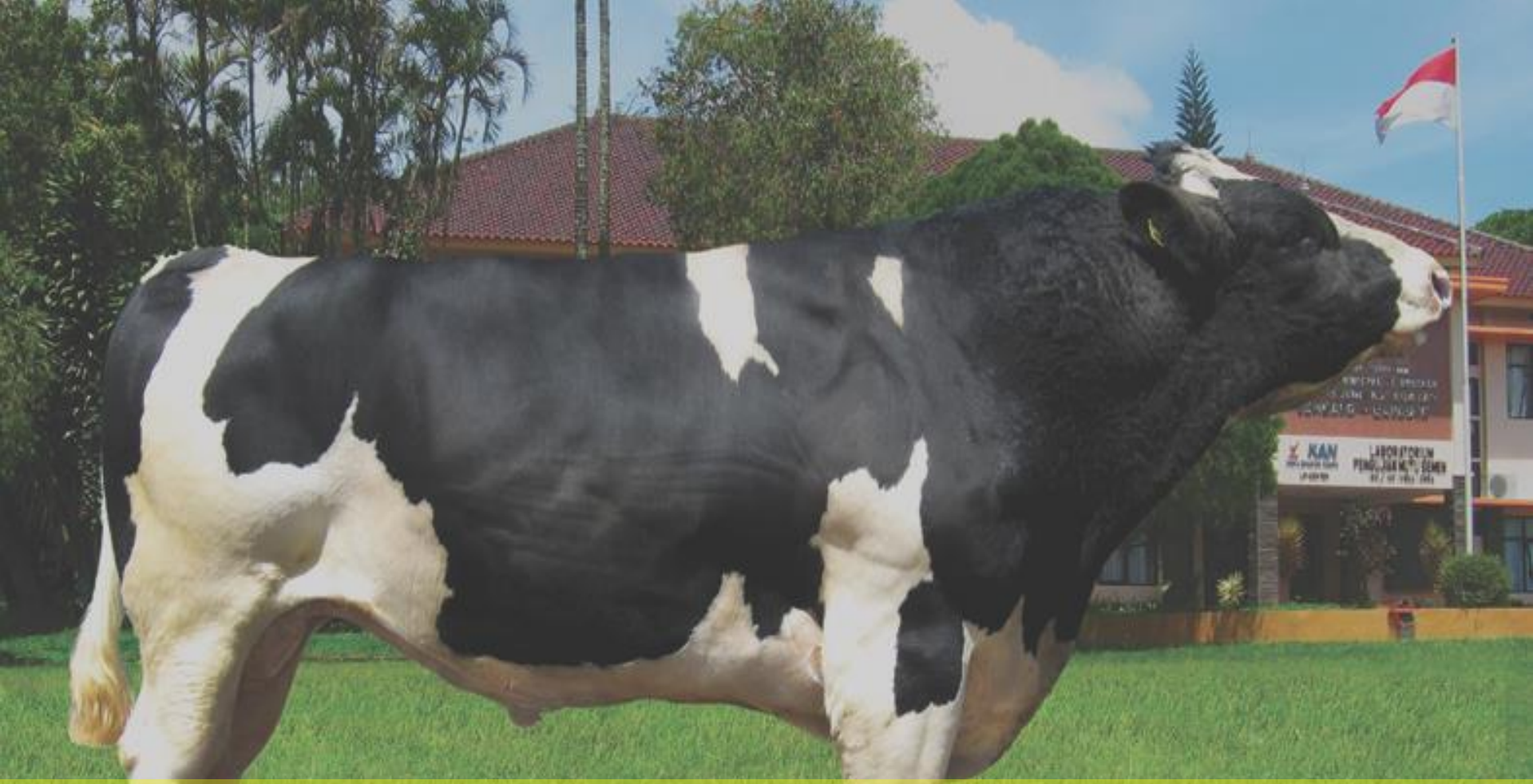
HOW TO INCREASE QUALITY AND QUANTITY IN DAIRY CATTLE AS DUAL PURPOSE BY GENETIC IMPROVMENT

Argi Argiris, IPB Bogor, Indonesia

Contributed presentation at the 60th AARES Annual Conference,
Canberra, ACT, 2-5 February 2016

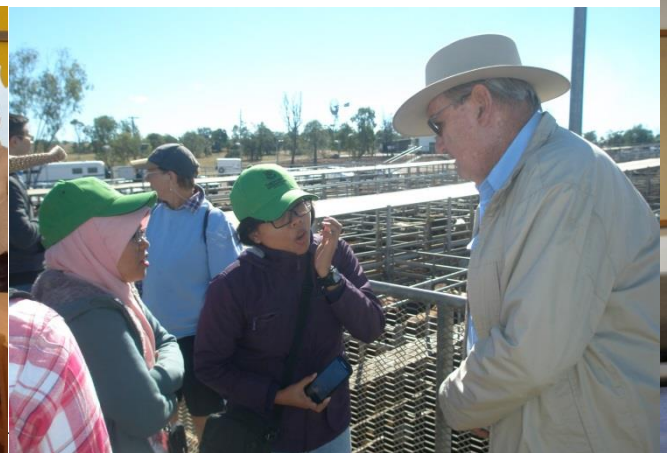


HOW TO INCREASE QUALITY AND QUANTITY IN DAIRY CATTLE AS DUAL PURPOSE BY GENETIC IMPROVMENT

Argi Argiris, IPB Bogor, Indonesia

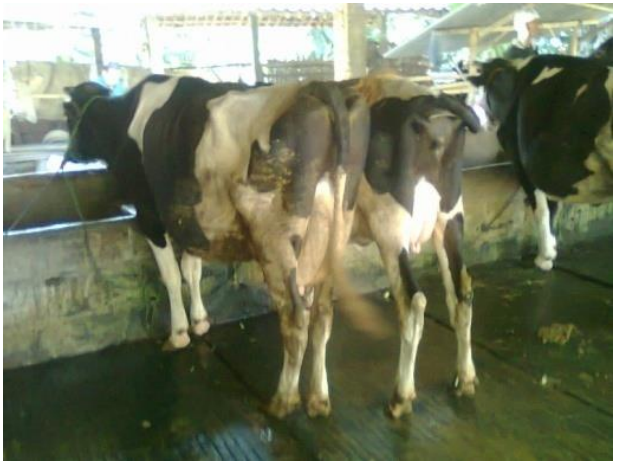
Background

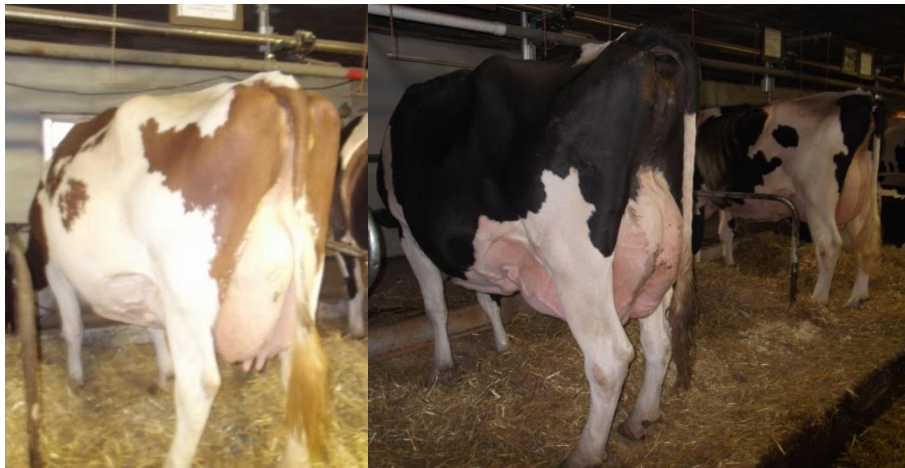
- **Australia Awards Indonesia: Red Meat Partnership Policy Training Course, April-May 2015**
  - 10 technical staff from Ministry of Agriculture, Indonesia
  - 6 week short introductory policy course
    - funded by DFAT/DAFF
    - managed by Coffey International, Jakarta
    - delivered by UQ International Development



Dairy industry in Indonesia

- Dairy cattle are dual purpose, for milk and beef
- Average milk production is low (10.5 lt/day)
- Low quality standards for milk processing
- Identification on cattle is not effective
- Mobility of calves is high
- Difficult to get good data on animal performance
- Design of breeding policy





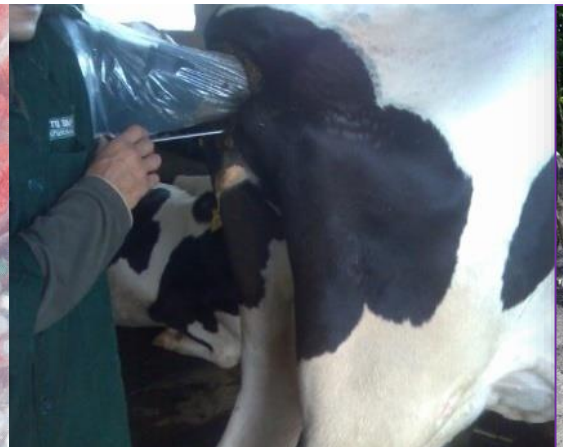
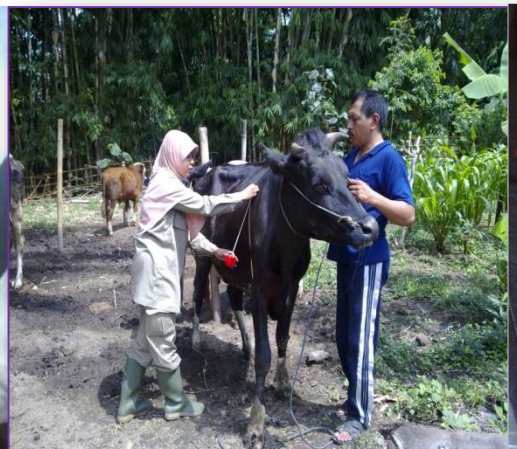
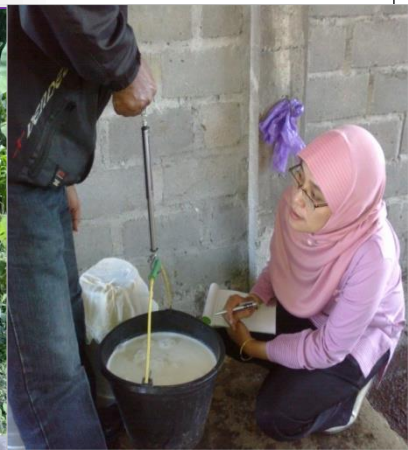
Problems

- How to increase dairy cattle population
- How to increase average milk production
- Start to identify cattle
- How to get good data as a basic tool to make good policy (population, reproduction, production, breeding management etc)
- How to introduce improved technology (reproduction, production, feeding, breeding, animal health, etc)

GENETIC IMPROVMENT by BREEDING SCHEME

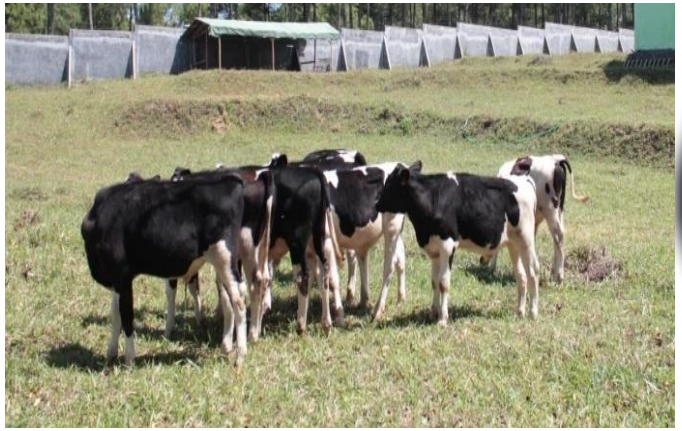
PhD project, IPB Bogor

- Customer satisfaction with dairy semen from AI Centres in Indonesia
  - 2 AI centres in Indonesia, supply same product, compete in same market
- Assessment of semen quality supplied by centres
  - Possibility of introducing technology from Australia
  - Beef Breeding Services, Rockhampton - adapted microscope used to identify sperm with better survival rates
  - Opportunity to cooperate with Australia to export semen to Asian and African countries
- Survey customers in 5 areas in East Java regarding semen performance
- Investigate microchipping of calves so their location during their life can be tracked
  - Performance recording and estimation of breeding values
- Economic evaluation of natural breeding compared to AI in beef cattle

POTENTIAL RESULTS

- Introducing new genetics for better quality and quantity of milk
- Increased milk production
- Introduce a performance recording system
- Get good data on animal performance
- Eficiency of reproduction/production etc
- Make better policy decisions with good data
- Increase farmers' incomes



BULL CATALOG (PROVEN BULL)

Vista

PRODUCTION CAM (07/96) — 51 daus. — 47 herds — (83 % Rep.)

Estimated Breeding Values		kg	% Rank
MILK		+2287	99
FAT	+0.02	+86	99
PROTEIN	+0.02	+74	99

LPI +1733 % Rank 99

TEV +762$ % Rank 99

CONFORMATION CAM (07/96) — 51 daus. — 48 herds — (70 % Rep.)

	1st/1st	% Rank
CONFORMATION	+4	73
DAIRY CHARACTER	+10	
FRAME / CAPACITY	+7	
RUMP	+8	
FEET & LEGS	+5	
MAMMARY SYSTEM	+2	
FORE UDDER	-3	
REAR UDDER	+6	
SIZE	+9	
STATURE	+6	

0 +4 +8 +12

FINAL CLASS: N/A

Descriptive Traits

Chest Floor	Loin Strength	Rump Width	Pin Setting	Foot	Bone Qual.	Leg Set	Udder Texture	Med. Susp.	Fore Attach.	Rear Att. Height	Rear Att. Width	Fore Teats
+4	+9	+9	+2L	+4	+6	+2C	+8	+8	-3	+5	0	-7

Auxiliary Traits

Calving Ease (84 % Rep.) 1 2 3 4 5 6 7 8 9 — Difficult — Average — Easy

Milking Speed (76 % Rep.) 1 2 3 4 5 6 7 8 9 — Very Slow — Average — Very Fast

Herd Life (41 % Rep.) 2.5 — 3.0 — 3.5 — 3.09

Somatic Cell Score (66 % Rep.) 3.5 — 3.0 — 2.5 — 2.87

MAYERLANE VISTA ET

GP

70HO0730

Reg. #: USAM2159770

Birthdate: 91/01/01

Sire: Rothrock Tradition Leadman EX GM

Dam: Mayerlane Velmas Velvet ET VG
02-02 305 12,869 461 3.60% 422 3.30% (kgs)
1 Lact: 14,706 530 3.60% 489 3.30%

MGS: Walkway Chief Mark VG SP GM

THANK YOU