Free-ranging and animal welfare in broilers on organic farms in Sweden

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SLU

CORE organic

FORMAS

SLU EKOFORSK

PhD project

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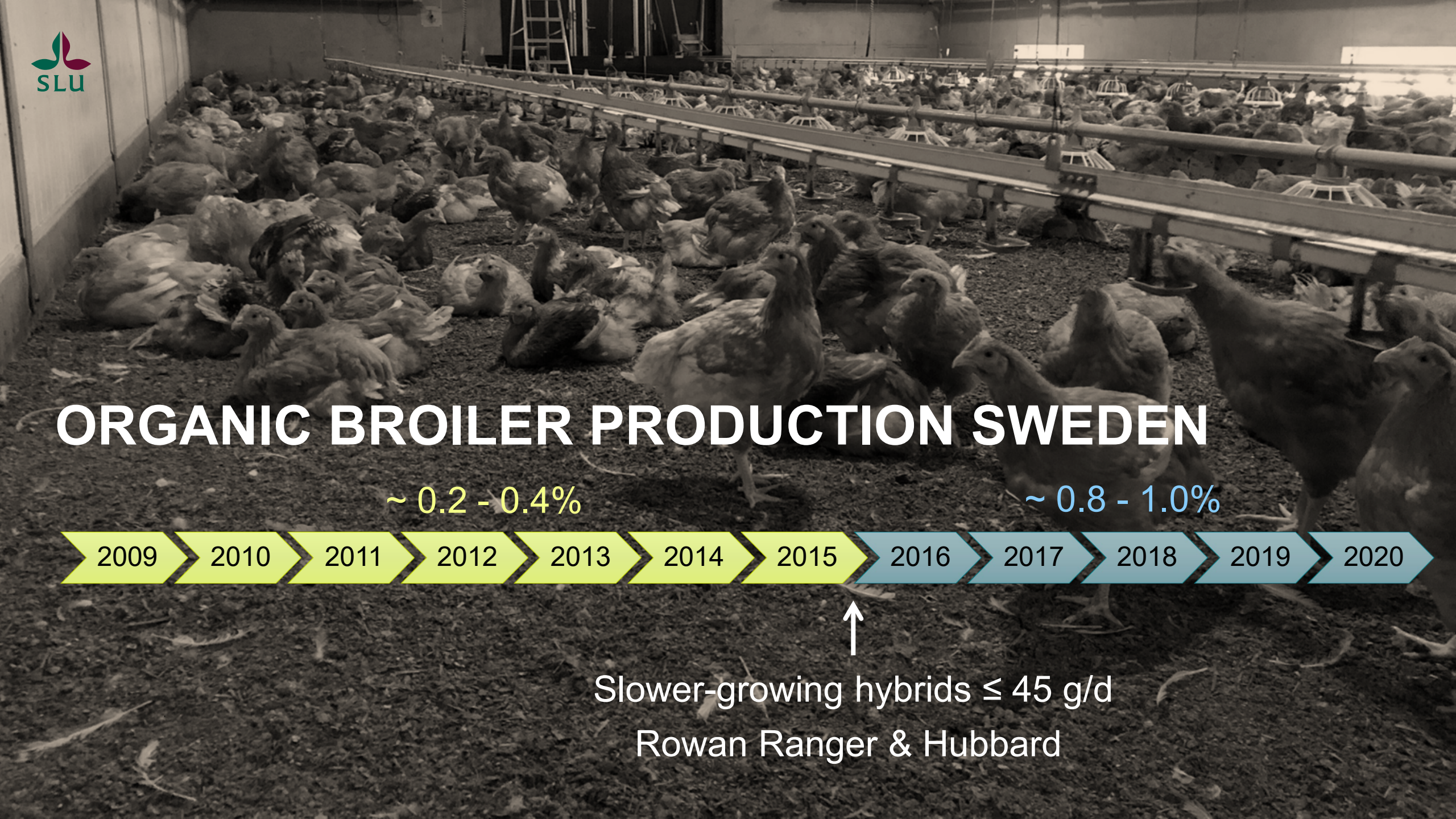
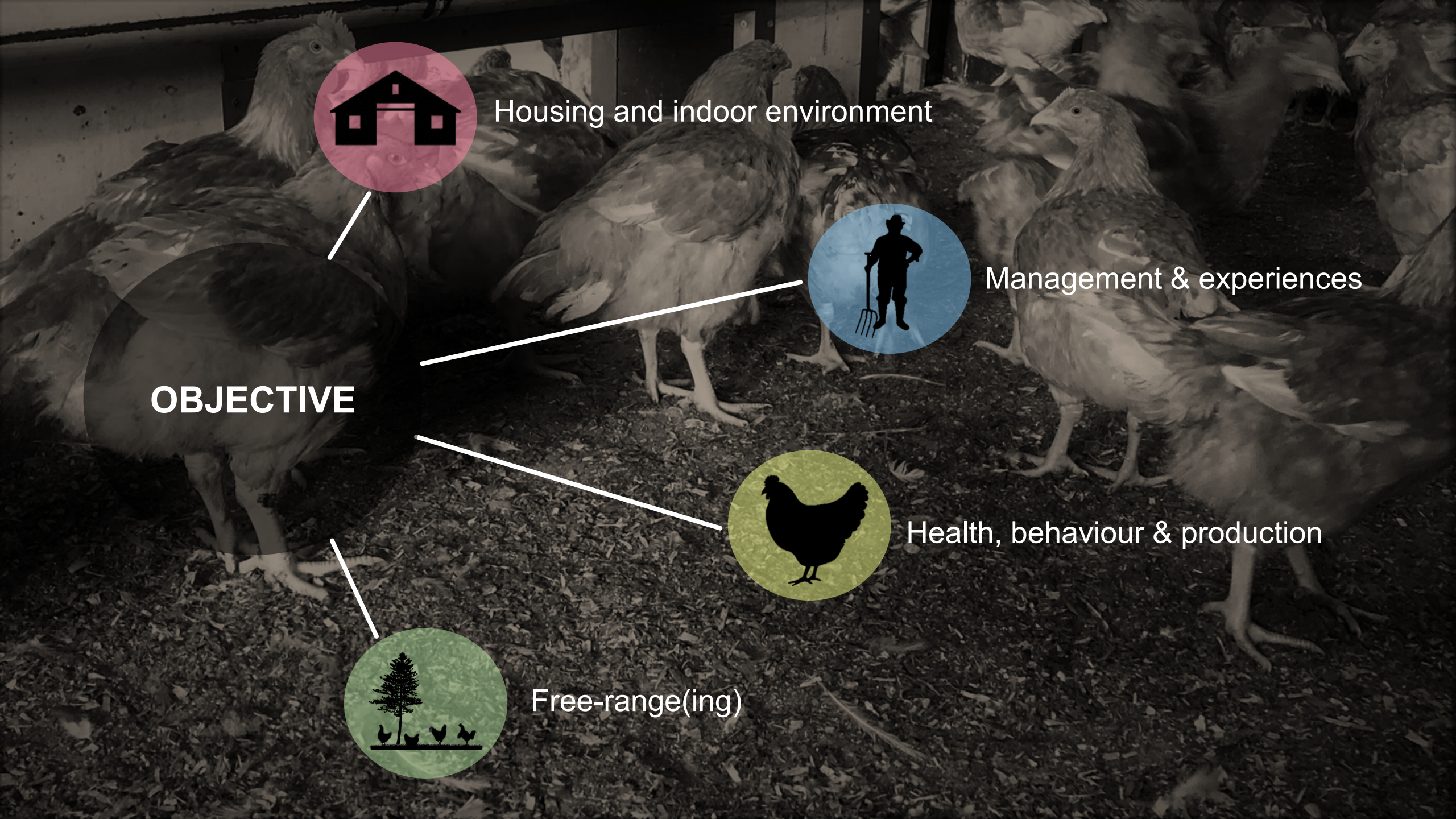
“Optimizing the use of the free range as the key to improve organic chicken production”

- Free-range use ↔ bird health, welfare and performance
- Free-range use ↔ nutrient load of soil
- 7 countries (SE, DK, NL, BE, PL, IT, TR)
- Management strategies for free-range systems
- Sustainable organic poultry production

“Organic broiler production – hybrid, outdoor range and mapping of problems and factors of success on commercial farms”

- Slower-growing hybrids
- Systematic evaluation (survey) lacking
- Knowledge ↑ (”state of the art”)
- Mapping of challenges and factors of success


ORGANIC BROILER PRODUCTION SWEDEN
~ 0.2 - 0.4%
~ 0.8 - 1.0%
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
Slower-growing hybrids ≤ 45 g/d
Rowan Ranger & Hubbard


Housing and indoor environment
Management & experiences
OBJECTIVE
Health, behaviour & production
Free-range(ing)

MATERIALS & METHODS

- Dimensions
- Litter and air quality
- Environmental enrichment

- Management routines
- Farmer experiences
- Bird health & behaviour
- Production
- Free-range(ing)

Behaviour

- Scan sampling
- Pop-holes
- Avoidance distance test
- Environmental enrichment

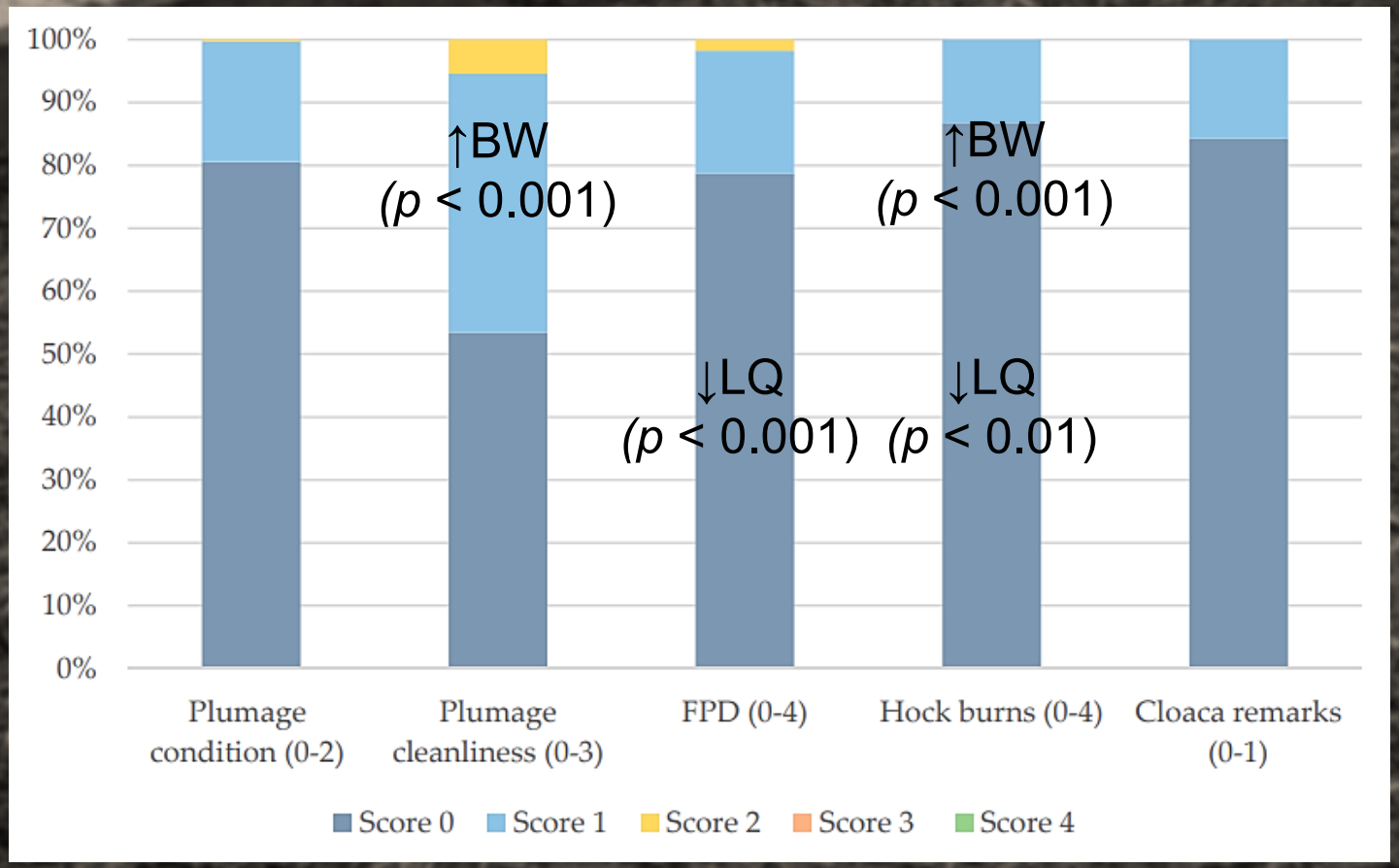
Health

- Clinical examination (*n*=400)
- Gait scoring (*n*=350)

- Vegetation cover
- Artifical shelter
- Bird ranging
- Weather

- Farms *n*=8
- Rowan Ranger (*n*=5 farms) & Hubbard (*n*=3 farms)
- KRAV ® (all farms)
- Farm size 8 975±1 688 chickens
- Flock size 4217±1290 chickens
- Mean flock age 55±6 days

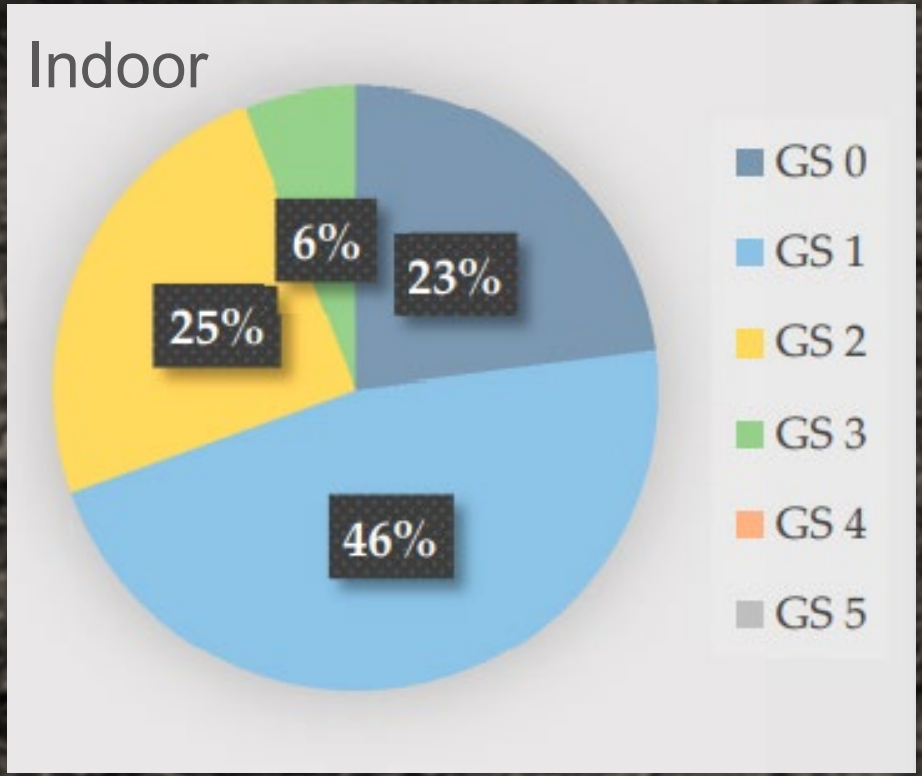
CLINICAL EXAMINATIONS

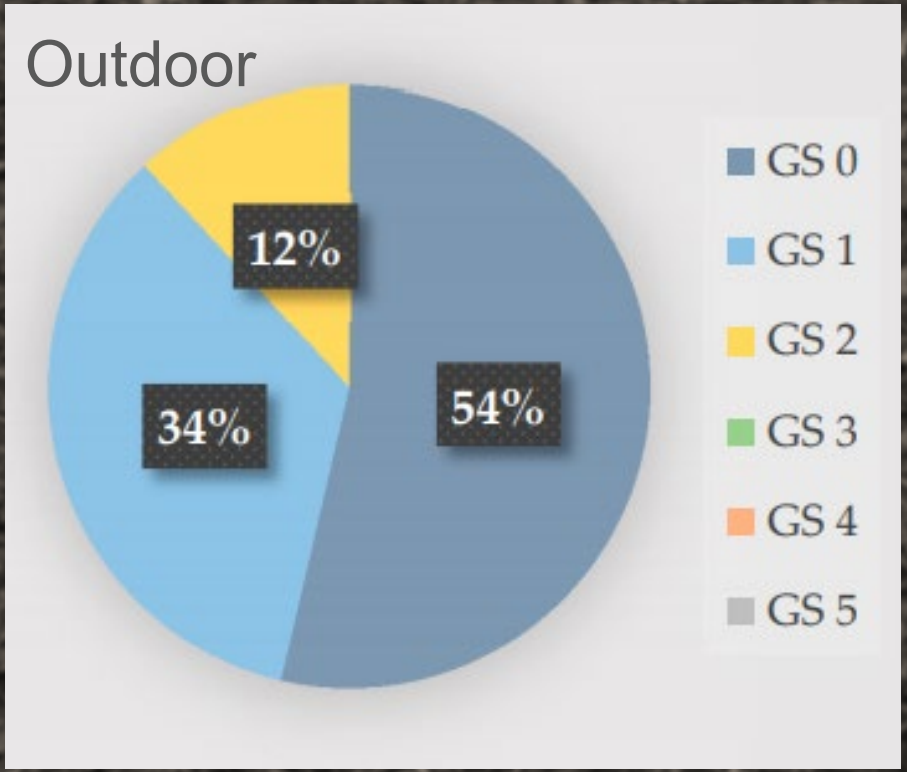


- Most birds no remarks
- Some mild-moderate lesions
- No severe lesions
- Flock (farm) variations
- Neg effects of ↑BW
- Neg effects of ↓litter quality

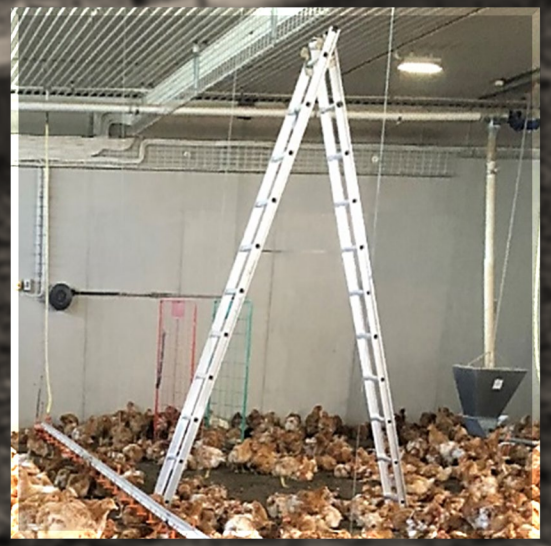
GAIT SCORES

- Outdoor GS better than indoor GS ($p < 0.001$)
- ↑ mean flock BW = worse GS ($p < 0.05$)





ENVIRONMENTAL ENRICHMENT



FREE-RANGE(ING)

- None or little vegetation cover (mostly pasture)
- ↓ artificial shelters
- ↓ proportion of flock ranging 0.6% (one flock 20%)
- Ranging close to house < 25 m

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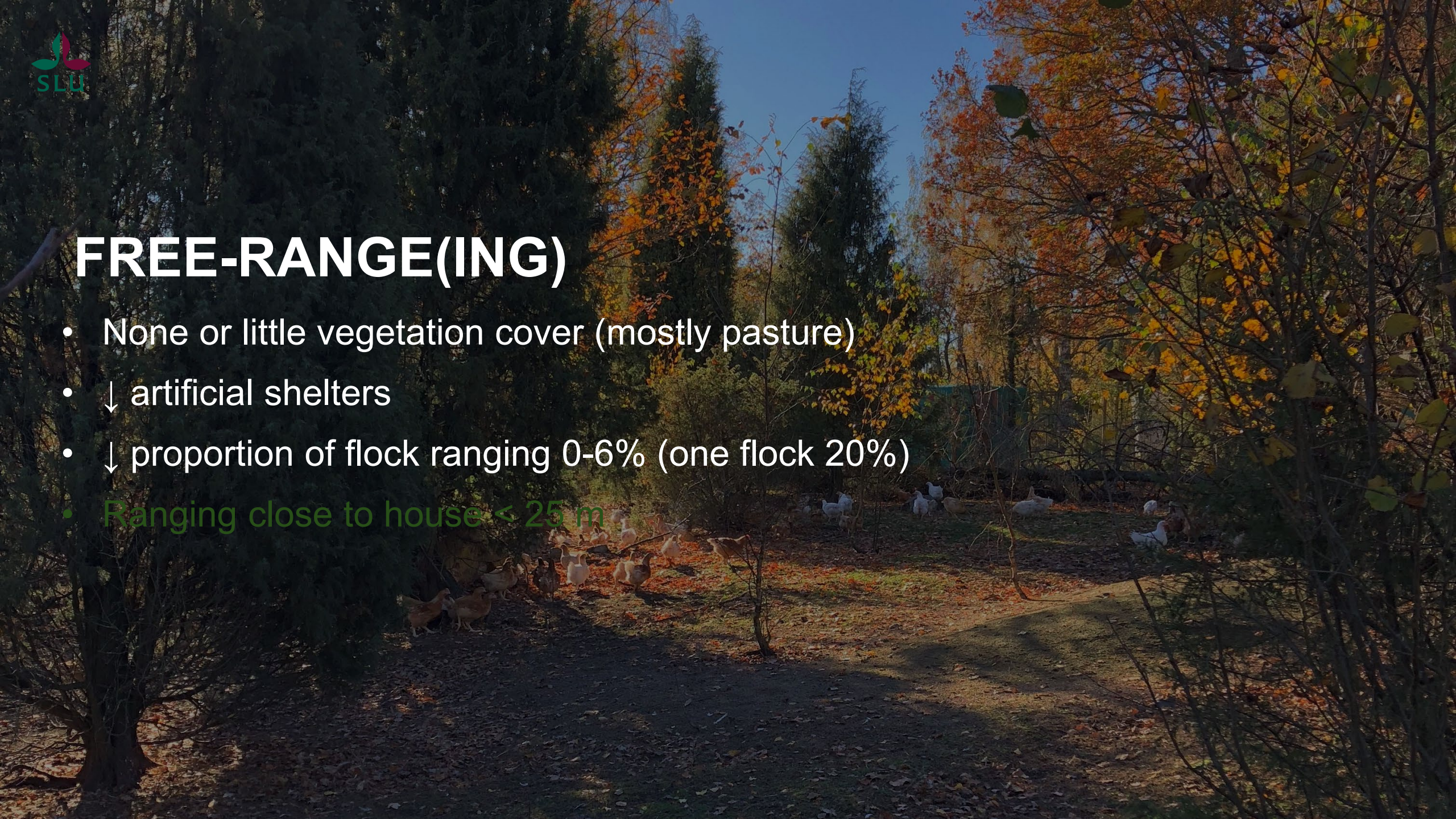

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CONCLUSION

- Minor to moderate, but no severe, health concerns
- Not slow-growing enough?
- Environmental enrichment: quantities and suitable items
- Free-range: lack of vegetation cover requires artifical shelters

MANY THANKS

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Farmers

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https://www.slu.se/freebirds

https://projects.au.dk/coreorganiccofund/core-organic-cofund-projects/freebirds/

https://www.slu.se/centrumbildningar-och-projekt/ekoforsk/2017-2019/kycklinghybrider/

Göransson et al. 2020. Bird Health, Housing and Management Routines on Swedish Organic Broiler Chicken Farms https://www.mdpi.com/2076-2615/10/11/2098

Göransson et al. 2021. Behaviour in Slower-Growing Broilers and Free-Range Access on Organic Farms in Sweden https://doi.org/10.3390/ani11102967