PCCP PHILIPPINE COLD CHAIN PROJECT ??? REDUCING LOSS IN FOOD CHAINS: LINK BY LINK

EXPERIENCE FROM THE CARAGA REGION OF THE PHILIPPINES

Nicholas Richards

Chief of Party, PCCP



Caraga Region, Mindanao www.winrockpccp.org



- 1. The PCCP in the Caraga Region
- 2. Caraga Region Philippines development context for food production and consumption
- 3. Food consumption trends and attitudes in Philippines
- 4. Examples on FLW data in Philippines
- 5. A multi faceted process to reduce FLW in Caraga region
- 6. Our efforts thus far in reducing food loss across food value chains and our challenges
- 7. Our plans and partnerships





PCCP: An agricultural and food system development project focused on:

expanding the supply and quality of horticulture, fisheries and swine sector food products

improved practices and facilities for perishable and non-perishable food production

improved marketing linkages and outcomes

and better access to financial and agribusiness services and products







Development Context Caraga Region

Infrastructure and logistics very weak

Security issues (NPA, Lumad land disputes,)

Poverty incidence 44%, ranked at bottom

Limited private sector investment or attraction

Small scale agriculture: smallholders predominating

Inter island transport and frequent storms

Limited access to micro finance

Caraga is a net food importer



Philippines household typical daily meals: 8th National Nutrition Survey 2015

Food attitudes generalised

Most of Filipinos' food consumption goes to cereals (150 kg/capita), then meat and fish; per capita consumption of vegetables only averages 22 kg/yr: FAO 146 – 182 kg/yr. Some Filipinos consider vegetables as a poor man's diet. Opt to purchase meat and meat-based products instead. Many households opt to consume fewer vegetables: these require more preparation and have short shelf life.

Among urban-based Filipino families, packaged and instant foods and sugar drinks have become popular despite most of these foods are high in calories, fats, sodium, and food additives, and relatively bereft of nutrients

Selected data on FLW Philippines

Products	Estimated losses	Causes	Reference
Rice	9-37%	Disease, mechanical damage	PHiLMECH 2015
Mango	2-33%	Diseases, sap burn, pests	Nuevo and Apaga 2010
Onion	35% (6% farm, 12% wholesale, 18% retail)	Disease, mechanical damage	PHiLMECH 2015
Fruits and vegetables	27-42%	multiple	PSA 2012
Pork	2.9% pre slaughter	pests and diseases	PSA 2016





Traditionally Gov of Phils sees rice self sufficiency as its major agriculture focus...

- So FLW is more concerned about rice FLW, with good data and awareness campaigns
- Fish: I could not find data on fish FLW, limited for Pork
- Vegetables: limited consumption, much lost/ degraded in transport system. As demand increases ...FLW will become a big problem
- Need for improvement in diets of poor/ nonpoor households (malnutrition and over nutrition besets Philippines)

PCCP: Reducing Food Loss and Waste in the Caraga Region

1. Increased productivity at farm level to increase food supply and quality (restoring food production potential)

2. Alleviation of food loss through improved post harvest handling, processing, transport and storage (reduce Visible Food Loss)

3. Connecting cold chain logistics with market needs and opportunities (Reduce Food Loss, maintain food quality)





4. Data collection on FLW : establish the drivers and quantify loss (PCCP data collection: very limited thus far)

5. Promote the enabling and policy environment for FLW reduction via advocacy and planning (planned conferences Philippines on cold chains and FLW)

PCCP has been working mostly on the first three aspects on FOOD LOSS. We are supporting this via SEVEN LINKS in the food chains, that can lead to food loss reductions. *Partnerships at all stages are key to progress*.





SEVEN LINKS OF FLW reduction PCCP SUPPORTS IN THE CARAGA



MARKET

PLACES

&

AWARENESS

LINK 1: Increased productivity at farm and producer level

Increased availability of improved agri inputs and services

Increased knowledge and skills of farmers and agribusinesses: production techniques, inputs, harvest maturity, harvest practices

Increased use of financial services: accessibility and affordability of loans

Increased access to improved market information prices, quality standards, market windows







LINK 2. Improved Post Harvest handling and storage (cold and dry)

Improved post harvest infrastructure:

• 9 slaughterhouses, 6 cold rooms, 1 ice plant supported with equipment and buildings

Increase usage of improved post harvest processing and handling practices examples:

- Usage of plastic crates in place of bamboo baskets
- Mango grading for size and defects, post harvest disease control via hot water dips
- Lobster conditioning pre transport
- Mud crabs tying and packaging

FRUIT & VEGE TABLE PACKING AND TRANSPORT

AAT





Hot water dipping of mango to stop post harvest diseases

Lobster & Fish Conditioning for live transport

Conditioning to delivery in aquarium tanks with aeration and recirculating water at least 6-8 hours to recover stress during harvest and expel undigested food taken (fish and lobster)

Fish





Lobster



Loose packing of crabs in crates

Proper packing of mudcrab in plastic crate or box, heads-up



LINK 3. Food safety and hygiene





FISH TRANSPORT in contaminated water and ice









Fly infested vegetables

110 meat vendors trained in food safety, 33 information campaigns to consumers

LINK 4. Low tech and high tech cold chain systems and practices





LOW TECH: Closed System-Waterless for lobster transport





lobster induced to sleep, submerged to 18°c for 5-10 minutes, before packing in paper or moist cloth and place inside styro box with ice pack inside the box to maintain coolness inside during transport



HIGH TECH: COLD ROOM WITH PIG CARCASSES

LINK 5. Wet market improvements





Wet markets not designed for cold storage and display: fixed benches, no power outlets



Conversion: Wet market with freezers and moveable stainless steel benches



LINK 6. Education on FLW to farmers, consolidaters, markets, consumers





Our approach final year of PCCP...

Not officially an 'activity or result' of our project, but we are working to connect and promote food loss, food quality, food safety and cold chains through technology and practices adoption.

Plans include:

- Cold Chain orientation for small holders and market vendors
- survey of local markets, farms, consolidators, shippers to measure FLW
- Promoting benefits and needs of food for cold storage especially low tech versions, zero energy cooling systems
- Cold Chain Summit in Caraga Region Nov 2018

LINK 7. Forming Partnerships for nutrition sensitive agriculture, improve food quality and safety and reduce FLW





What we do:...

- Promoting Climate Smart Agriculture systems for responsive food chains: irrigation, rain shelters, fisheries water quality control, animal feed local substitutes SBM, adapted seed varieties
- Communications and outreach program to promote concepts / awareness via campaigns, social media, video, radio blasts, IEC materials
- 17 PPPs with Gov Agencies, Meat Processors, Traders, Wholesalers, Feed Suppliers, Seed Technology: build, support or improve cold and dry storage, food safety campaigns, supply of inputs, farmer training and extension.

INDICATOR	TARGET	PROGRESS MARCH 2018
Number of agricultural producers reporting decreases in post-harvest losses from post-harvest handling techniques and technologies	10,400	6824
Number of agribusinesses using improved cold chain	50	8
Percentage decrease of total harvests lost during post-harvest / transit by farmers	ND	ND

What is needed to reduce FLW....

- Need more PPPs and private sector funded rural infrastructure and logistics for safe storing, handling and transporting food
- Convergence and integration of govt programs across: agriculture, nutrition, food standards regulation, public health is needed
- Awareness of food loss and waste across markets / value chains/ consumers/ agencies = NEED DATA!!

THANK YOU

Nicholas Richards Nicholas.Richards@winrock.org











pccp.info@winrock.org



www.winrockpccp.org www.winrock.org fb.me/winrockpccp2013

@pccp_wi