

Eastern Indonesia-Agribusiness Development Opportunities

Stakeholder Consultation Workshop

Beef

DFAT Aid

ACIAR Project AGB-2012-005

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Australian Government
Australian Centre for
International Agricultural Research



Eastern Indonesia Agribusiness Development Opportunities (EI-ADO)



- Research commissioned by ACIAR, implemented by Collins Higgins Consulting and Indonesian partners
- EI-ADO project objectives:
 - Identify five commodity value chains linked to NTB, NTT and East Java with most potential to increase income of poor farmers
 - Identify opportunities and interventions with most potential for improving the efficiency, competitiveness and income of poor farmers
- Information and recommendations from EI-ADO study to inform DFAT in the design of the Australia Indonesia Partnership for Decentralisation – Rural Economic Development Program (AIPD-Rural).
 - \$112 million DFAT funded development program targeting Eastern Indonesian

AIPD-Rural



- **Goal:** Increase the net income of 1 million poor male and female farmers by at least 30% by 2022 (300,000 of which should be reached by 2017)
- **Objective:** to increase the competitiveness of poor male and female farmers
- **Strategy:** address the “systematic” constraints of the agricultural sectors that are important to the poor in selected districts
- **Outcomes:**
 - Improved farm practices
 - Increased access to input and markets
 - An improved sub-national business enabling environment
- **Approach:** Market Development or M4P

EI-ADO Methodology

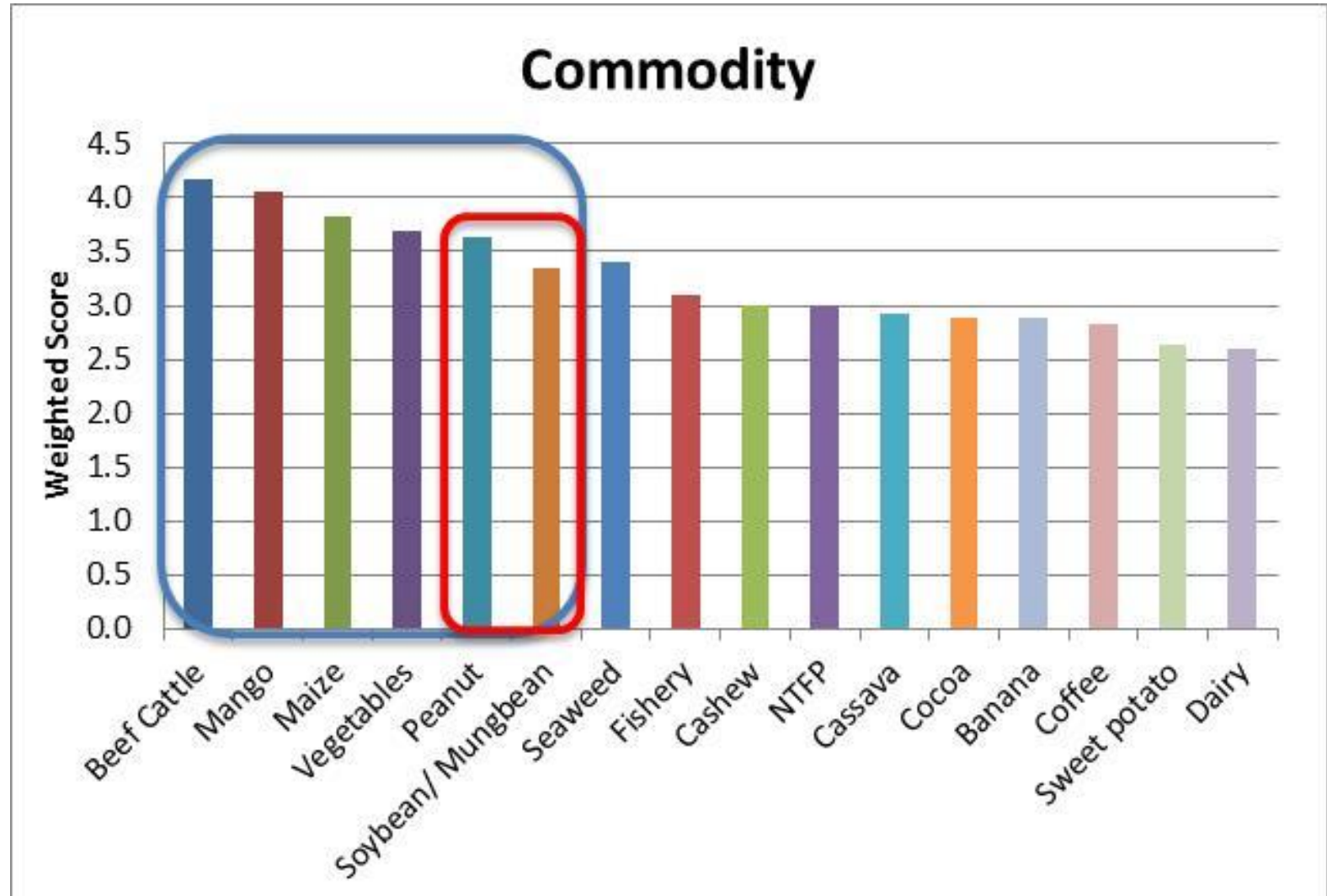


- Initial identification of 32 commodities
- Reference Group selected down to 16 commodities
- 16 commodity literature reviews preformed
- Provincial and Reference Group consultation for commodity prioritization
- Identification of 5 priority commodities for detailed value chain studies.

1. Beef	
2. Legumes	Soybean, mungbean, peanut
3. Mango	
4. Maize	
5. Vegetables	Chilli, shallot, tomato & potato

Commodity Prioritisation

Commodities with most potential to increase income of the poor



Beef Presentation



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Project Approach

Beef value chain team

Name	Role	Fieldwork areas	Organisation
Dianne Mayberry	Commodity Specialist	East Java.	University of Queensland,
Teddy Kristedi	Commodity, value chain and fieldwork expertise	East Java	ACIAR
Dahlanuddin	Commodity Specialist	NTB	University of Mataram
Marthen Mulik	Commodity Specialist	NTT	University of Cendana
Scott Waldron	Value Chain Specialist, Team leader	All areas	University of Queensland
Simon Quigley & Dennis Poppi	Commodity Specialists	No fieldwork	University of Queensland



Project Approach



Methods

- M4P framework, AusAID intervention guidelines
- Extensive literature, statistical and policy reviews
- Fieldwork 32 days, 68 interviews
- Technical input within and outside team, several reviews & iterations on report

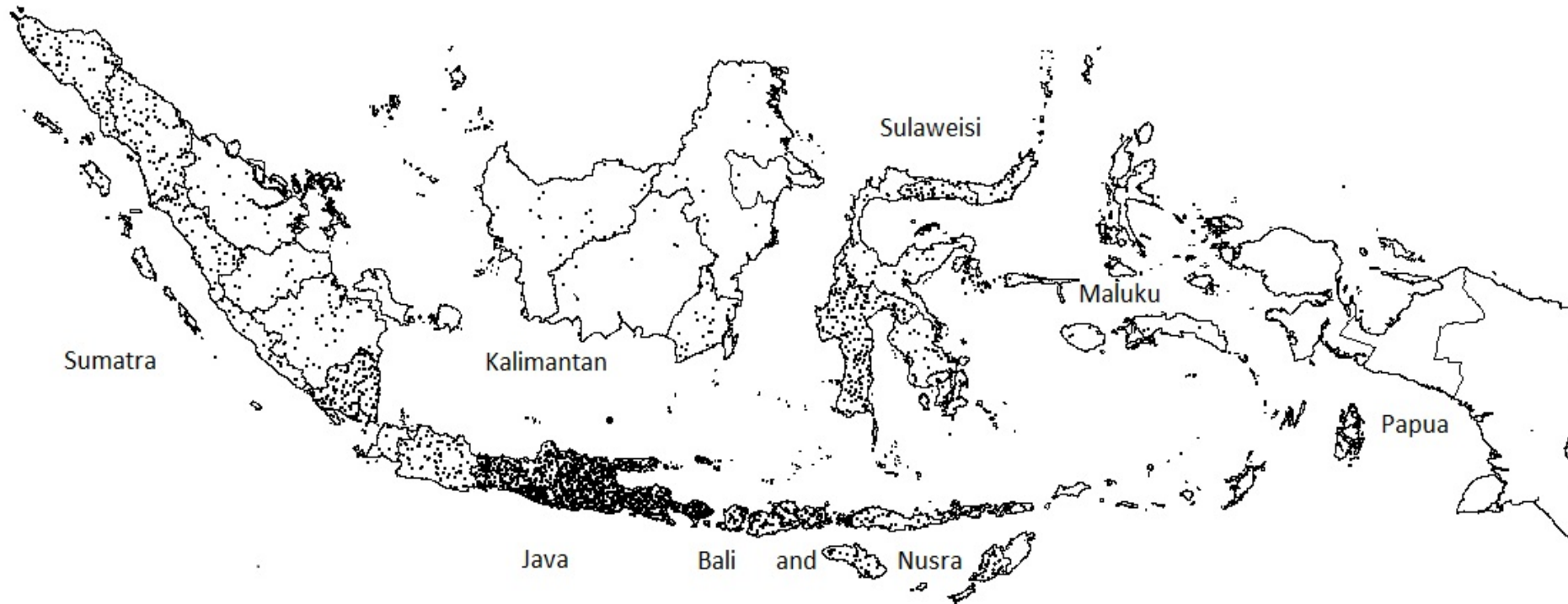
Output

- Detailed report on virtually all aspects of the EI beef industry
 - Can't cover much of report today
- Interventions identified for PRISMA
 - Focus for today

Limits

- Limited fieldwork, only in EI
- Intervention information developed – on project parameters & analysis of chain structures
 - Not business models / plans developed with potential partners

Cattle Distribution and Density



Cattle map

1 dot = 5,000 head

Source PSPK, 2011 bovine census

Fieldwork

Breeds and densities of cattle

Weather and crops

Scale of production

Comparative advantage

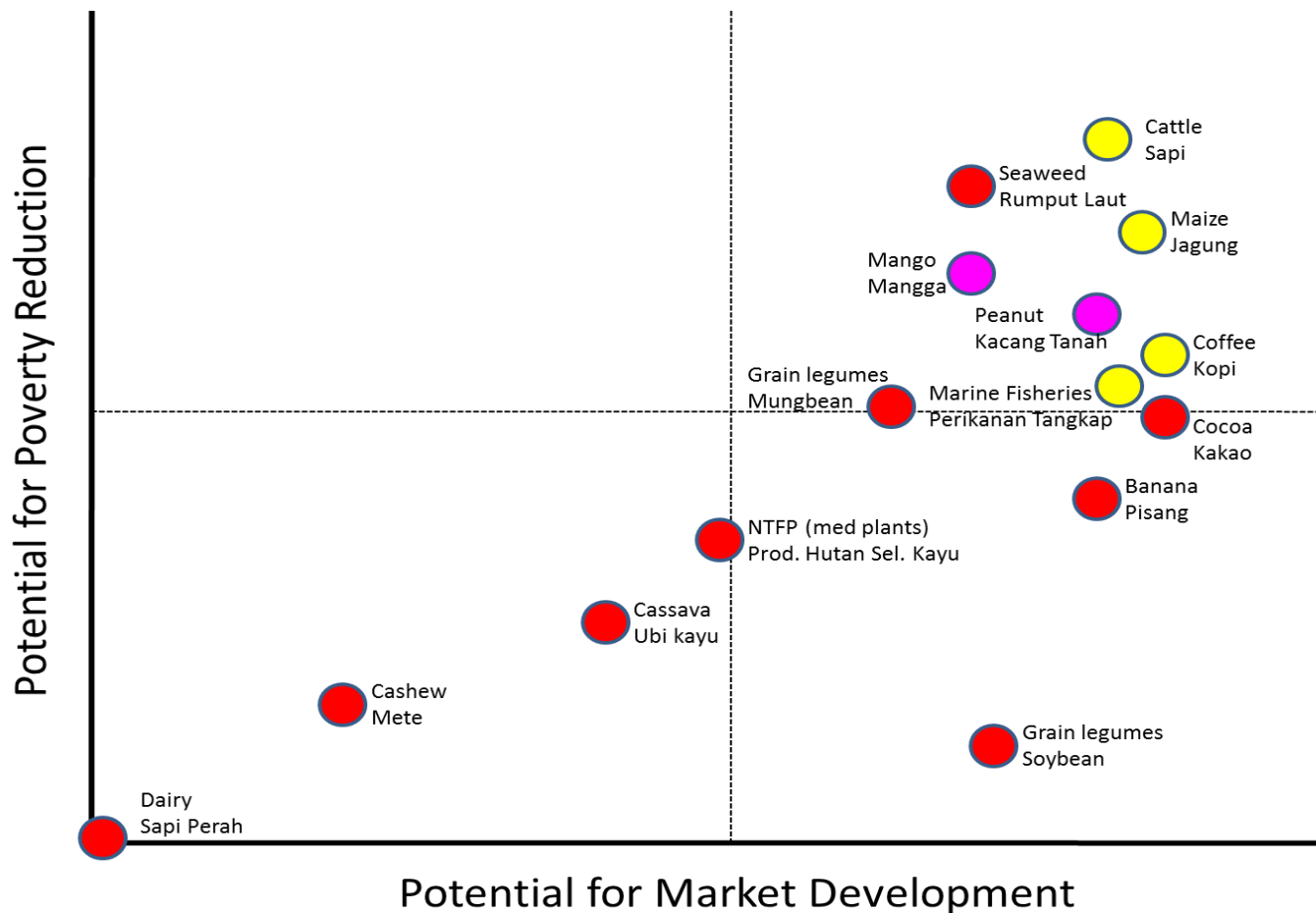
Trade

Major Interests in the Beef Sector



Major interest in the beef sector is from domestic and international agencies

Quadrant Graphs from 2012 Consultations



Estimated Employment in Beef – EJ, NTB, NTT



- 1.55 million cattle producers
- 15,000 cattle traders
- 19,000 in slaughter sector
- 7,000 beef stallholders in wet markets
- Total of 1.6 million people (approx. 80% in EJ)
- Excluding input providers (vets, AI agents, extension staff), feed growers and traders, cattle brokers, transport operators, beef processors, beef and by-product traders etc.

*Cattle play important livelihood roles
Chain actors can be low income,
landless, women ...*

Productivity

Cattle production thought to be inefficient & uncommercialised

For example - slaughter rates

East Java – 11%

NTB – 8%

NTT – 5%

Compared to

Indonesia – 15%

SE Asia – 14%

World – 21%

Australia – 31%

So sector thought to have high potential for productivity gains & commercialisation



Demand - Consumption

Current low consumption (1.3+kgs per capita). But beef has established place in diet.

Growth in demand expected due to:

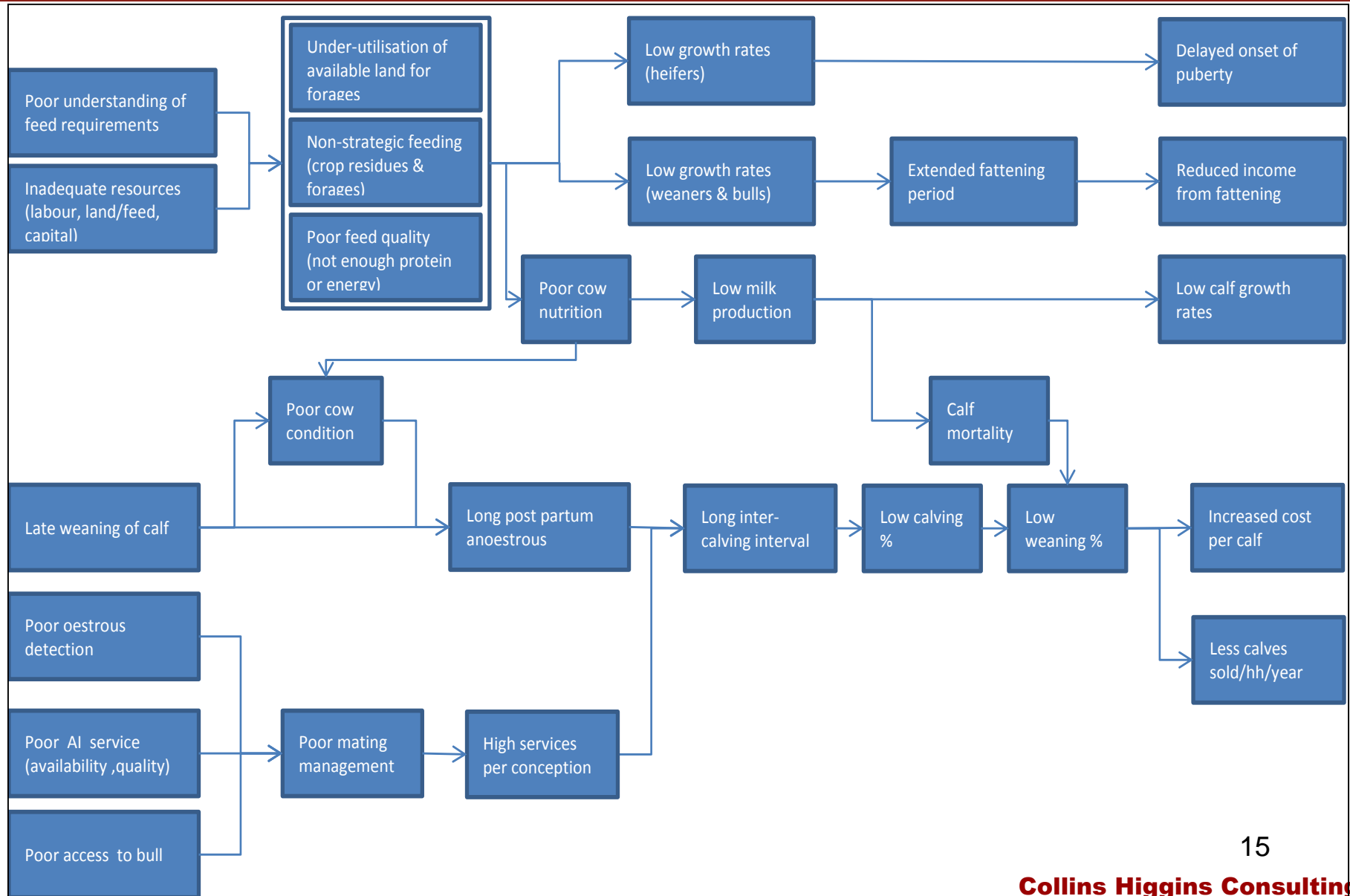
- Population growth - 1% p.a
- Urbanisation - 1.7% p.a
- Incomes (+ve expenditure elasticities for beef)

So...

- Macro settings.... suggest high potential for poverty reduction and market development
- But how does this play out
 - At household level?
 - Within value chains?



Problem Tree for Ongole, Brahman and Euro-X cattle production in EJ



Management Practices – Smallholder Bali Cattle Production Systems in NTB (AS2/2000/103)



- Improved oestrus detection and access to bulls or AI services
- Increased production or utilisation of feeds (residues, tree forages, grasses)
- Strategic allocation of feeds
 - Lower quality maintenance requirements of dry cows
 - Higher quality feed for cows at calving and lactation
- Early weaning and feeding of calves
- This leads to
 - Puberty at a younger age
 - Higher physiological growth potential / growth rates at later stages
 - Reduced sales age, increased turnoff rates and revenues
- Weaning pens, pen sanitation and the composting of animal waste

Budget Analysis – Smallholder Cattle Production System

System

- Upland East Java (Malang)
- 2 crops/year (rice, corn), forages on bunds
- 2 Ongole cows, AI'd
- Grow calves to slaughter (30mo), Rp24,000/kg LW
- Under 2 productivity scenarios



Productivity scenario	Low	Higher
Straw (% body weight)	1.7	1.5
Forage (% body weight)	0.3	1 + bran supplement
Mortality (%)	5	0
Av. weight cow (kgs LW)	280	305
Calving (%)	40	60
Weaning age (month)	7	5.5
Weaning weight (kgs)	90	109
Liveweight gain (kg/hd/day)	0.3	0.4
Total Revenue	5,890,280	12,203,310
sales revenue	5,469,720	11,724,000
Total Costs	2,957,086	5,854,875
own-produced feedstuffs	506,625	527,024
collected and purchased feed	1,363,891	3,135,049
other variable costs	274,675	326,750
depreciation	300,000	500,000
transport costs (including feed)	511,895	1,366,052
Gross profit (returns to capital, labour and management)	2,933,194	6,348,435
less opportunity cost of inventory/capital	2,902,076	4,169,308
Net profit (returns to labour & management)	151,366	2,179,127
less opportunity value of family labour	608,760	1,281,600
Net profit (returns to management)	(577,642)	897,527
Share of total household income (%)	-23.6%	19.4%

Systematic Change at Household Level



- Change appears feasible
 - Well-understood & simple management changes / packages
 - Economic incentives in place for uptake
- But is not straightforward
- There are no single ‘technical fixes’
 - An integrated suite of management changes are required
- Cattle management embedded in cultural “outlooks”
 - Cattle held as source of “savings”
 - A more target-driven approach required (profit / productivity)
 - For more progressive produces
- Long-term, repetitive capacity-building required, but not currently delivered through
 - Extension system, many government programs or the agribusiness sector

Approaches to Facilitating Change



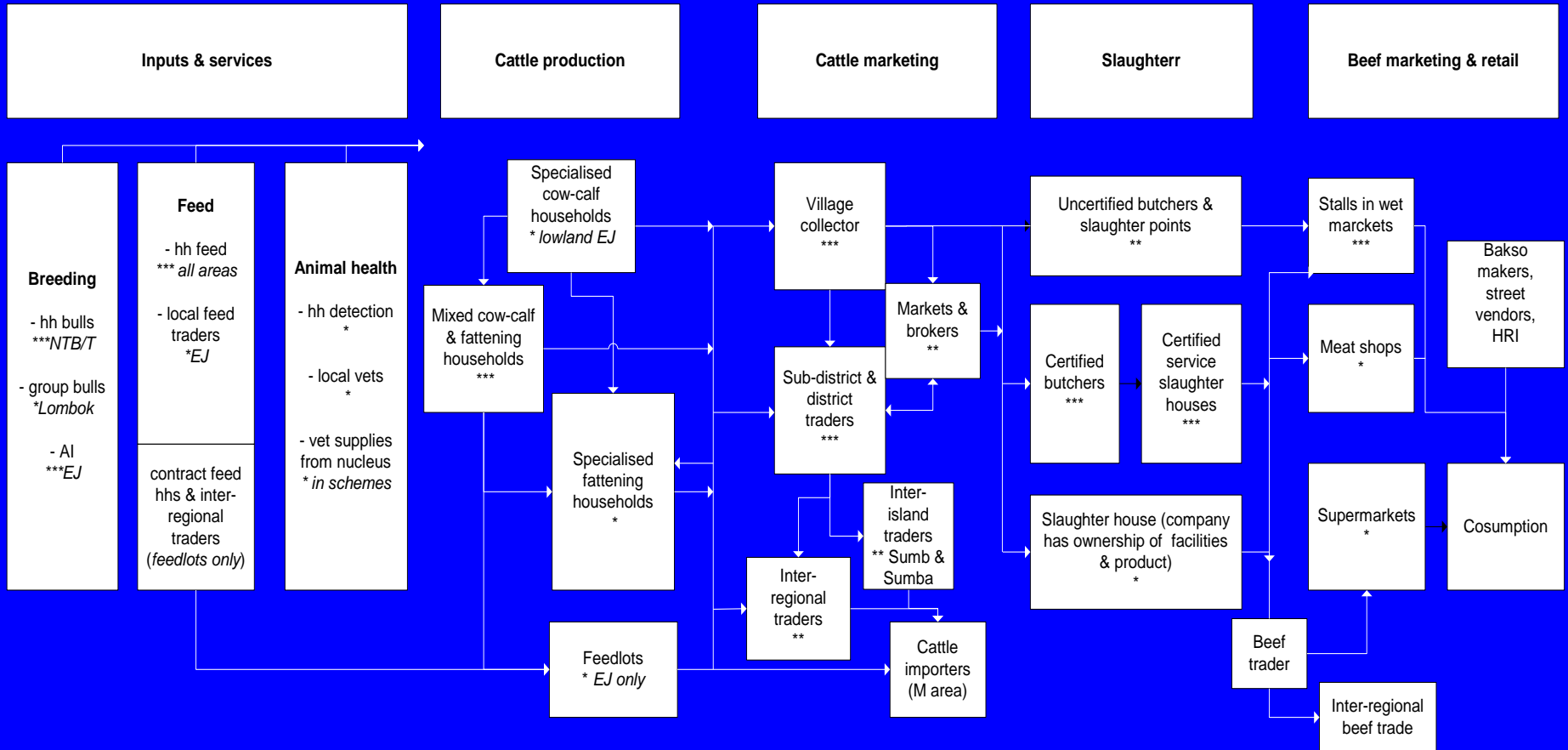
- “Bottom-up” approach
 - On-farm Indonesian programs, ACIAR, IndoBeef groups etc.
 - Within particular research and project groups
- “Top-down” approach (PRISMA)
 - Off-farm drivers of change & commercialisation
 - Source of dissemination & scale – catchment areas of buyers
- Synergies between these

'Top-Down', 'Lead-Firm' PRISMA Approach



- Linkages between agribusiness actors & farmers
- To generate embedded services, target-driven production systems, access to finance etc.
- Search for partners, intermediaries, targets
- With mutual incentives to work together
- Within context of industry structures, settings, dynamics

Beef Value Chain of Eastern Indonesia



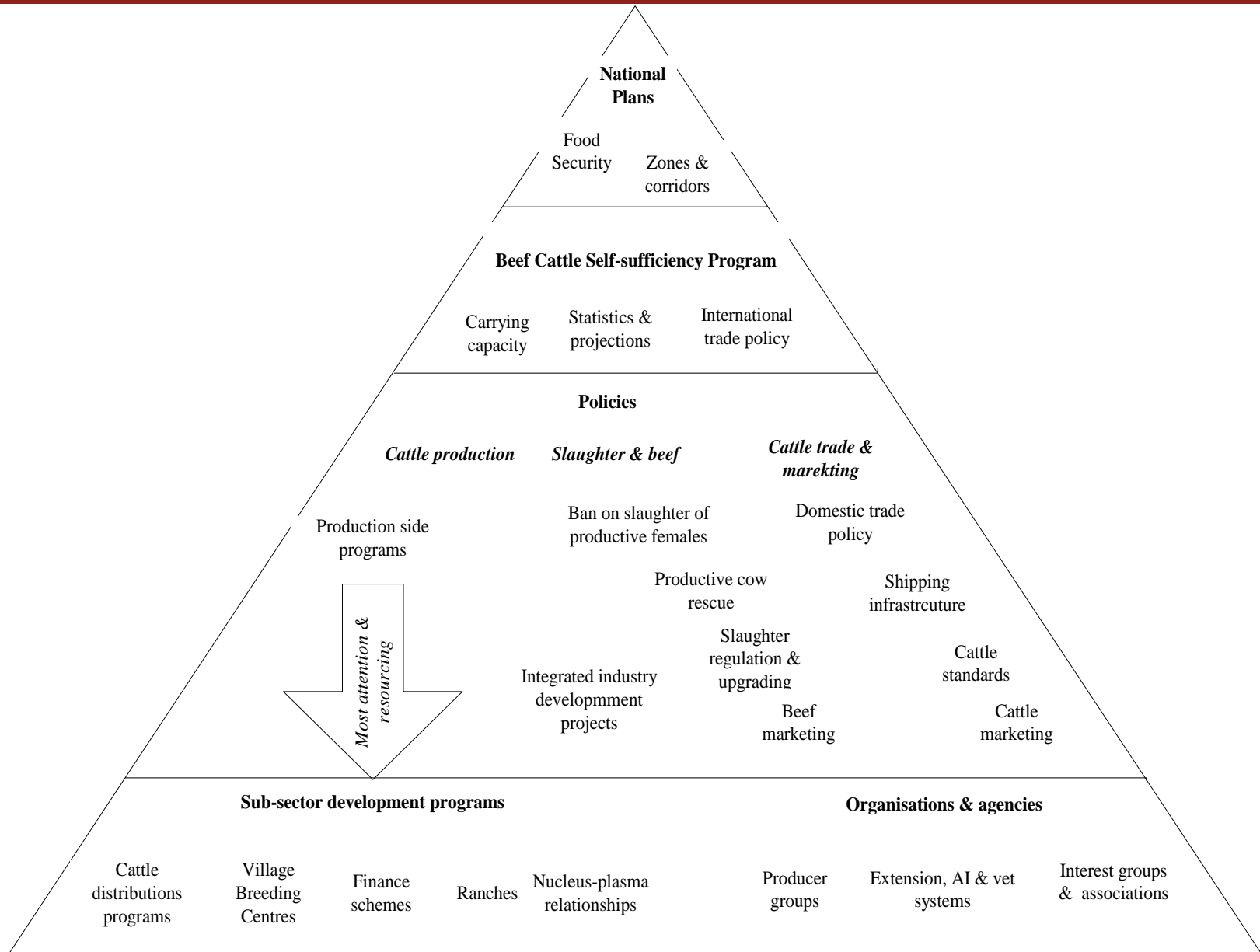
- Flows & structures
- Supply chain – efficiencies & inefficiencies
- vs value chain
- Location and type of lead firms in chains

Common Interests of Agribusiness and Producers (general)



- For input providers (AI agents and feed traders)
 - Expand markets and sales
 - For cattle buyers (traders, butchers, feedlots, cattle marketing companies)
 - Access to cattle to specification
 - Communicate preferences more directly with producers (lot size, breed, weight, height, timing and pricing etc)
 - Reduce purchase, aggregation, holding costs
 - For producers
 - Facilitate more target-driven & commercialised production / management systems
 - Technical advice, services, finance/backing
 - Potential for modest price premiums
- For industry and rural development
- Dissemination of linkages and practices – in catchment areas of input providers & cattle buyers (can be large)

Policy Hierarchy

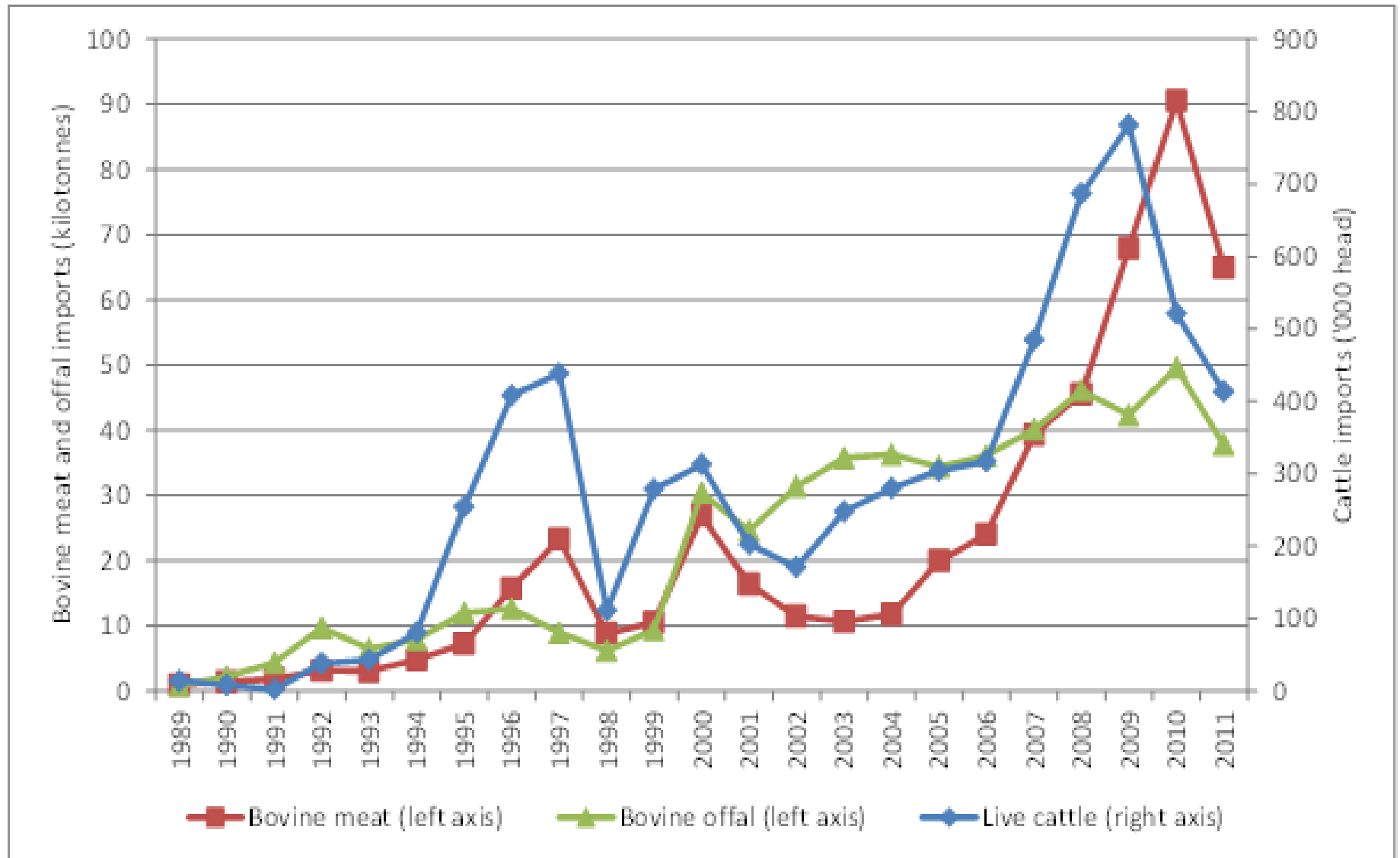


Cattle Distribution Programs

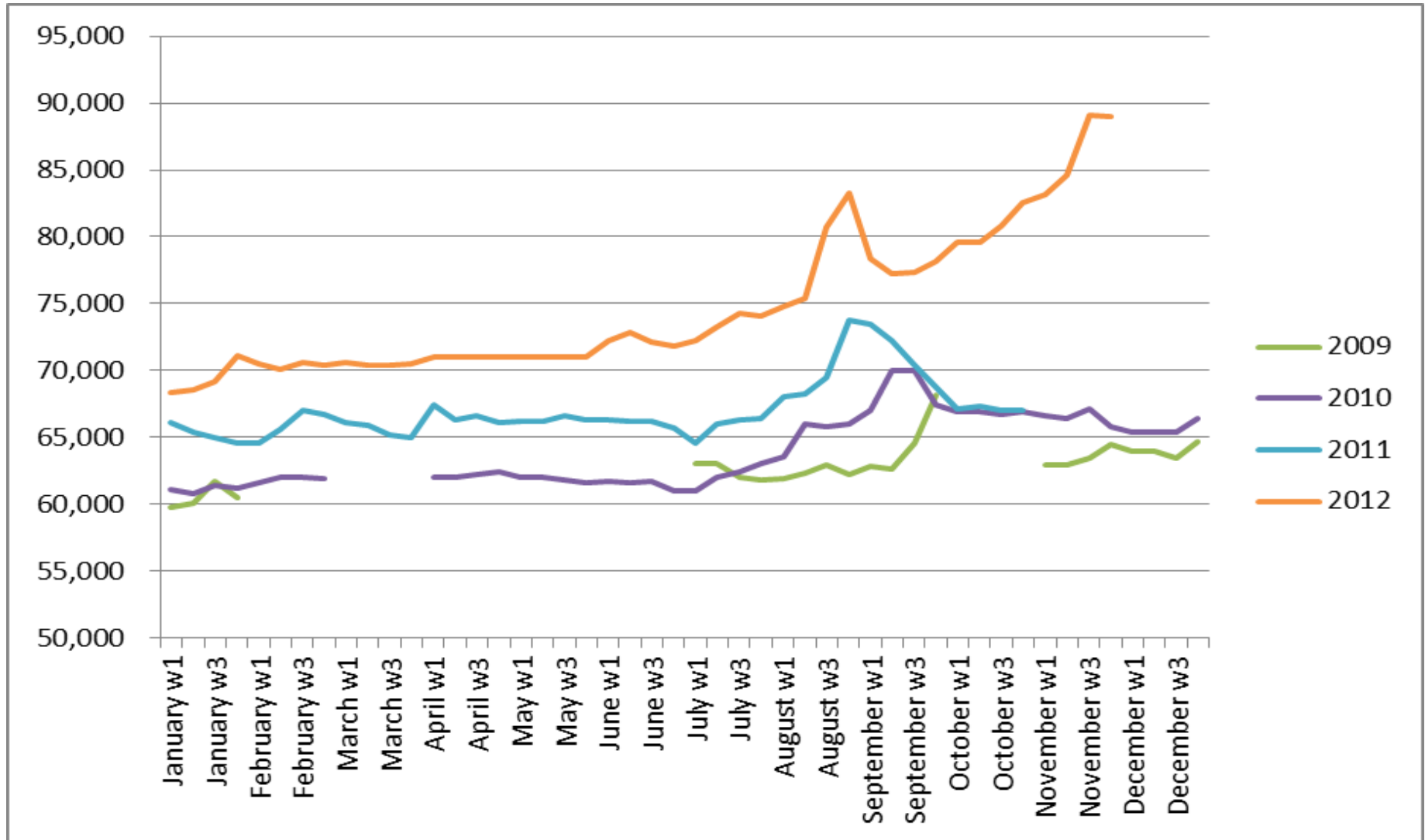
Scheme	Partners	Terms
Government schemes		
SMD (Graduates Building the Village)	<ul style="list-style-type: none"> University graduate assigned to village or kelompok Salary for the first year, then self-funding 	<ul style="list-style-type: none"> Rp300 mil allocated to group Return 2 calves, then own cow
Kopel (sub-district extension system)	<ul style="list-style-type: none"> Central government through bupati Sub-district extension agent 	<ul style="list-style-type: none"> ST - return 9 calves over 5 years Or 3 calves in 5 years
PPDKP (Breeding livestock development in regions)	<ul style="list-style-type: none"> Centrally funded Supervision of Dinas 	<ul style="list-style-type: none"> Grant – but can't sell cow
BSS (land of one million cattle (NTB))	<ul style="list-style-type: none"> Provincial funding No facilitator 	<ul style="list-style-type: none"> Similar to SMD
And another 9 ministries and government departments!		
Community/religious/NGO schemes		
BLM (Direct Community Assistance)		<ul style="list-style-type: none"> Return 2 calves in 5 years
LM3 (independent public institutions entrenched in the community) (NTT)	<ul style="list-style-type: none"> No facilitator 	<ul style="list-style-type: none"> Rp300 mil per group Based on diversified, complementary commodities
Corporate schemes		
Pertamina, State Oil and Natural Gas Mining Company	<ul style="list-style-type: none"> Pertamina, Gadjah Mada, Ministry for Less Developed Regions Sub-district Technical Services Department on ground support 	<ul style="list-style-type: none"> Bima Set up for cattle production and biogas.
And many other corporate responsibility programs (mining, cement, airports)		

- Cattle 'rescue' and re-distribution programs
- For at least 1,000 groups between 2010 and 2012
- Especially NTB & NTT
- Cannot be avoided in any sector program
- May be benefits in developing linkages

Indonesia Imports – All Sources



Weekly Beef Prices in Jakarta



Implications



- Increased competition for slaughter and breeder cattle in EI.
- Results in:
 - Upward pressure on cattle prices
 - Increased difficulty for cattle buyers (butcher, traders, feedlots) to secure cattle to specification at prices that enable viability
 - Greater domestic trade flows (also subject to local quota and disease restrictions)
- Favourable conditions in which to conduct a beef project
- However, policy measures are to / will be wound back
 - Price corrections can be expected
 - Some traders, butchers and feedlots in EJ will switch back to imported cattle
- However, the fundamentals of (constrained) supply and (growing) demand for beef in Indonesia will remain
- Still D for local cattle

Supporting Information



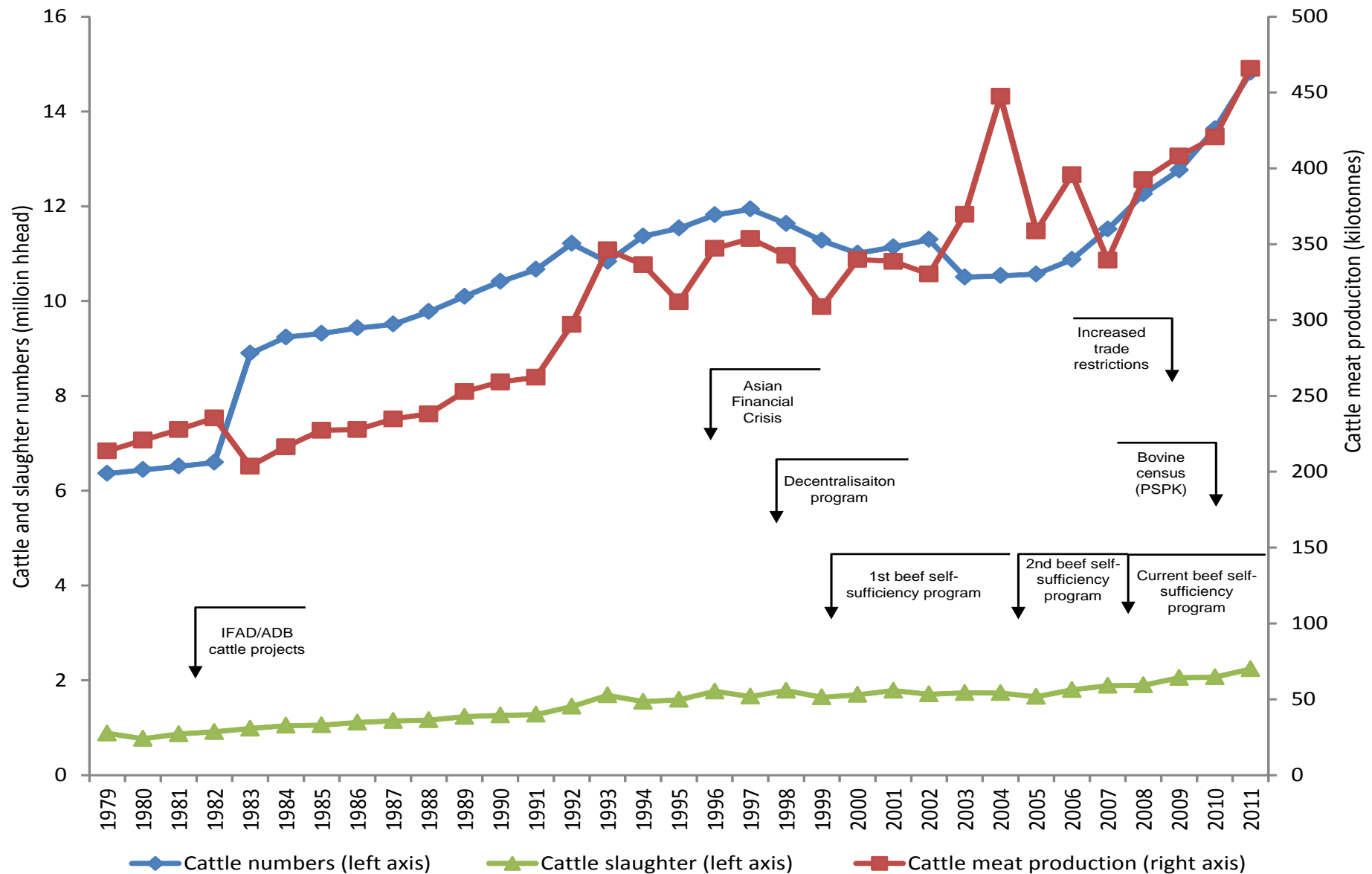
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Beef Value Chain Fieldwork Summary – Oct/Nov 2012

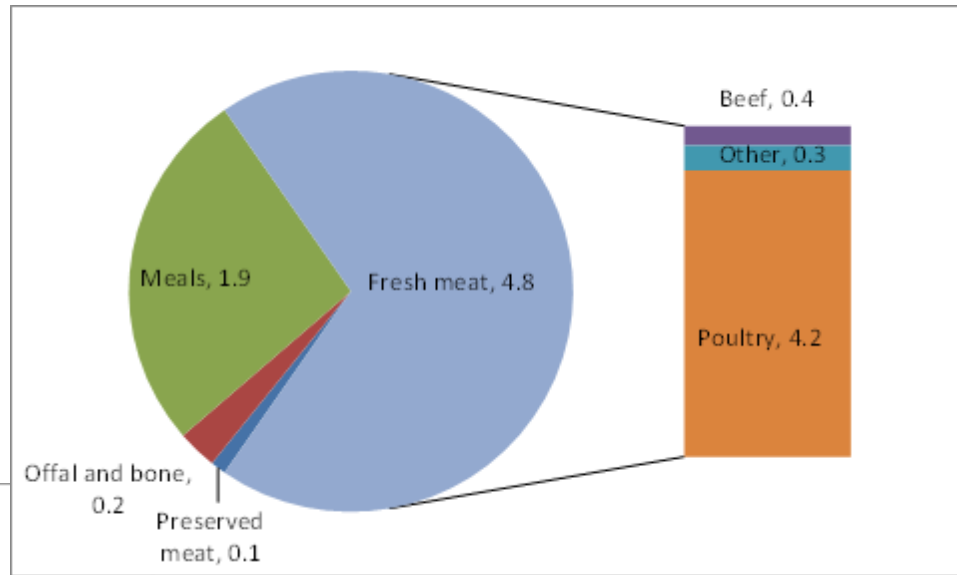
	Input Supplier	Banks	Port / holding yards	Government	2armers / farmers groups	Feedlots	Nucleus- plasma	Traders	Markets	Slaughter	Retail	Assoc / NGO	Total
East Java													
Surabaya		1	1	2				1		1	2	1	9
Tuban					1	1	1		1				4
Malang	1			1	2	1		1	1	2		1	10
Probolingo	1					1							2
NTB													
Mataram	1	1	1	4					1	2	3		13
Central Lombok					2		1	1					4
Bima					2							1	3
NTT													
Kupang			1	2	1		2			1	2	1	10
Sumba Timur			1	2	3			2	1	1		1	11
TTU				1	1								2
Total	3	2	4	12	12	3	4	5	4	7	7	5	68

Production Statistics and Policies



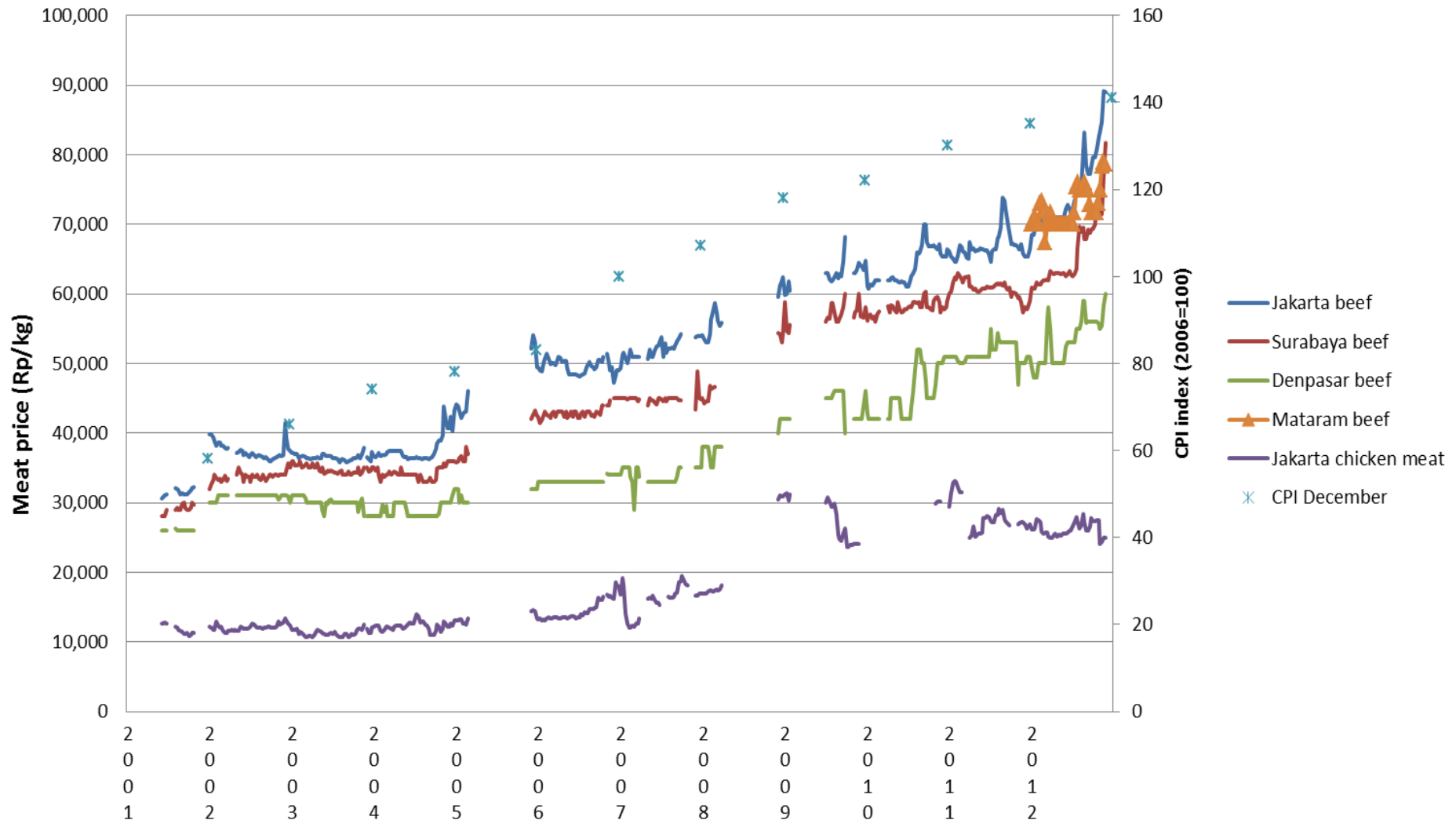
Demand

Annual per capita meat consumption (kg)
Source: SUSENAS



Daily per capita protein consumption (g)
Source: SUSENAS

Inflation, Beef and Chicken Meat Prices Selected Cities, 2001 - 2012



Incentives of Agribusiness to Participate



- Few / weak linkages or services now. So why would this change?
- On the inputs side, AI agents and feed traders:
 - Improved breeding and feeding practices can increase their market and returns
 - Success rates of AI can be increased if suppliers (breed centres and their agents) work more closely with producers for timely oestrus detection and service delivery.
 - Feed traders can expand their markets if they participate in feed training programs with project fattening groups and households, and disseminate advice and training to other non-project groups and actors.

Incentives of Agribusiness to Participate



- Cattle buyers (traders, butchers, feedlots, cattle marketing companies)
 - In “open” markets (weak linkages) have few costs in providing services etc.
 - But incur high search, aggregation and holding costs to put together consignments of cattle to specification. In some cases cannot access sufficient supply to meet orders
 - Links with progressive cattle producers & groups reduces costs and increases continuity for the buyers
 - ESPECIALLY IN CURRENT MARKET OF TIGHT SUPPLY

Pros/cons of Coordinating with Existing Programs

Upside	Downside
Very large numbers of cattle, groups and households	Handouts, government property, household ownership / responsibility, period until ownership, sell cows / renege
On the ground staff in some schemes, or technical support from extension system	Can be weak
Necessarily involves groups	Groups are [empty] formed for scheme
Potential for improvement in production systems, and downstream activities / marketing	Can be poorly integrated into farming systems
	Risks that the schemes will stop
	Complications of working in existing / government schemes

Integration of Farmers into the Value Chain



Weak linkages

- Participation of farmers in markets??
- Information on markets, prices, preferences
- Feedback from downstream (traders, butchers)
- Services (traders, official extension)
- Knowledge of attributes & value of cattle
- Even programs (cattle distribution)

But there are some exceptions!

Weak Linkages of Agribusiness with Farmers



- Input suppliers no incentives to provided embedded services to farmers
- Few feedlots in EJ – weak backward links
- Slaughterhouses no incentive – service kill plants
- Traders and butchers buy on open market, through networks, few formal linkages
- With some exceptions!!!
- To develop and build into program

Production Systems

Intensity of crop-livestock systems		Wet tropics		Dry tropics			Enterprise mix				Scale	Land				Breeds	Price
	Fieldwork site	Lowland EJ	Upland EJ	Intensive NTB	Semi-intensive NTB, NTT	Extensive NTT	Feedlots	Cow-calf production	Fattening households	Mixed operations	Cattle (head)	Cropping land (ha)	Crops/year	Trees & forages (ha)	Collective grazing land		Local bull 270kgs (IDR/kg/LW)
	East Java																
Intensive	Probolingo	1					1	1	1		3	0.4	3			x-breed	25,000
	Malang		1							1	3	0.75	2			x-breed	24,000
	NTB																
	Central Lombok			1				1	1		3	0.2	3			Bali	25,500
	Bima				1					1	5	0.6	2	0.4		Bali	22,000
	NTT																
	TTU				1					1	5	0.5	1	0.5	20	Bali	
Extensive	Sumba Timur					1				1	7	0.5	1	0.5	40	Ongole	22,000

Cattle

	Indonesia	Java	Sumatra	Bali, NTB, NTT	Kalimantan	Sulaweisi	Maluku and Papua
Total cattle (mil. head)	14.8	7.5	2.7	2.1	0.4	1.8	0.3
<i>% of national herd</i>	100	51	18	14	3	12	2
Compound <i>av ann.</i> <i>Growth 2003-11 (%)</i>	5.3	3.9	9.7	5	4.9	7.8	4.8
Breed composition (% of herd)							
<i>Bali</i>	32	3	25	95	63	79	83
<i>Ongole</i>	29	42	29	4	11	8	14
<i>Madura</i>	9	16	2	1	12	0	2
<i>Other</i>	30	40	44	0	14	12	1
Sex							
<i>% females in herd</i>	68	68	68	67	64	71	67

Source: 2003 Ag Census, 2011 Bovine Census

Eastern Indonesia Cattle Programs



- Cattle distributions schemes
- Village Breeding Centres
- Ranches??

- Groups
- Finance schemes (KUPS & KKPE)

Village Breeding Centres



- Distribute cattle, including breeding stock
- Can be on the ground staff (SMD)
- Record production
- Grade breeders
- Redistribute to for breed improvement

Intervention Recommendations



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Intervention Identification



- Numerous potential interventions rejected
 - Not discussed here
 - See Beef Value Chain Report (2013) “SWOT” and “areas for further research”
- Promising potential interventions outlined
 - Based on project parameters
 - As concepts with supporting rationale
 - Specific business models / plans not yet discussed with potential partners
- A further round of sharpening and culling required
- To build business models and to negotiate with potential partners

Intervention Identification



Seven (7) interventions identified

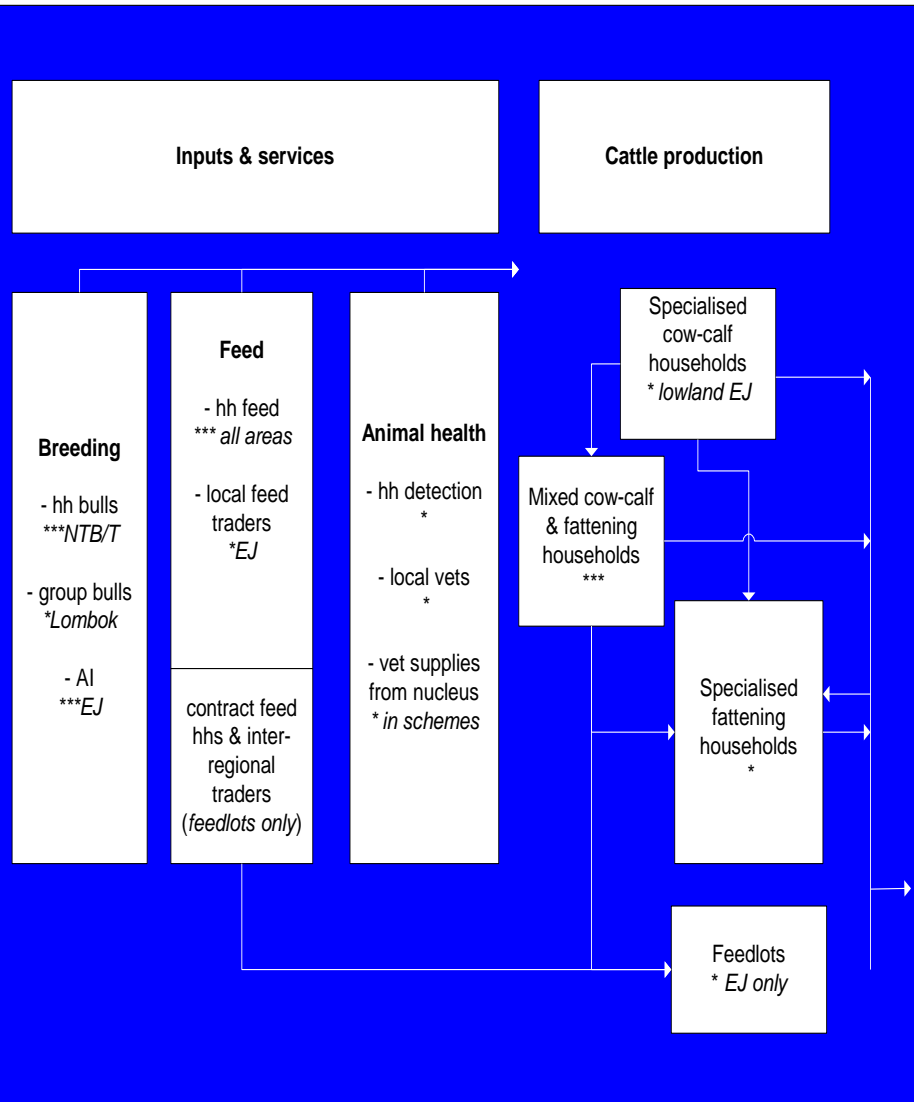
Inputs

1. AI in East Java
2. Feed traders and cattle fatteners in East Java

Outputs (cattle buyers)

3. Contract fattening in East Java
4. Feeder cattle for feedlots in East Java
5. Slaughter cattle for butchers in Eastern Indonesia
6. Breeder cattle for inter-regional traders in Lombok
7. Slaughter cattle for cattle marketing agencies in West Timor

Interventions in the Inputs Sector



AI agents and feed traders have incentives to participate

- Improved breeding and feeding practices by producers can increase market, sales and returns of the input providers
- Breed centres and AI agents can increase services/fees by working more closely with producers for timely oestrus detection and service delivery
- Feed traders can expand their markets if fattening groups and households improve feeding practices, more evenly over the year

Intervention 1: AI in East Java



Practice change

- Genetic improvement / genotype not the focus – but may play a role in package of reproductive interventions
- The focus is on timely delivery of genetic material
- Function of:
 - Accurate oestrus detection by farmers
 - Farmer communication with AI agents to provide service within oestrus period
 - If not, leads to extended calving intervals
- Household returns sensitive to calving intervals
 - If pregnancy can be bought forward by one oestrus cycle (av 21 days), increases annual calving percentages by 5.8% and gross returns from cattle by 14.3%

Intervention 1: AI in East Java



Delivery model

- Partners - Singosari national breeding centre, Dinas Livestock
- Intermediaries – network of AI agents that deliver services. Many dozens in each district of EJ
- Target - cattle producers that use AI

Intervention 1: AI in East Java



PRISMA role in facilitating

- Closer working relationships between local AI agents and cattle groups in EJ
- Training of AI administrators, technicians and agents in AI delivery, establishment of QA protocols for semen storage, handling, delivery
- Training of agents in broader animal husbandry practices that effect oestrus (nutrition, BCS, weaning), and the development of resources (training material, exchanges) – to disseminate in groups
- Field days for AI agents to conduct training with farmers on oestrus detection, and establish protocols for communication with AI agents
- May be need in some groups for increased household access to small amounts of credit to pay for AI services
- Fee structures that reward successful conceptions (not just attempts) would increase incentives for AI agents

Intervention 1: AI in East Java



Location

- 10% AI coverage in NTB, constrained by distance and transport from Singosari, undeveloped network
- AI coverage 90% in East Java
- In intensive cattle production areas in EJ

Outreach

- 900,000 conceptions from AI in EJ. At an average of 2 cows per household, would service about 450,000 households.
- However, requires close AI agent–farmer linkages most feasible if conducted with organized cattle groups (much fewer)

Intervention 2: Feed Traders & Cattle Fatteners in EJ



Background

- Feed the major input & determinant of productivity in the cattle production systems
- Growing specialised cattle fattening sector
 - 10-12 small feedlots in East Java
 - Smaller specialised cattle fattening households (independent, clusters, contract)
 - And cattle traders and butchers – in holding yards
- Growth of vibrant feed trading sector
 - Small, medium, wholesale feed traders – operate in networks

Intervention 2: Feed Traders & Cattle Fatteners in EJ



Practice change (Priyanti et al., 2013)

- Constraints to development of feed market on demand and supply sides, esp around seasonality
- Feed traders can access plenty of feed in wet season (December-April) – but so can producers (on-farm or locally)
- Feed gap in dry season (May-November). Traders can supply by sourcing in various agro-climatic areas (incurring higher costs) and by paying higher prices, but can run down / exhaust stocks, or are priced out of the market
- Cattle producers lack finance and technology to store feed on-farm
- Measures to even out feed supply and demand would improve productivity

Intervention 2: Feed Traders & Cattle Fatteners in EJ



Delivery model

- Partner with large feed traders in EJ
- Links with (intermediaries are?) medium and small feed traders
- Targets are both feed traders and cattle fatteners

Intervention 2: Feed Traders & Cattle Fatteners in EJ



Activities

- Training and infrastructure on feed storage:
 - round bales, straw pits & treatment, drying, storage/baling & bagging.
- Facilitate closer links between feed traders and specialist feed suppliers
 - Specialist forage growers, contract corn seed producers, soybean processors, plantations
 - May be particular technical, logistic or regulatory constraints to address?
- Trials, demonstrations, training and training material on animal nutrition for fatteners
 - Feed, feed technologies, least-cost ration tools etc.
 - Feed traders could participate
- Provide feed traders with training materials and tools to disseminate
- Finance options for both feed traders and buyers could to be explored

Intervention 2: Feed Traders & Cattle Fatteners in EJ



Location

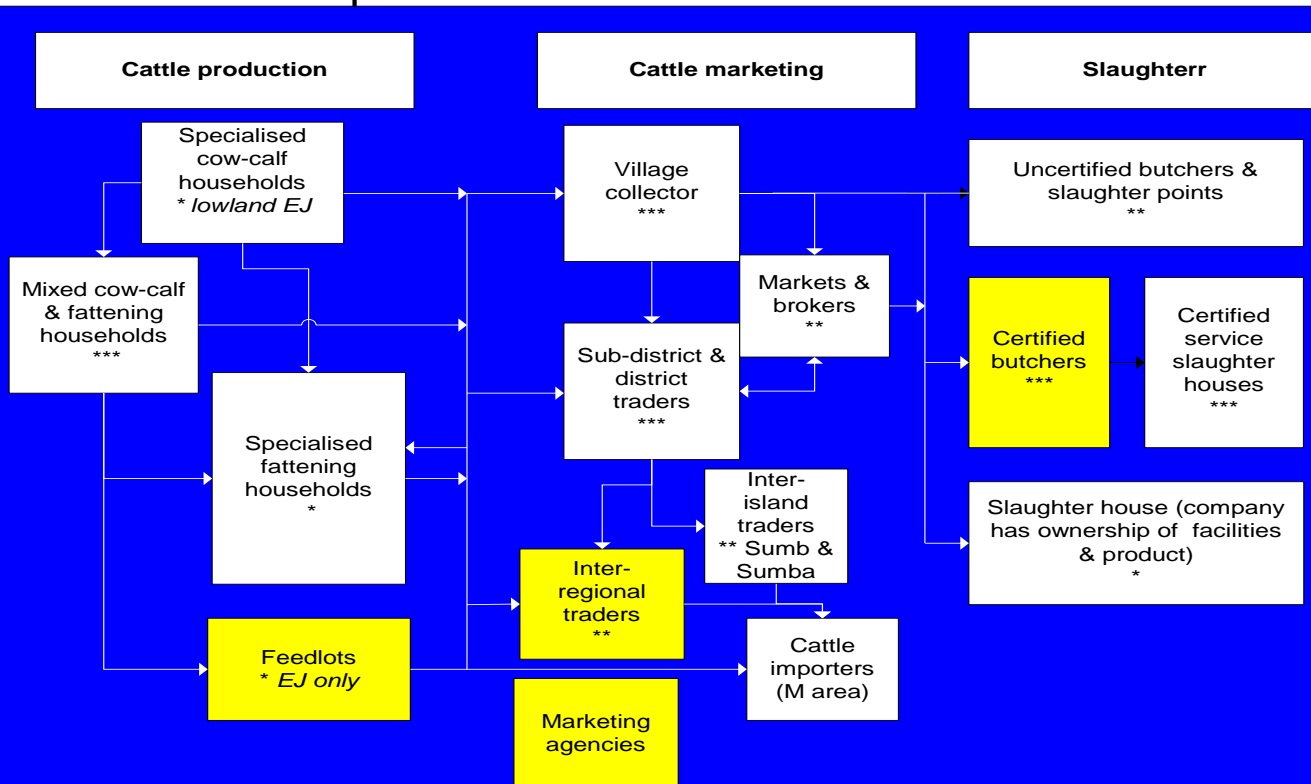
- Feed market most developed in lowland areas of EJ (e.g. Probolinggo)
- However specialised fattening occurs in large tracts of EJ (Probolinggo, Tuban and Malang.)
- Potential to apply to intensive cattle and feed production areas of Lombok

Outreach

- A large trader that sells 1 tonne of feed per day, might buy from five medium-sized feed traders, which in turn might source from 20 small traders or collectors
- Would provide enough feed for a year for a small feedlot or specialised fattening group (e.g. 40 head on a 180 day fattening regime)

Interventions in the Outputs Sector

- Under current procurement systems
 - Cattle buyers – traders, butchers, feedlots, cattle marketing companies
 - Have weak links with producers, so
 - Don't know background / performance of cattle
 - Incur high search, aggregation and holding costs to put together consignments of cattle to specification



Some buyers may have incentives to develop closer links with some producers / groups

Generic Steps for Developing Links Between Cattle Buyers and Producers/Groups



- Consult with cattle buyers to identify requirements on lot size, breed, weight, height and other specifications, timing and pricing
- Consult with cattle groups to establish interest, feasibility and incentives to meet these requirements
- Provide mechanisms through which buyers interact with producers
 - Feedback, training, extension material, veterinary products, finance / backing
 - Participation of buyers in group training activities
- Incorporate agreed demands into more targeted and market-driven production and marketing systems in cattle groups
- Establish, where beneficial, formal structures – off-take agreements, standard operating procedures etc.
- Establish mechanisms for dissemination of successful arrangements to other areas and groups.

Intervention 3: Contract Fattening in East Java



Background

Short-term cattle fattening is an attractive enterprise

- Not land-intensive, commercialised activity
- Fast turnover of cattle and cash
- For subsequent 'packages' of feed, cattle and capital

But can be demanding for individual producers

- Selecting, buying and selling cattle, feed, vet care, facilities etc.
- Low growth or adverse prices can easily mean –ve returns
- Significant capital costs and risks
- Access to finance critical

Contract fattening and technical/management assistance can reduce constraints

Intervention 3: Contract Fattening in East Java



Wahyu Utama in Tuban

- Small feedlot (1,400 head capacity)
 - integrated breeding, feed mill, slaughter, meat retail & restaurant
- Contractual relationships with about 100 fattening households,
 - WU sells 4 cross-bred or Ongole bulls to contracted producers (350 kg, 2.5 y.o)
 - Farmers buy cattle through KKPE loan scheme (subsidised at 4%)
 - Cattle fed 12kg/head/day WU ration, 120 days, 1 kg ADG
 - Wahyu Utama then buys back the cattle at 470 kg LW
 - Turnover 3 lots per year

Intervention 3: Contract Fattening in East Java

Returns to cattle fattening households contracted to Wahyu Utama (per head)

Item	Cattle
Total Revenue	13,132,800
Sales revenue	12,960,000
Total Costs	6,319,178
purchased feedstuffs (including transport)	5,760,000
other variable costs	59,178
depreciation	500,000
Gross profit	6,813,622
less opportunity cost of inventory/capital	2,171,200
Net profit (returns to labour & management)	4,642,422
less opportunity value of family labour	842,696
Net profit (returns to management)	3,799,726

But negative net profits

- Collateralised loans at market rates (13%)
- ADG 0.7 kg/day

Intervention 3: Contract Fattening in East Java



Practice change

- Contracted households not visited
- But manager said that he requires technical assistance and extension
 - Rations, animal health, penning
- Project could examine and discuss constraints and possible areas of assistance
- And potential for expansion of WU operation
- Would need to assess finance options

Delivery model

- Partner with Wahyu Utama
- Work through WU staff and consultants (intermediaries)
- Target contracted households

Intervention 3: Contract Fattening in East Java



Location

- Wahyu Utama in Tuban
- Growth of specialised fattening sector in East Java, but little on contract
- WU Utama model may be applicable elsewhere

Outreach

- WU – 100 farmers
- May be extendable elsewhere

Intervention 4: Feeder Cattle for Feedlots in East Java



Background

- No genuine feedlots in NTB and NTT
- 3 in East Java
 - Santosa (Probolinggo) 12,000 head capacity
 - Sapindo (in Malang) 2,500 head
 - Wahyu Utama (Tuban) 1,400 head
- If feed for 120 days, total turnoff 47,700 head per year
 - 1% cattle numbers in East Java
 - 6% of the provincial turnoff
- Sourced from
 - “Mixed” cow-calf households that keep feeders to 250kgs
 - And reportedly increasing numbers of specialised feeder production / backgrounding households (buy calves – sell feeders for latter-stage fattening)
 - Sector offers potential rural and industry development

Intervention 4: Feeder Cattle for Feedlots in East Java



Practice change

Incentives for feedlots

- Sapindo and Santosa source feeders through (large) traders that buy from markets / networks (efficient)
- But don't know the background / performance of feeders (critical factors)
 - Nutrition in suckling and backgrounding stages effects skeletal & physiological growth potential
 - Conformation, feet and disease
 - Major impact on feedlot returns – e.g. ADG 0.8kg compared to 0.9kg
- Links with cattle groups that produce a concentration of feeder cattle to specification can reduce costs / increase confidence in performance on feed

Intervention 4: Feeder Cattle for Feedlots in East Java



Incentives for specialised feeding households

- Purchase weaners at 89 kg and fed to 250 kg
- At ADWG of 0.4 kg
 - Cattle will reach the target weight in 400 days
 - Generates gross returns of IDR 1.8 million per head, but negative net returns
- ADWG of 0.5
 - Gross returns are IDR 2.4 million, net returns are positive.
 - If price premium of 10%, gross returns increase to IDR 3 million.

Intervention 4: Feeder Cattle for Feedlots in East Java



Delivery model

- Partners – large feedlots in EJ (Sapindo, Santosa, WU)
- Intermediaries – network of feedlot buyers / traders
- Targets - link with groups and producers

Intervention 4: Feeder Cattle for Feedlots in East Java



AIPD-Rural could facilitate feedlot-trader-producer linkages through:

- Training and field days for feedlots with groups
 - To communicate preferences and specifications
 - Extend expertise in nutrition, animal health and management systems
 - AIPD-Rural could also provide technical support in the areas
- Feedlots have bulk feed purchase and milling capacity – rations and mixes could be extended back to producers
- Formal or informal sales agreements could be discussed (lot size, specification-price schedule, finance?)

Intervention 4: Feeder Cattle for Feedlots in East Java



Location

- Sapindo – Malang
- Santosa – Probolinggo
- Wahyu Utama – Tuban
- But feedlots have procurement channels well beyond these districts

Outreach

- The feedlots could potentially reach 20 groups or 2,000 households
- Of these, perhaps $\frac{1}{4}$ may have the resources and interest to participate

Intervention 5: Slaughter Cattle for Butchers in Eastern Indonesia

Background

- Butchers play key role in beef chains
- Small-scale, integrated networks
 - Buy cattle from markets and production areas
 - Slaughter in service-kill facilities
 - Retail beef and offal in wet market stalls



Intervention 5: Slaughter Cattle for Butchers in Eastern Indonesia

Practice change

- Butchers have weak linkages with cattle producers
- Producers have incomplete information on the preferences of downstream buyers, or how to measure them
- Butchers require
 - Good body/muscle conformation – for dressing percentages and carcass weight for primary cuts
 - Cattle not going to be rejected or discounted for disease reasons (e.g. liver fluke)
 - Consistent numbers (e.g. 14 per week, more in Idul Fitri)
- Partner – with selected butchers (possibly butcher associations?)
- Targets – butchers and producers



Intervention 5: Slaughter Cattle for Butchers in Eastern Indonesia

Practice change...

Butchers have incentives to participate

- Reduces search, negotiation, transport, road fee and holding costs
- Cattle buying is done by the head butcher (boss)
 - 2 days of his time per week or IDR 313,000 per head slaughtered
 - Higher than slaughter costs combined



Intervention 5: Slaughter Cattle for Butchers in Eastern Indonesia

Activities

- Field days where butchers could communicate their preferences for cattle and the reasons
- Visits by some farmers or group leaders to slaughter facilities
- Assistance could be given to producers to assess the feasibility, costs and benefits of servicing this sales channel

Location

- Butchers throughout EI, but interventions / pilots best done in cities like Surabaya, Malang and Mataram and Kupang

Outreach

- E.g. 15 butchers would employ 105 slaughter workers
- Buy from up to 5,460 cattle producers
- Potential for dissemination of models through large butcher networks



Intervention 6: Breeder Cattle for Inter-Regional Traders in Lombok



Background

- Currently high demand for Bali breeding cattle (heifers and young bulls)
- The disease (brucellosis) status of Lombok means significant trade flows
- 13,600 head in 2012, 15,000 head in 2013
- Conducted through orders (300-1,200 head)
- And provincial standards (sex, age, weight, girth, height, length) and prices
- Oligopoly – only 3 traders – that often work together

Intervention 6: Breeder Cattle for Inter-Regional Traders in Lombok



Practice change

- Traders aggregate lots of 300-1,200 head for a given order
- Spend many months and large outlays to source cattle to specifications to meet orders
- High costs effectively deducted from prices paid to producers
- Not possible for groups to enter into formal supply agreements or contracts with groups or producers
 - Traders receive orders at variable times of the year for variable numbers of cattle to various specifications
- However, may be beneficial for groups to orient / specialise production systems to production of breeder cattle
 - And to link with traders
 - May include access to finance

Intervention 6: Breeder Cattle for Inter-Regional Traders in Lombok



Returns to specialised breeder production

- Cow-calf households turn off Class 2 breeders (12 m.o, 144 kg, 104 cm, 96 cm body length)
- ADG – 0.3kg
- Prices
 - Females - IDR5.5 mil. trader ---- IDR3.5 mil producer
 - Males - IDR 6 mil. trader ---- IDR4 mil. producer
- Gross profit / head - IDR 3.8 million
- Considerably higher with higher productivity & prices

Intervention 6: Breeder Cattle for Inter-Regional Traders in Lombok



Delivery model

- Partner with one or more of the 3 inter-regional breeder traders
 - H Saad Husni, H. Sabri or H. Fathullah
- These traders would develop relationships with cattle groups through:
 - Communicating directly with, and training / mentoring groups on specialised breeder production
 - May include animal health program and finance/backing
 - Price-grade agreement at household level could be explored

Intervention 6: Breeder Cattle for Inter-Regional Traders in Lombok



Location

In intensive cow-calf production areas, close to the traders – i.e. Central Lombok

Outreach

- H Saad Husni exports 2,800 breeders for export – 1,400 households
- Other traders have similar numbers

Intervention 7: Slaughter Cattle for Cattle Marketing Agencies in West Timor



Background

- NTT 'exported' 66,000 slaughter cattle in 2010
 - mostly from West Timor
- Cattle marketing agencies (not individual) traders accounted significant % of this
 - PUSKUD - 3-4,000 head and TLM – 500 head. Operate on a profit-sharing basis
 - Gejati – 3,000 head. A cooperative, and sell non-members cattle on commission

Intervention 7: Slaughter Cattle for Cattle Marketing Agencies in West Timor



Practice change

- In all agencies
 - Productivity was said to be is low, fattening periods are 'too long'
- In Amarasi sites, household and holding areas had poor feed, production, penning and sanitation.
- Agencies are interested in improving productivity, feed (tree forages and feed banks) and the flow of cattle into and from the contracted groups

Intervention 7: Slaughter Cattle for Cattle Marketing Agencies in West Timor



Income effects

- No formal budgeting done
- Benefits depend on the valuation of household inputs (labour, feed) and company inputs (veterinary products, technical services and marketing).
- Ownership structures increases accessibility for the poor, but may also reduce net margins and incentives to maximise productivity and profitability for households

Delivery model

- Partner with agencies (PUSKUD, TLM, Gejati)
- Intermediaries – vets and extension staff of the agencies
- Targets – contracted cattle producers

Intervention 7: Slaughter Cattle for Cattle Marketing Agencies in West Timor



Activities

- Assist the agencies to establish more productive fattening systems tailored to their contracted households, groups and areas
- Based around training, research and piloting
- Facilitating participation of the agencies in training programs with groups, development of training material
- Identify successful households and groups in contractual relationships with the marketing organisations – to act as demonstration households
- The purchase of feeder cattle is a key part of PUSKUD and TLM operations. May be opportunity to link the marketing agencies with specialised feeder cattle producers / groups
- Pilot and explore scale-out

Intervention 7: Slaughter Cattle for Cattle Marketing Agencies in West Timor



Location

- PUSKUD
 - Office in Kupang
 - operate every district in West Timor, 1 in Flores
- TLM
 - Office in Kupang
 - Operate in large tracts of West Timor
- Gejati
 - Amarasi sub-district, Kupang City

Outreach

- Should be modest in initial stages
- Potentially large reach – up to 3,000 households

Links with Other Projects



- Feasibility of these AIPD-Rural interventions is not dependent on other projects
- But the likelihood of quick and large impacts will be increased through co-ordination with beef-specific projects operating in EI:
 - Indonesian beef cattle projects in Indonesia especially in NTB and NTT
 - IndoBeef
 - Other activities mooted under the 'Red Meat Forum'
- These programs link directly with large numbers of cattle producers with improved practices, organised into groups
- Links with these groups are attractive to agribusiness actors – part of 'the deal' for agribusiness actors
- In turn, AIPD-Rural / agribusiness partners provide a source of extension / outreach for the cattle group project
- Obvious benefits if AIPD-Rural partner with firms and agencies that supply inputs into, or buy cattle from, these groups.

Areas for Further Research



- Banks and finance
- Feed value chains
- Indonesian cattle distribution programs & groups
- 'Modern / mechanized' abattoirs
- The slaughter cattle trade in Sumbawa, West Timor and Sumbawa
- Cattle owners in West Timor and Sumba
- Ranches
- Purpose-built cattle ships

General Principles



Seven interventions have been identified that:

- Have potential to introduce technical change, to commercialise small-holder operations, improve their market access or stimulate market development
- Are located in established region- and sector-specific value chains
- Provide sustainable delivery models through the aligning interests of partners, intermediaries and targets
- Lead to significant productivity and income gains for project targets. Targets are primarily small-holder cattle producers, although in some cases are also upstream and downstream actors (e.g. feed traders and butchers)
- Are with companies or agency partners that have significant supply or procurement catchments that link with significant numbers of small-holders

General Role of PRISMA



In facilitating closer linkages between producers/groups and agribusiness firms...

- Technical and management development of firms through specialist technical and management advice.
- Field days where agribusiness firms visit and communicate with groups and households to directly communicate supplier preferences and to understand the production systems and goals of the producers and groups
- Group training and demonstration activities and/or dedicated field days to connect the actors
- Assistance to agribusiness firms to disseminate successful practices of project producers/groups to other non-project producers/groups in the catchment areas