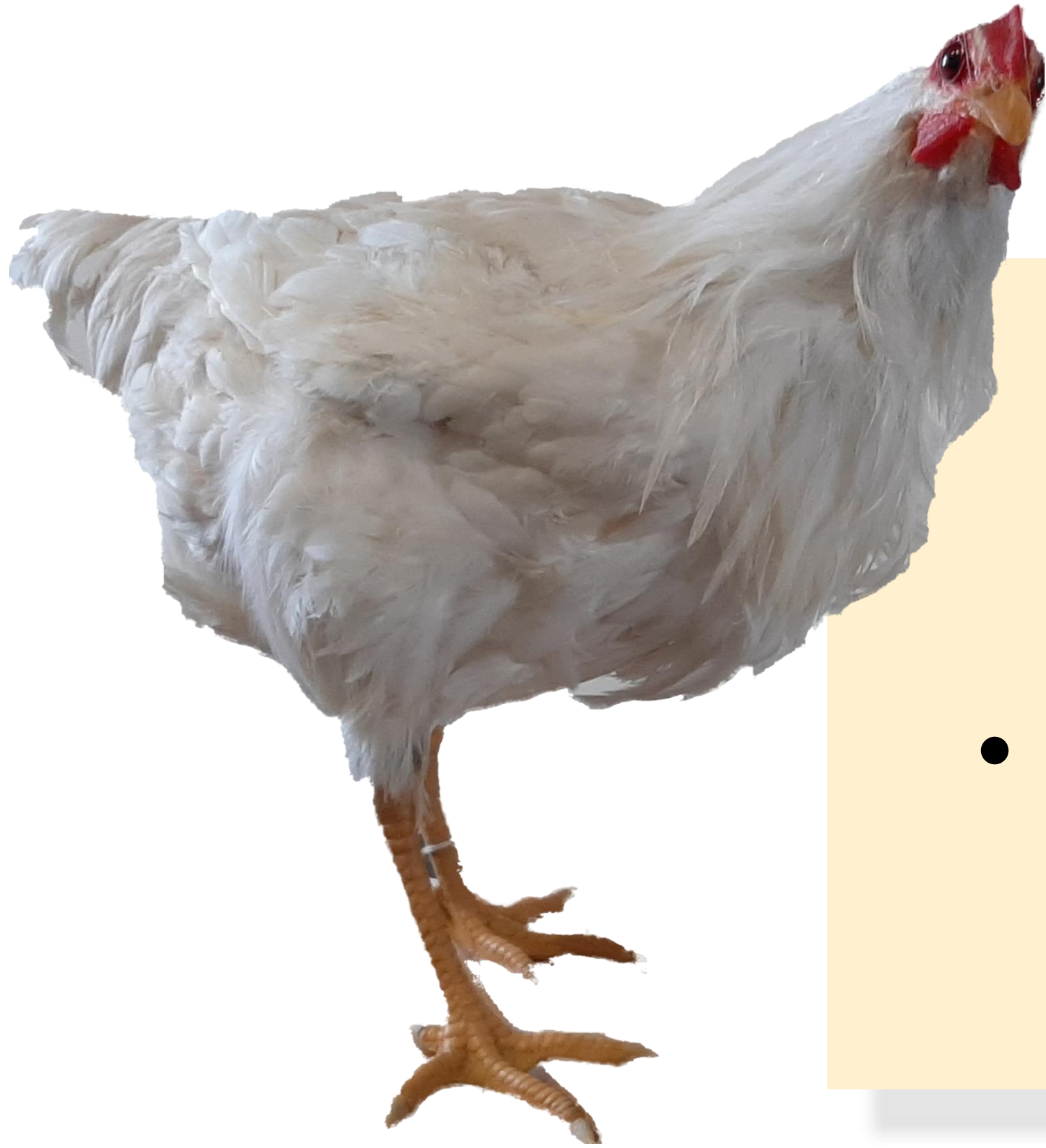# Centre for Agricultural Engineering

Machine vision for meat chicken monitoring

Dr Cheryl McCarthy and Dr Derek Long

cheryl.mccarthy@usq.edu.au

- Chicken is a major global source of protein for human consumption
- Weight and health monitoring of commercial flocks are manual human tasks
- Novel machine vision technologies have been developed to complement human tasks with potential benefits for production and welfare
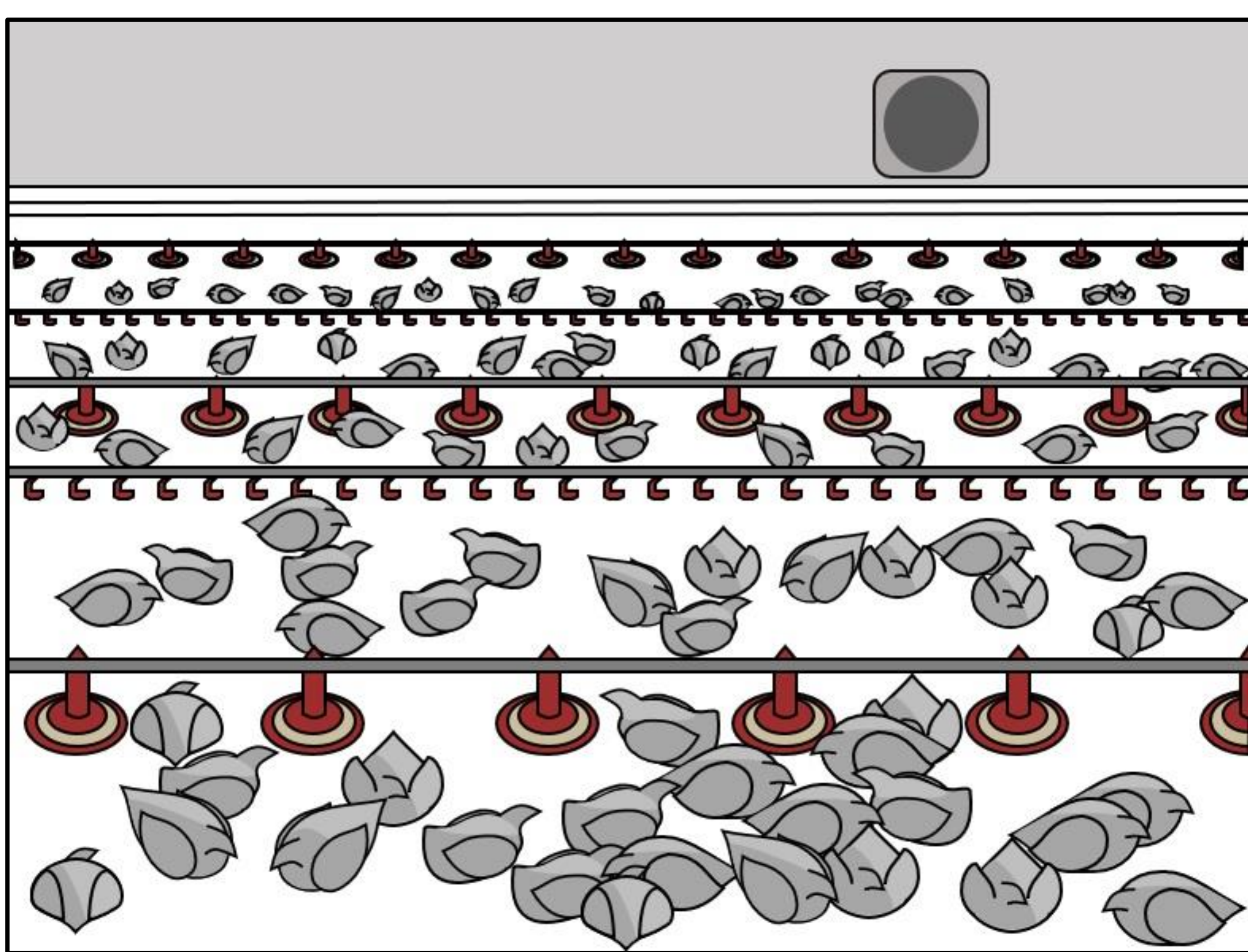
Existing camera technologies

analyse background pixels or use top view images of chickens

Proof-of-concept technology
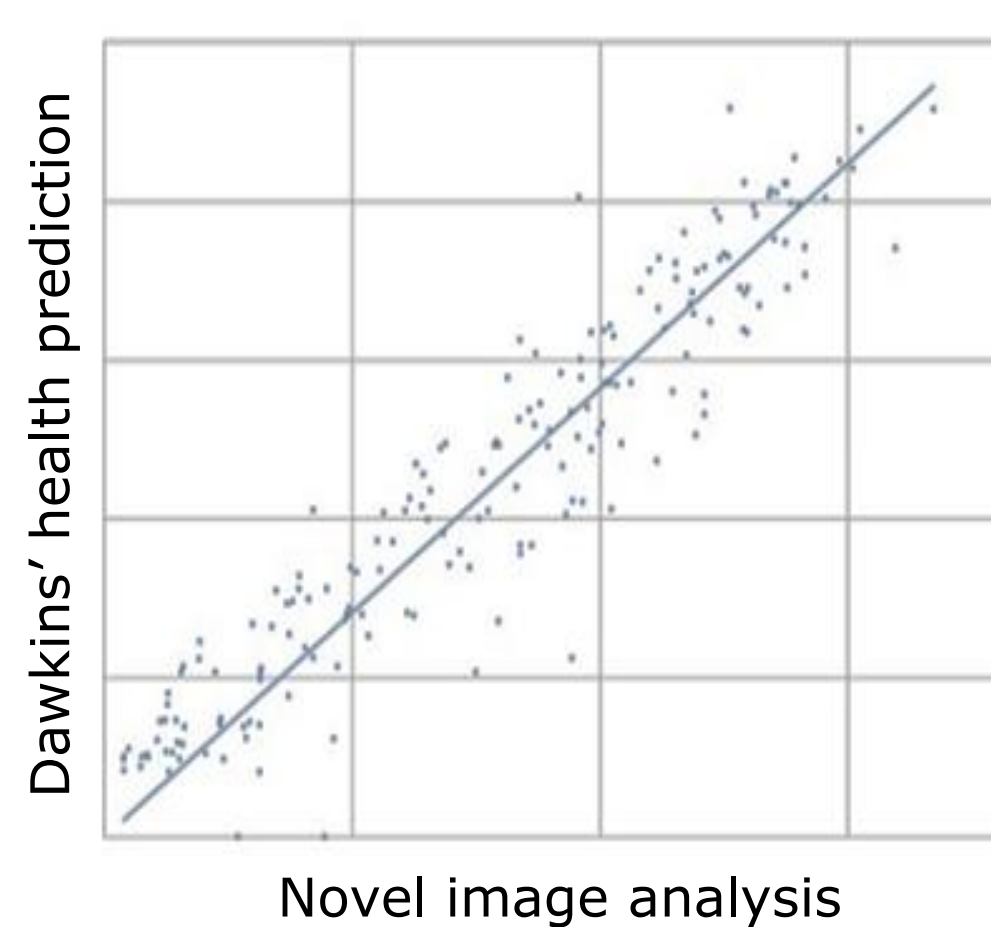
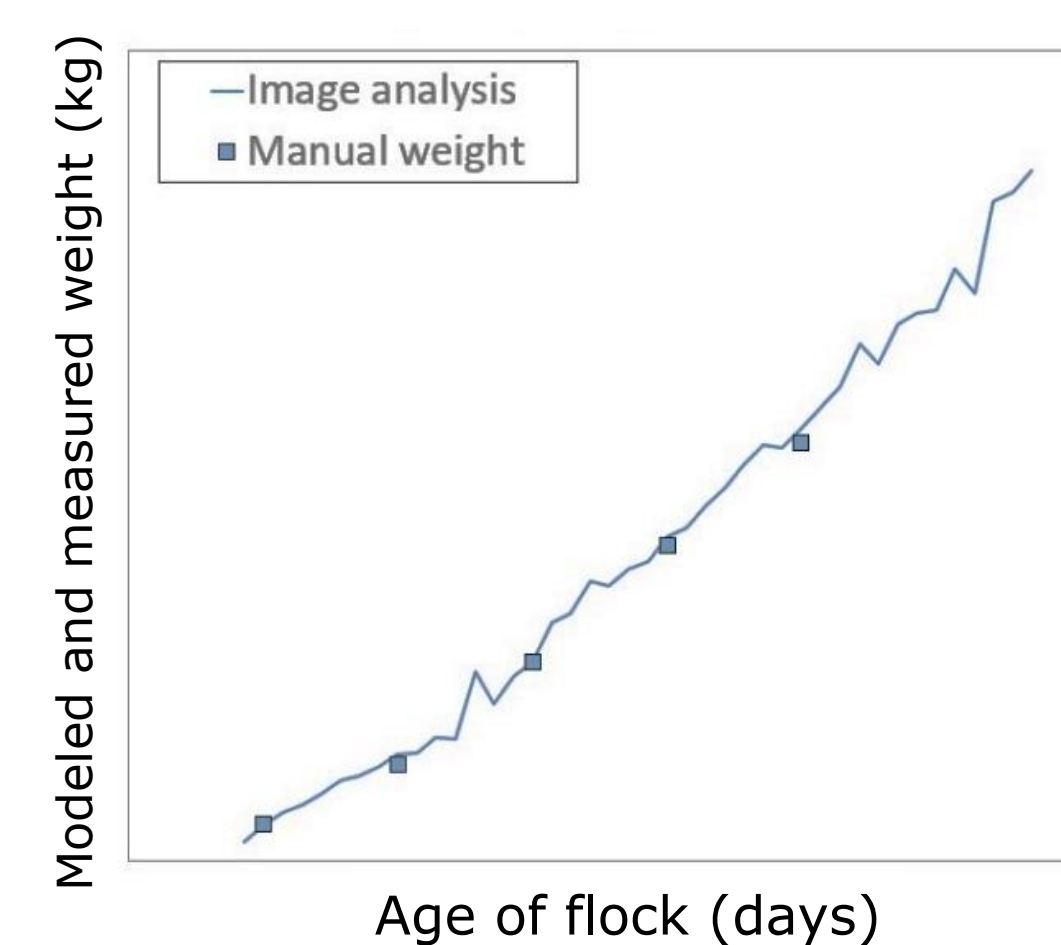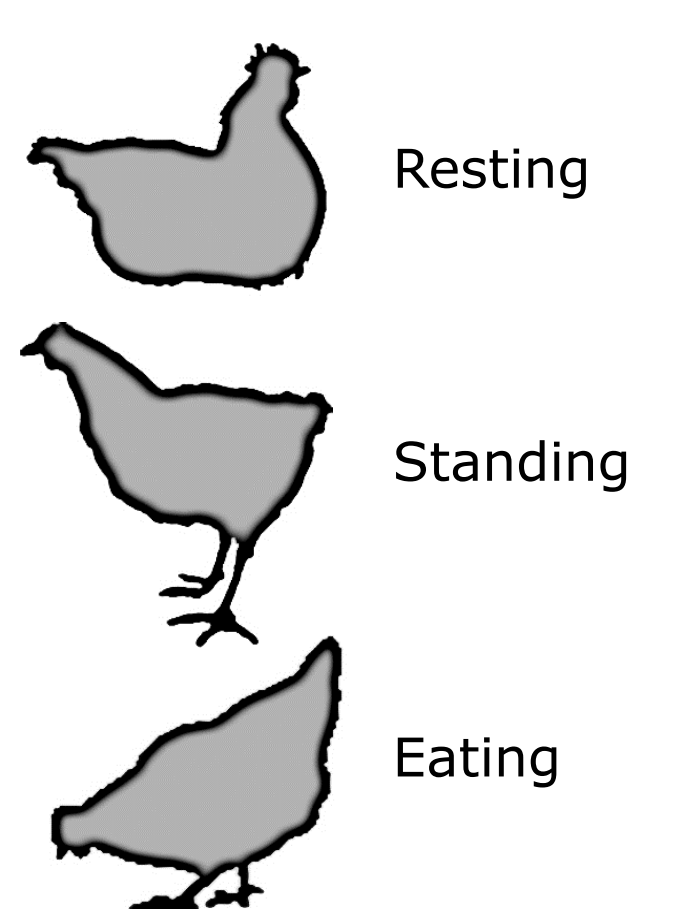for chicken detection from oblique view

Results

of image analysis

Correlation with health indicators

Dawkins' health prediction

Novel image analysis

Weight estimation

Modeled and measured weight (kg)

— Image analysis
■ Manual weight

Age of flock (days)

Behaviour classification

Resting

Standing

Eating

Conclusion

A single low-cost video camera can measure multiple flock attributes in commercial shed conditions, to provide real-time alerts to the farmer