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# Mixed farming systems in the beef value chain of the city of Malang, Indonesia

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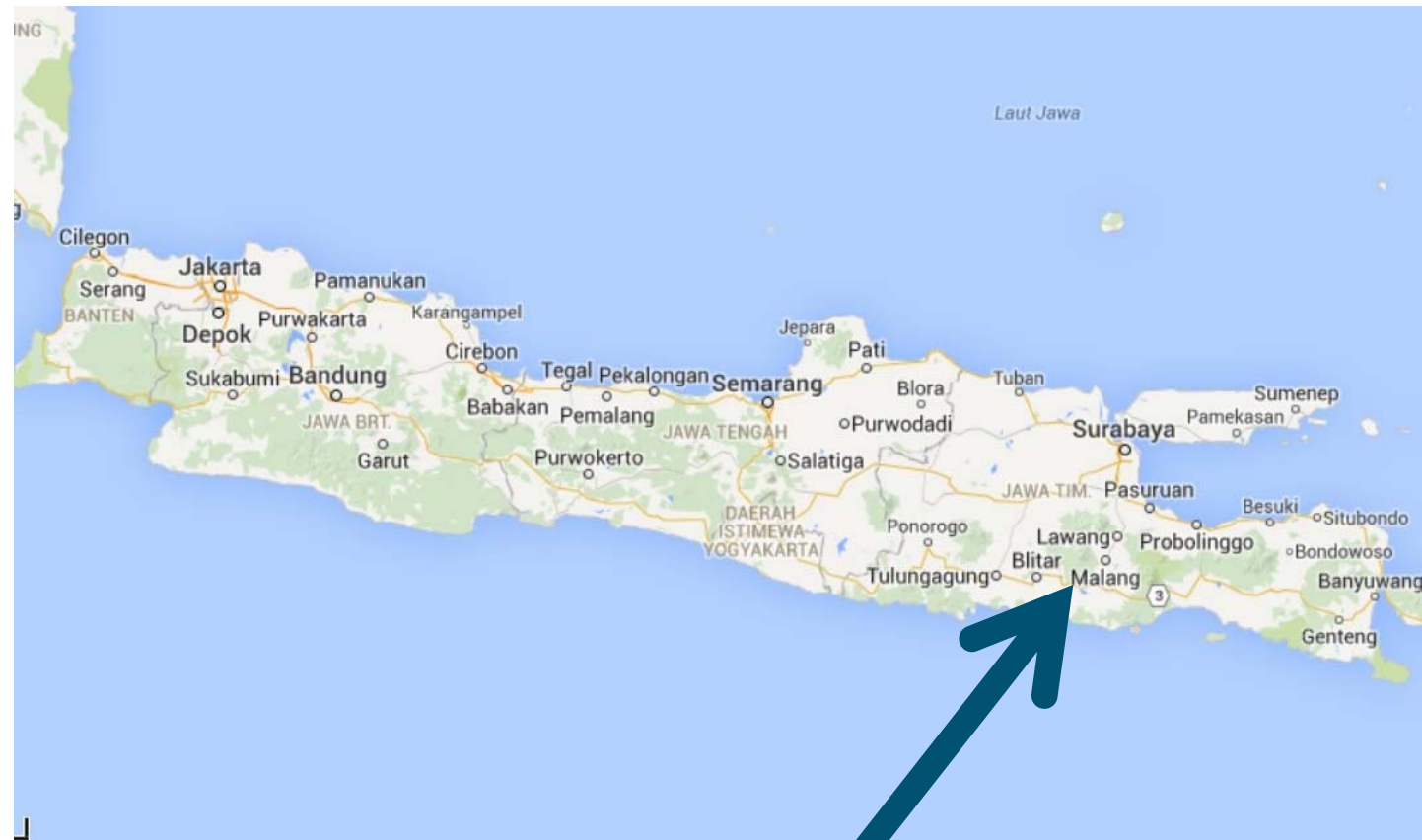
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# Indonesia



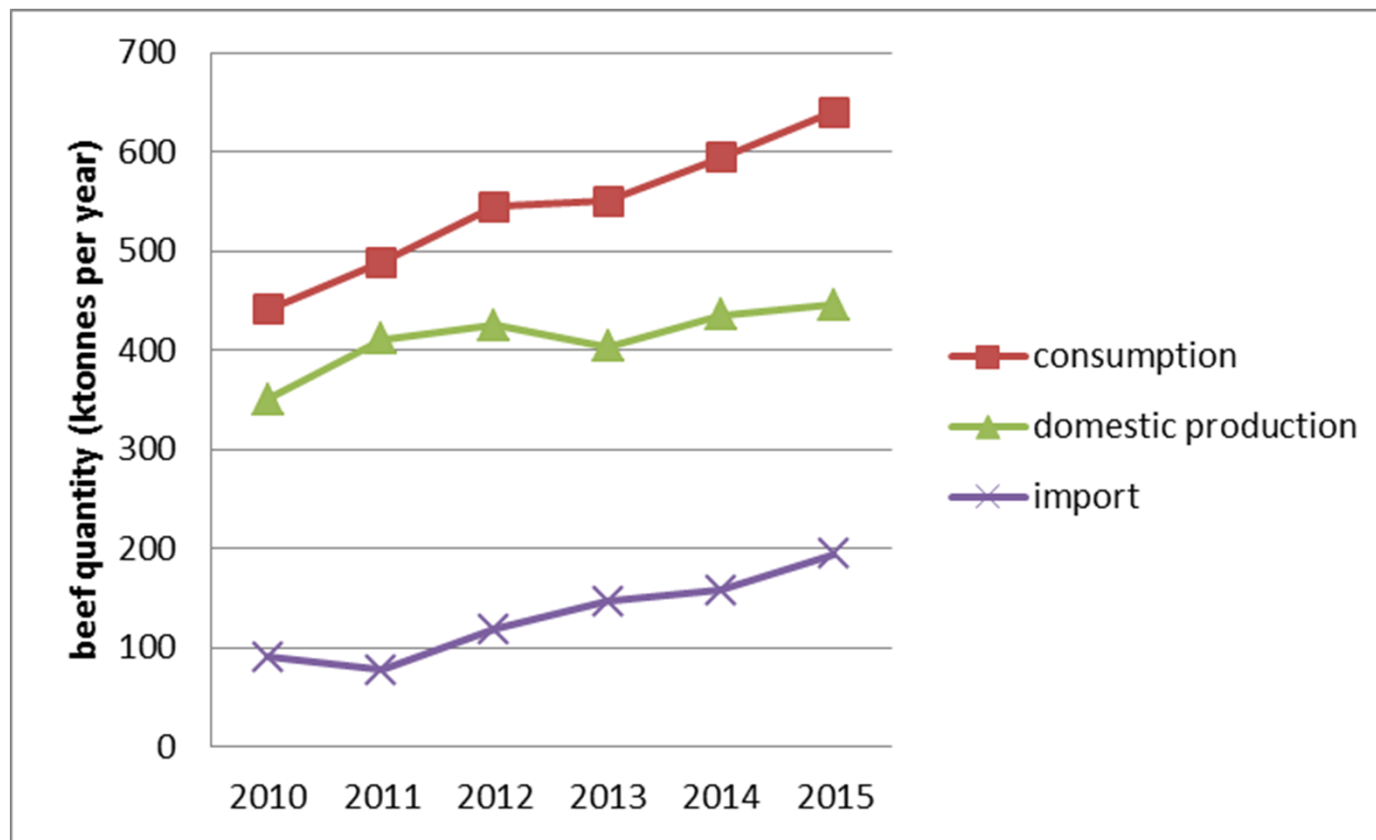
# The densely populated island Java



# The Malang conglomerate of 1.2 million inhabitants



# National beef deficit





# Beef production for Malang

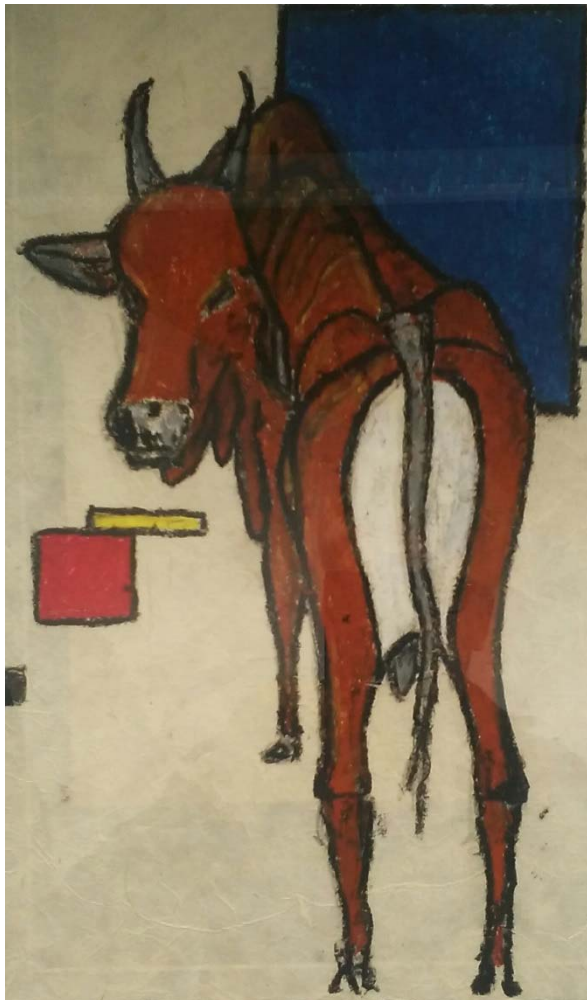
- Bakso (meatball soup)
- 100 finished bulls required daily



# Beef production for Malang

- breeds

The Madura, Bali or Java breed



# Beef production for Malang

- breeds

The Ongole breed





# Beef production for Malang

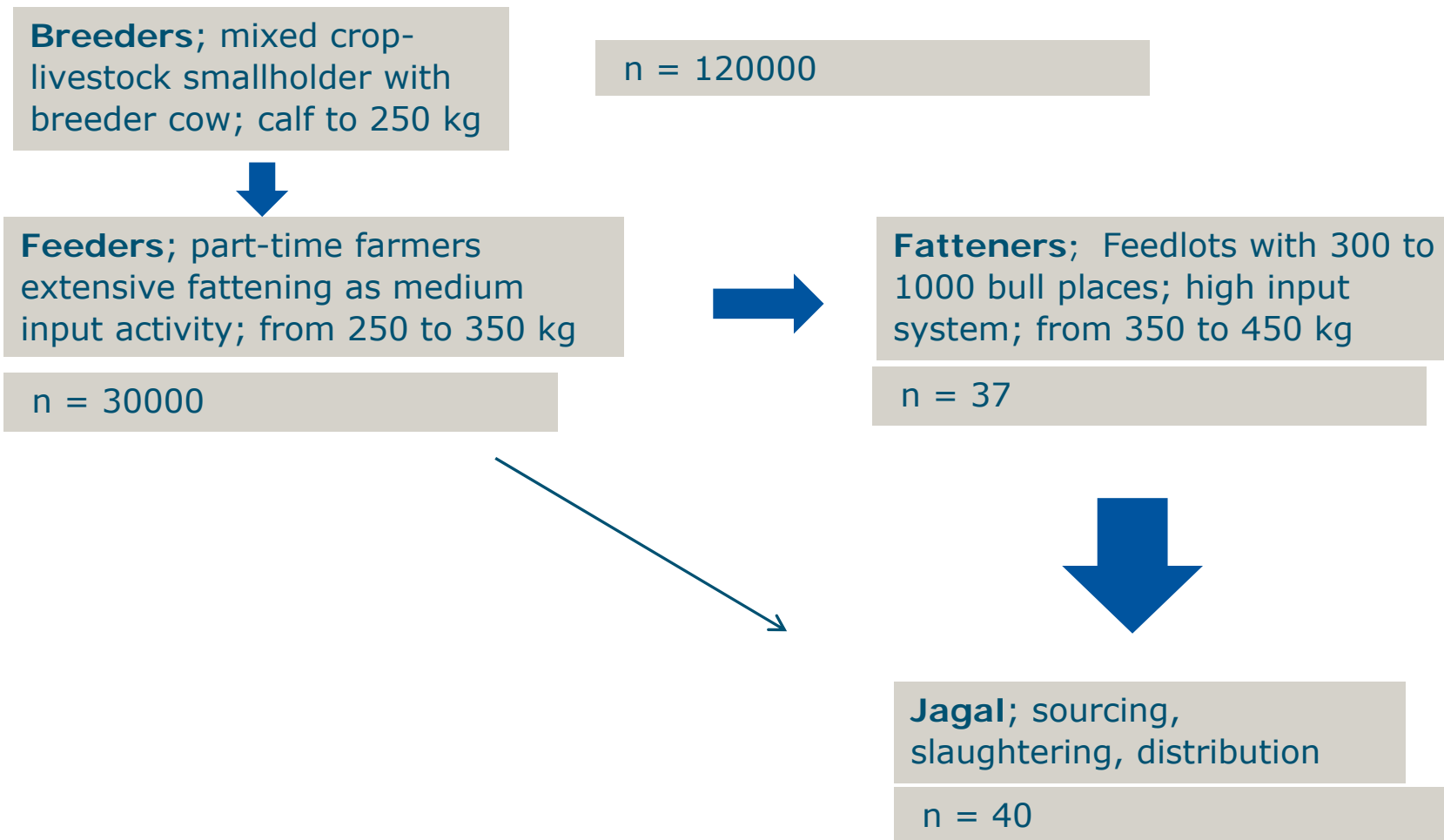
- breeds

Cross breeding (Simmental and Limousin)



# Beef production for Malang

## ■ The value chains



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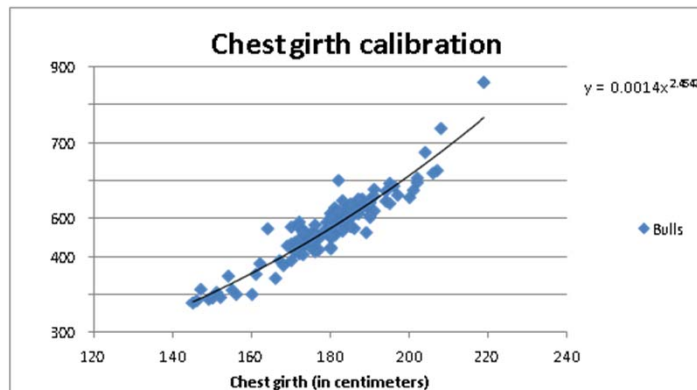
# Objectives

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- To study performance of the beef value chain to the city of Malang
- Define options for improvement
  - *Actual growth compared to potential*
  - *Reproduction parameters*

# Methods

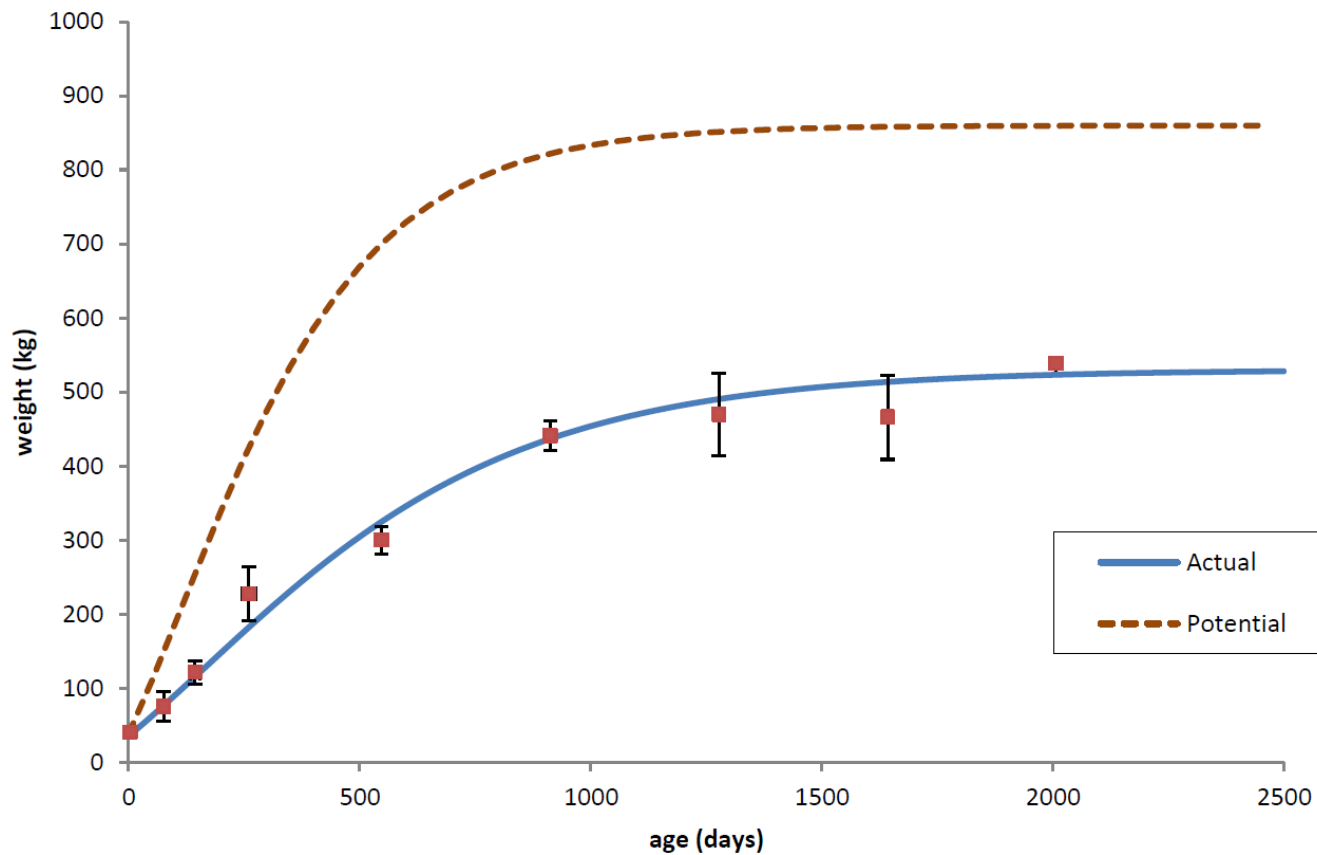
- On farm data collection (n = 56 farms and 230 bulls)
  - *Liveweight* (chest girth and/or scale), *age* (month of birth or dental examination), *reproduction parameters* (interviews)
- Expert interviews





# Results

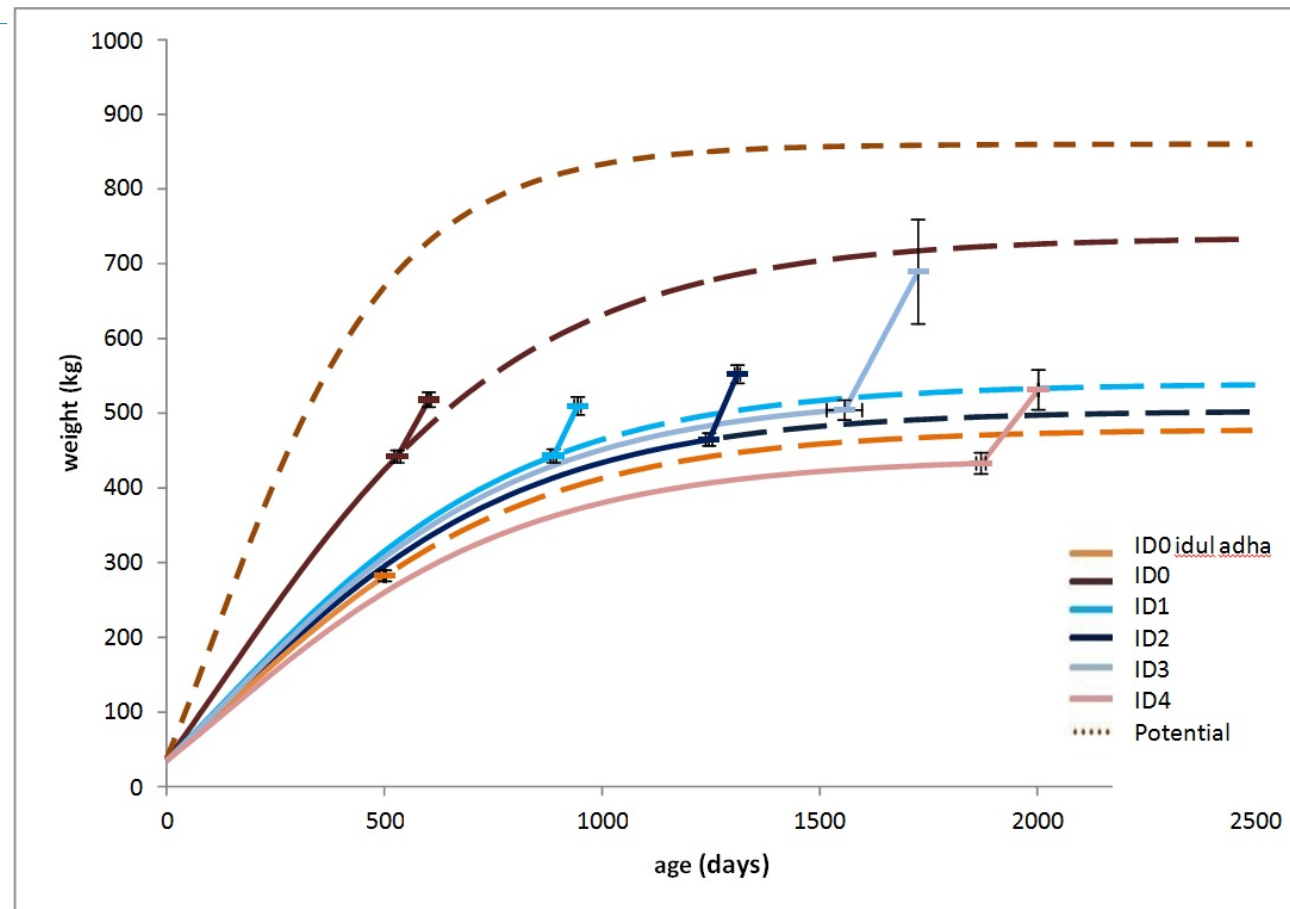
## Actual and potential weight and age of bulls at breeder and feeder farms



# Results

## Growth curves for bulls at feedlots

(*ADG at feedlot: 1016 ± 69.3 g/day*)



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# Results

## Reproductive performance at 38 breeder farms; mean $\pm$ s.e.

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Age at first oestrus (months)	17.0 $\pm$ 0.49
Weaning age (months)	5.9 $\pm$ 0.28
Intercalving interval (months)	15.2 $\pm$ 1.01
Average service per conception (n)	1.6 $\pm$ 0.11

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# Beef production for Malang

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## ■ Economics of intensification

### Breeder

# beef animals sold per year	0.31
Price per kg LW	40000
Benefit (Rp per year)	3.1 million
Costs (Rp per year)	0
Gross margin (Rp per year)	3.1 million

### Breeder

# beef animals sold per year	0.62
Price per kg LW	40000
Benefit (Rp per year)	6.2 million
Costs (Rp per year)	3.7 million (10000/day for feed)
Gross margin (Rp per year)	2.4 million



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# Beef: supply is insufficient

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- Import from Australia (presently banned on East Java).
- Breeders on other Indonesian islands (promoted)
- Intensifying smallholders (is difficult; study successes!)



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# In summary

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- The value chain for beef involves many people, is relatively efficient and utilizes crop residues and high quality agricultural by-products.

Looking forward to your questions!

