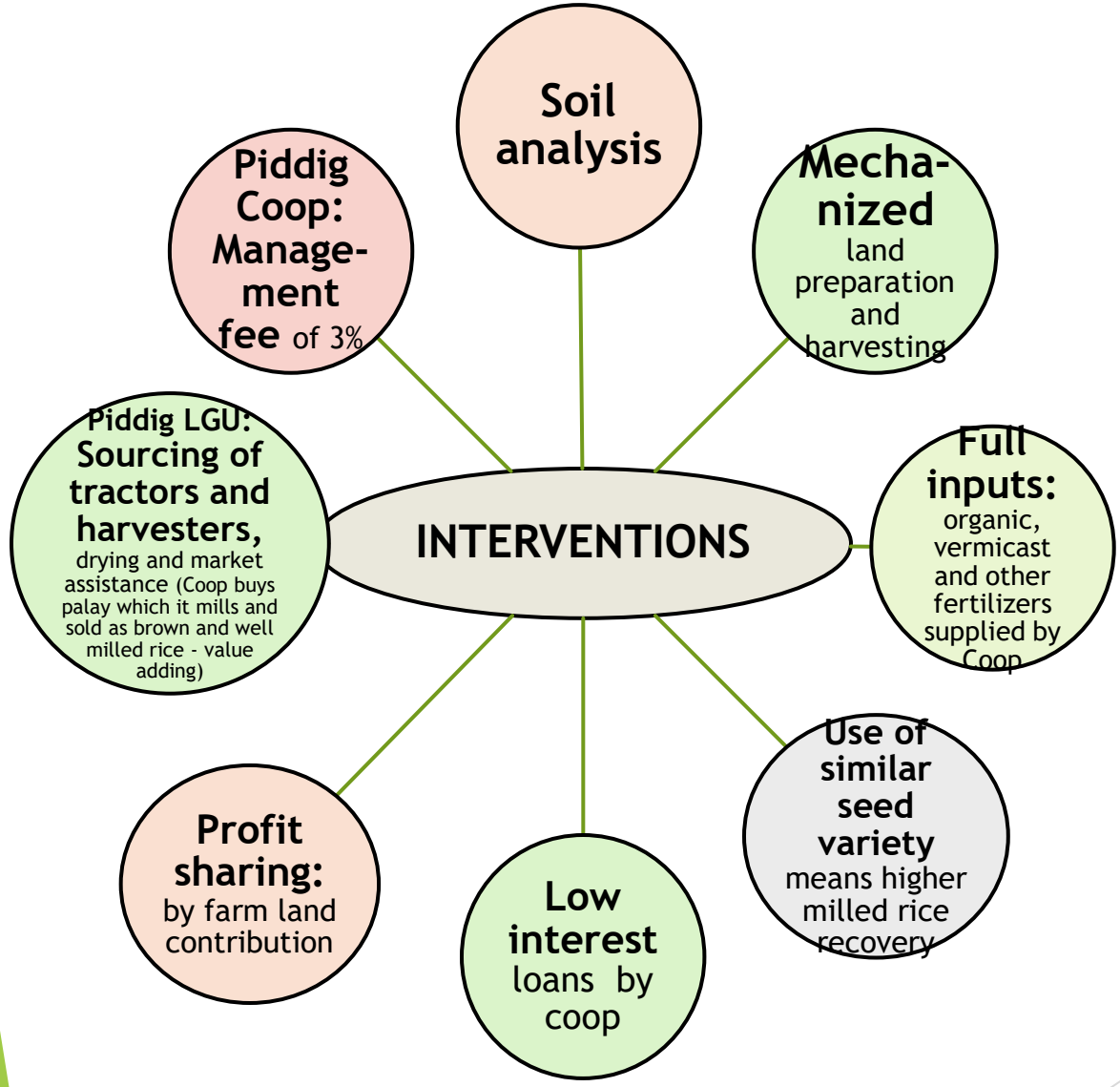
Land tenure services (e.g., land titling).

Product packaging

- 2 kg pack

- 25 kg bag

Interventions: Rice Farm Consolidation



TBL Benefits

PEOPLE

- Reduced poverty
- Farmers organized
- Women livelihood

PLANET

- Efficient irrigation water use
- More effective input use
- Lower harvest and post harvest losses

PROFIT/PROSPERITY

- Higher farm incomes.
- Multiplier effects on the community

Coop Beneficiary Impact

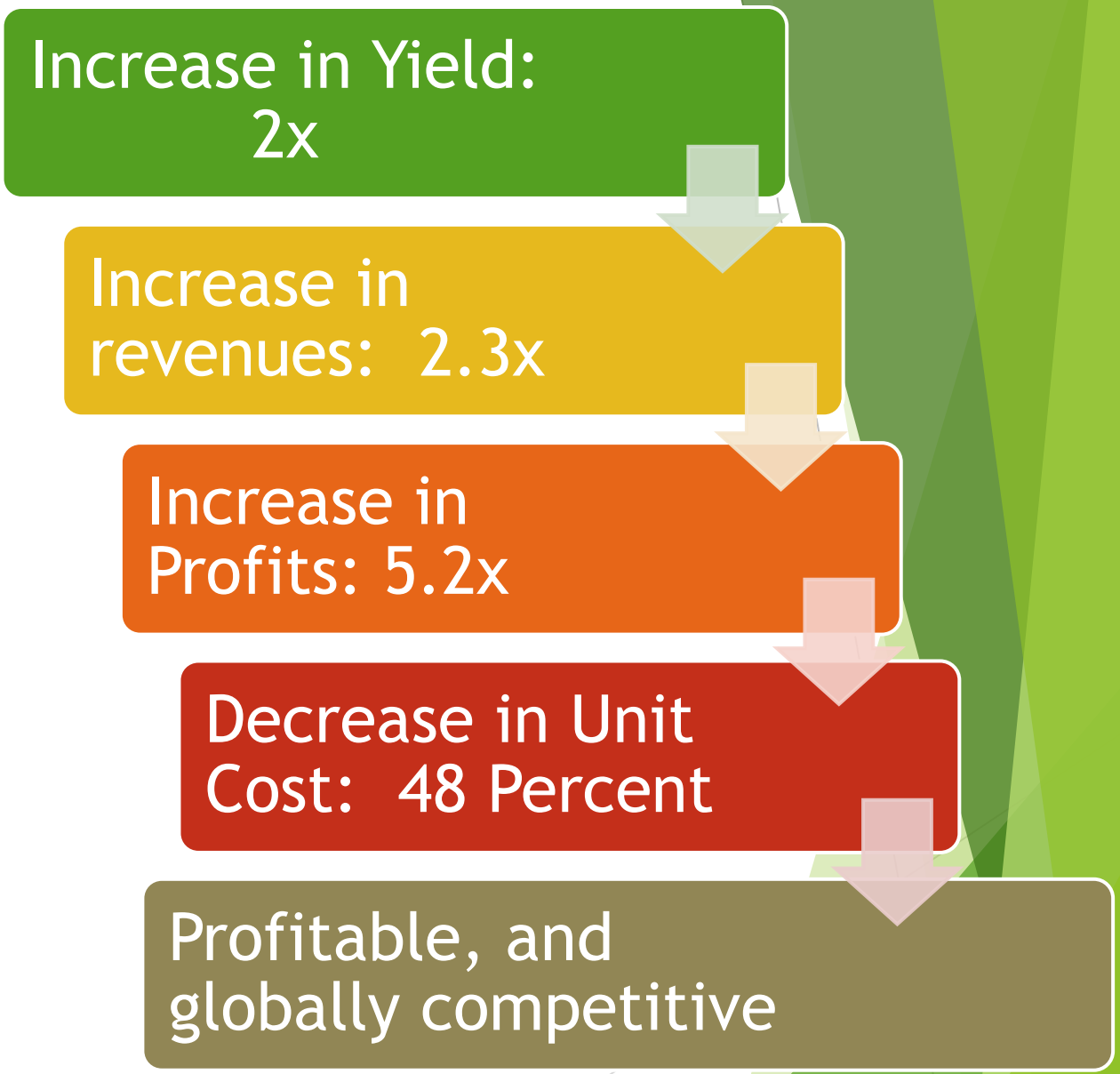
Particulars	Without Project		With Project	
	Inbred	Hybrid	Inbred	Hybrid
Yield kg/ha)	4,000	5,500	6,273	8,200
Production value (P/ha)				
Local traders (P19/kg)	76,000	104.500		
Coop buying (P21.50/kg)			134,869	176,000
Production Cost (P)				
Traditional	53.000	59,750		
Full mechanization			48,700	55,400
Income	23,000	44,750	86,169	120,900
Production Cost (P per kg)	13.30	10.90	7.76	6.75

Value Chain Interventions

- Consolidation - economies of scale
- Value chain interventions
  - soils test, seed supply, irrigation scheduling,
  - faster, mechanized land prep, fertilizer application harvesting, storage, milling
  - cheaper bulk purchase
  - packaging and marketing

Analytics: Traditional vs. Modern

- ✓ Reduced poverty
- ✓ Social peace



Soccsksargen Region

New Tech Sandique Farm

Makilala, North Cotabato

Jack, the mechanical engineer, the perennial agri tech disruptor

Jack’s modern rubber nursery

Jack with rubber tapper


“ Rubber tree is a perennial plant. You can’t afford to make a mistake today because you will be carrying that mistake in the next 30 years. ”
Alfonso Jack Sandique
President, Philippine Rubber Development, Inc.
Member, NSSCC Rubber Industry Development Sub-Committee
Salamat gid!

The Cacao farm, promising perennials

Young cacao trees

Young cacao tree

Pod harvest to fermentary

Pods and fermented beans

Project Origins

- Jack challenged the traditional cacao production
- Planting using PRDI rubber way
- Goals:
  1. Uniformity of stands
  2. High density of trees
  3. Short gestation period
  4. Sustainable, efficient farming system

Project Design

- Started June 2018

  So far, so good!

Milestones:

- *85 percent success rate in nursery of superior planting materials; plastic bags 8 in x 16 in*
- *Fruit bearing in in 8-9 months but **forcibly culled and allowed to bear fruits if girth @ one meter** is measured or above 24 cm*

Early outcomes

- Girth achieved in 14 months
- Harvesting pods at high density for its age
- Estimate to close canopy at 2.5 years
- Density is 1,450 trees per ha vs trad 1,000
- Target production at maturity:

  4 kg dried fermented beans per tree per year

Projected yield

- Typical cacao yield: 0.5 to 1 ton per ha
- Jack's: average 5 tons per ha per year of dried fermented beans

Take aways

- Farming can be very profitable
- Hands-on management
- Best practice

Salamat gid mga kasimanwa!


Merry
Christmas