EU costs and implications of the European Chicken Commitment

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Objectives

- Compare the cost of production (on-farm) for ‘standard’ and European Chicken Commitment (ECC) in the EU
- Make comparisons ‘per kg of meat’
- Assess the effect of ECC on bird places in existing EU housing and the number and cost of new buildings to maintain current output
- Estimate additional requirements for feed and water in ECC production
- Calculate carbon footprint for standard and ECC production
- Outside the scope of the study - animal welfare implications

European Chicken Commitment on-farm overview

Subject	Requirement
Stocking density	A maximum of 30kg liveweight per m^2
Choice of breed	Must demonstrate higher welfare outcomes Guide threshold value of 60g daily growth rate, based on 2.2kg liveweight
Flock thinning	Discouraged; if practiced then one thin only
Environmental standards	Include: Natural light Perch space and pecking substrates

Project approach

For standard and ECC production on a ‘per bird’ basis

- Determine typical flock performance
- Establish input costs
- Compare meat output

For each EU Member State

- Estimate the range of stocking densities used
- Compile current statistics on annual chicken output in each Member State

Build to EU-wide implications

Information sources

- Published material from breed companies supplying chickens for standard and ECC production
- Official statistics for bird numbers
- Published scientific and technical papers
- Industry stakeholder information gathered from a range of Member States

Average liveweight target assumptions

	Standard and ECC production
Liveweight at thinning (kg)	1.800
Liveweight at final depopulation (kg)	2.700

Production cycle length and mortality

	Standard	ECC
Days to reach 1.8kg (thinning)	31	37
Days to reach 2.7kg (final depop.)	40	51
Turnaround time (days)	10	10
Annual production cycles	7.30	5.98
Mortality (%)	3.0	2.5

Average growth rate for ECC is around 52g per day

Comparison of stocking and liveweight output

Key assumptions:

- 50% of all mortality is before thinning and 50% after
- Stocking density is to the maximum permitted

	Standard (39kg/m²)	ECC (30kg/m²)
Day-old birds (per m²)	21.98	16.87
Birds at thinning (per m²)	21.66	16.66
Birds at final depopulation (per m²)	14.44	11.11
Average liveweight (kg)	2.409	2.408

Feed and water use

Feed use is a key factor for economic and sustainability assessments

Based on breed standard data

	Standard Aviagen 308	ECC Hubbard Redbro
Feed conversion ratio	1.55	1.85
Feed use (kg per bird)	3.84	4.58
Water use (litres per bird)	6.50	7.80

Carcass and meat yield

Based on breed standard data

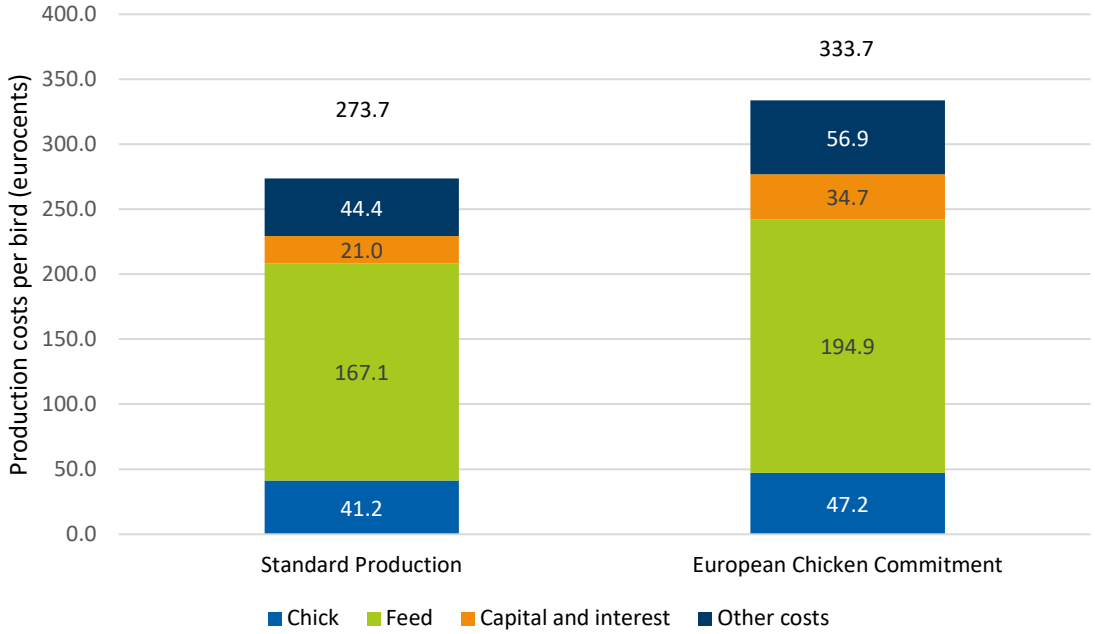
Percentage of liveweight	Standard Aviagen 308	ECC Hubbard Redbro
Carcass yield	72.65	71.05
Breast	25.62	20.70
Leg	23.13	21.64
Wing	7.54	7.60
Total (breast + leg + wing)	**56.29**	**49.94**

Key cost assumptions

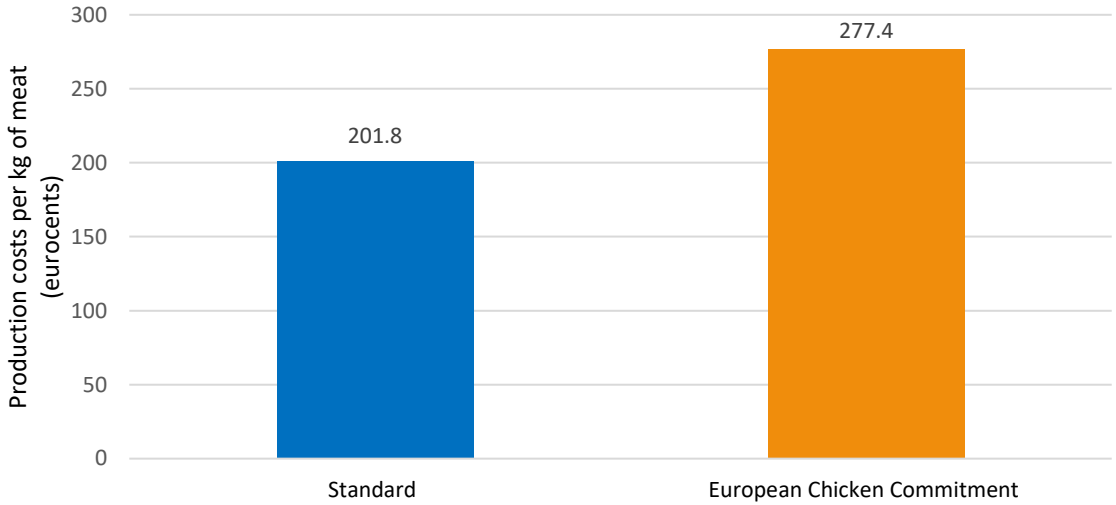
	Standard	ECC
Day-old chick (eurocents)	41.2	47.2
Feed (€ per tonne)	448	438
Capital costs - existing units (€ per m²)	350	361

Capital costs for ECC include the cost of fitting windows to existing houses to provide natural daylight

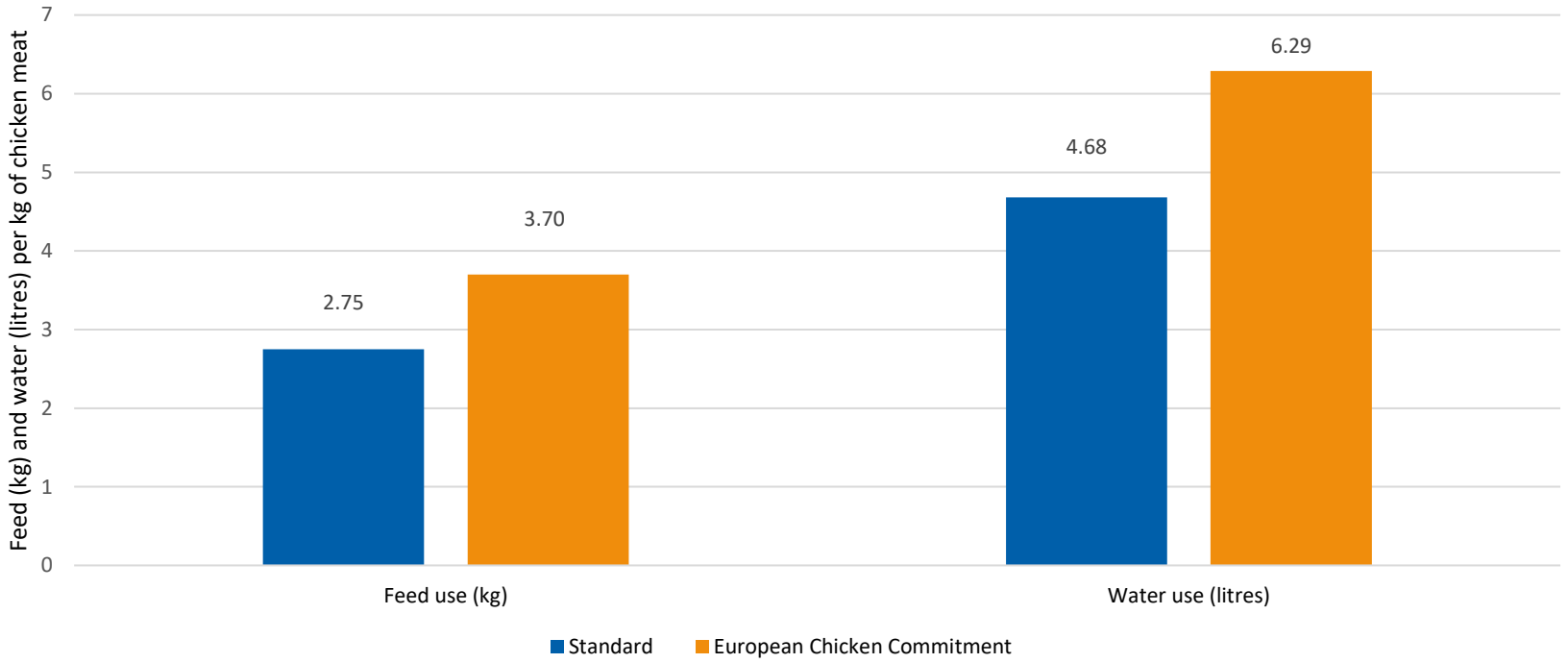
Production costs, eurocents per bird (+21.9%)



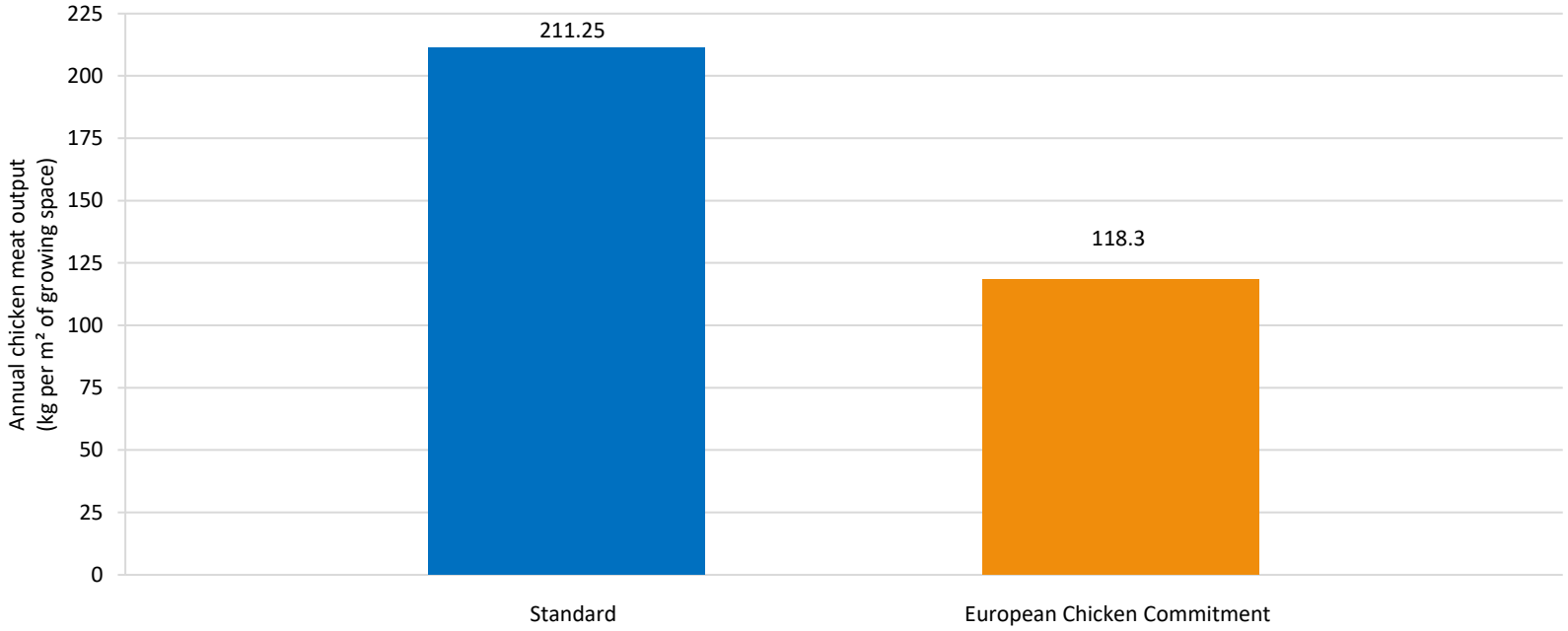
Production costs, eurocents per kg of meat (+37.5%)



Feed and water use per kg of meat (+34%)



Annual meat output, kg per square metre (-44%)

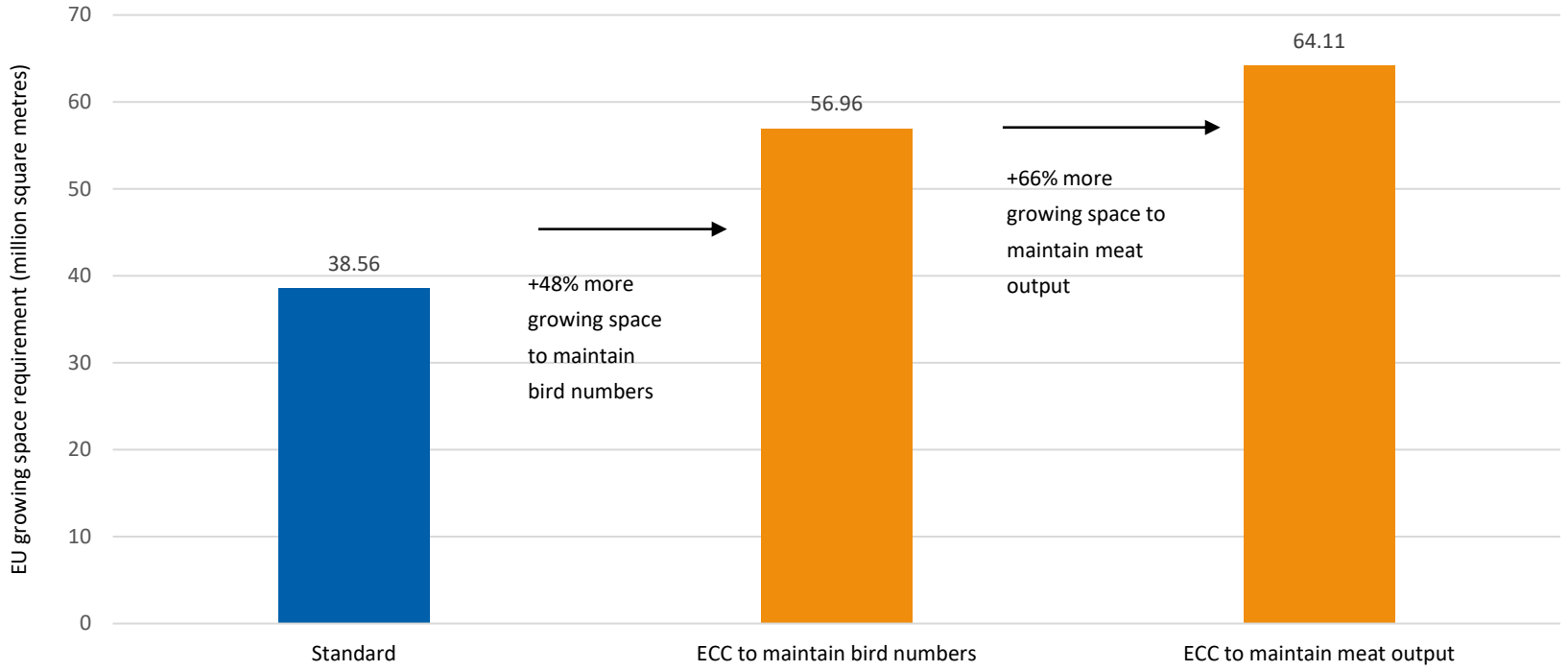


How much extra growing space would be needed to maintain the current EU output of chicken and chicken meat in ECC production?

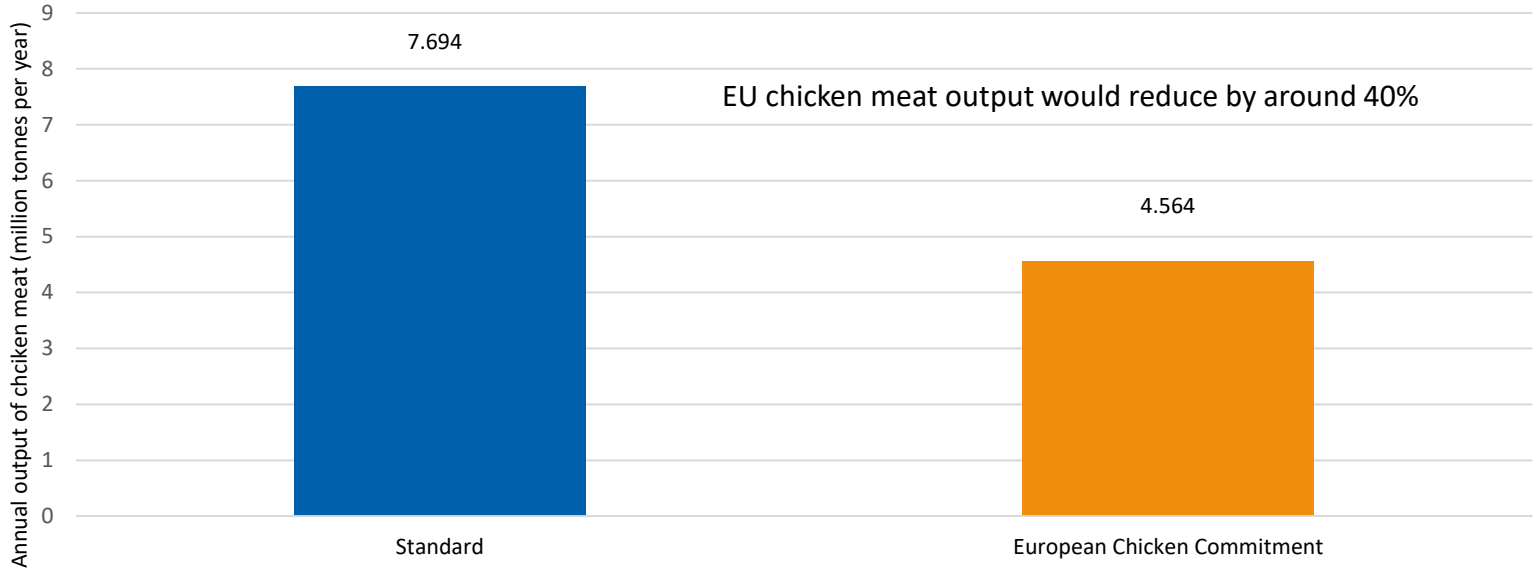
Calculating the extra growing space needed

- Stocking rates in the EU vary due to local legislation, customer requirements etc.
- For each Member State, the current percentage of birds at each stocking rate was estimated
- Published statistics on chicken output were then used to calculate the amount of growing space in each Member State and the EU total
- The amount of space needed to maintain (i) bird numbers and (ii) meat output in ECC production was calculated

Changes in EU growing space requirements



What if no new houses are built in the EU?



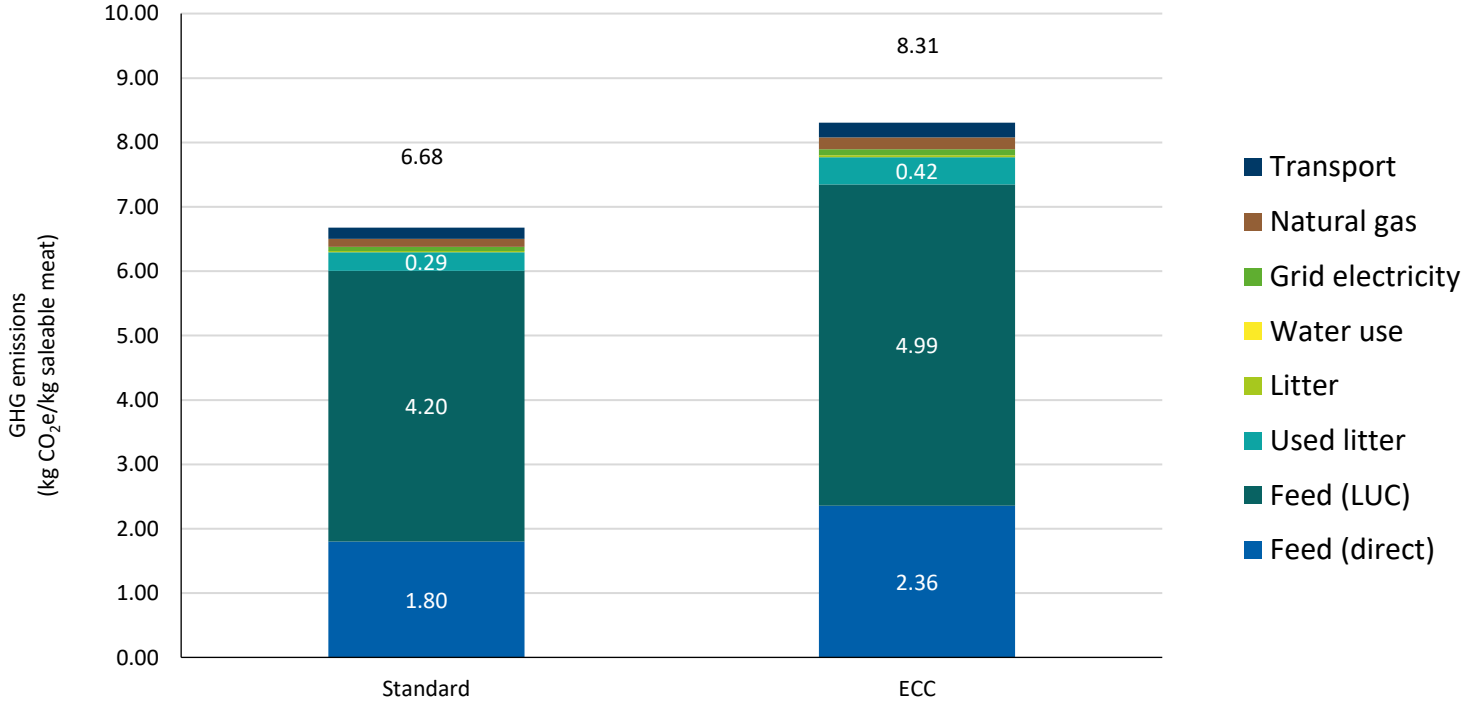
Implications at EU level

To maintain current EU chicken meat output

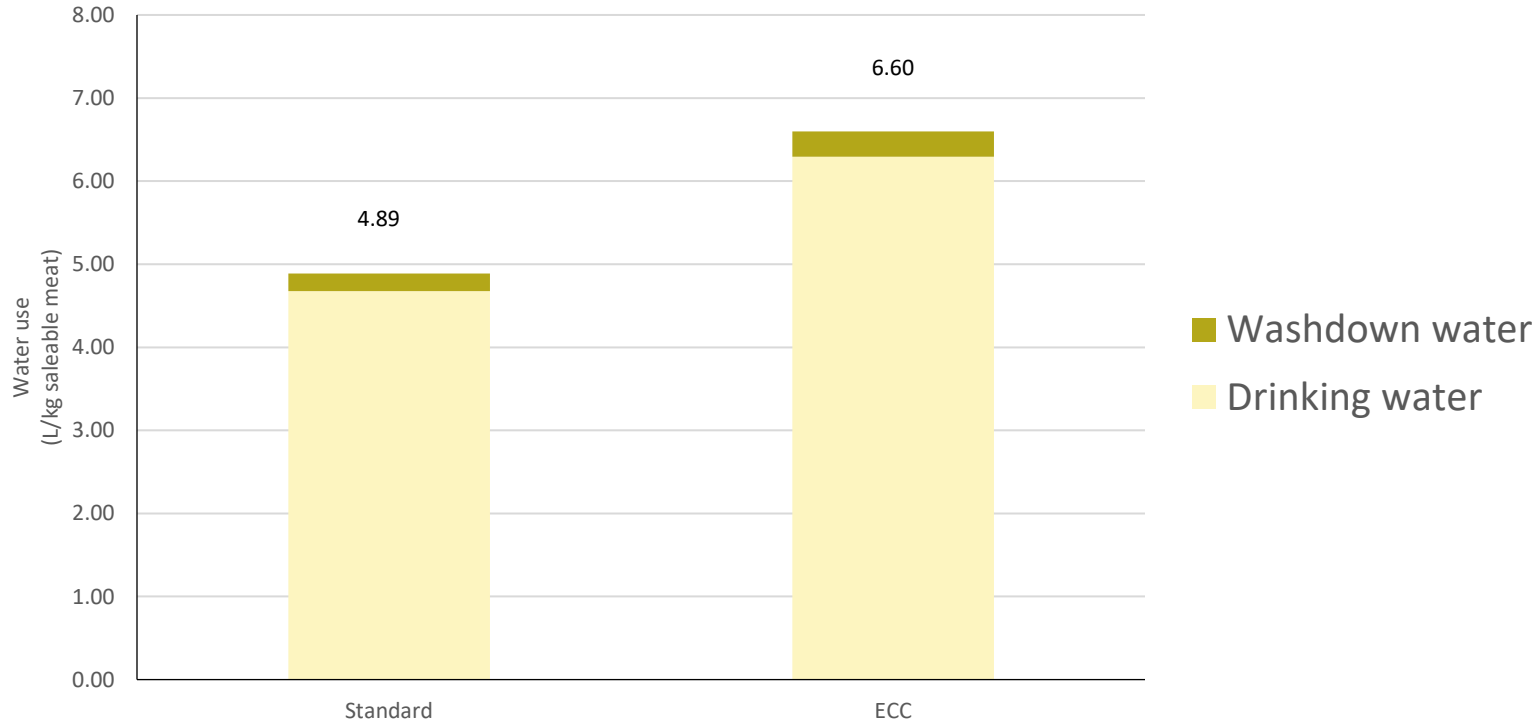
- An extra 25.55 million m^2 of growing space would be required
- Equivalent to 9-10,000 new buildings in the EU (typical size)
- At a current new-build price of €420 per m^2, the cost of this would be €8.24 billion
- Feed intake would increase by 7.3 million tonnes
- Water use would increase by 12.44 million m^3

Sustainability – system boundary

Sustainability – GHG emissions (+24.4%)



Sustainability – Water use (+34.3%)



Conclusions

- Cost of production per bird is higher for ECC than for standard production
- The cost difference increases on a ‘per kg of meat’ basis
- The number of bird places is lower in ECC, due to lower stocking density
- Reduced annual output of birds and meat, due to differences in cycle length and breed
- Many new buildings would be needed to maintain current EU chicken meat output
- Feed and water use is higher in ECC; the difference increases per kg of meat
- Carbon footprint is higher for ECC than for standard production

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Further additional costs of the European Chicken Commitment (ECC)

Wolfgang Schleicher
Managing Director
German Poultry Association (ZDG)

AVEC-Webinar: 22. Mai 2024
10 a. m.

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Assumptions of the calculation

- same base, as in the ADAS report
- on top: further additional costs not addressed by the ADAS report
- no permissions for building the needed additional production capacities (barns)

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Where do further additional costs arise?

non-use of existing capacities:

- **from parent herds/barns**
- **in hatcheries**
- **while transporting**
- **in the feed mills**
- **during slaughter and cooling**

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How big are the further additional costs?

- **+21.9 %** (ADAS report) per bird
- **+14.8 %** (further additional costs to the ADAS report) per bird
- in the whole compared with the conventional production: **36.7%** per bird
- in the whole compared with the conventional production: **54.2%** per kg meat

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Expected consequences changing to ECC

- losing self sufficiency – dependency of third/foreign countries
- increased negative environmental impacts (losing efficiency)
- losing international competitiveness
- loss of jobs
- increase of imports
- increasing food costs for consumer

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Thanks for your attention.