



Consumers and practitioner views and lessons from the workshop on PPILOW business models

Chair: Anne Collin

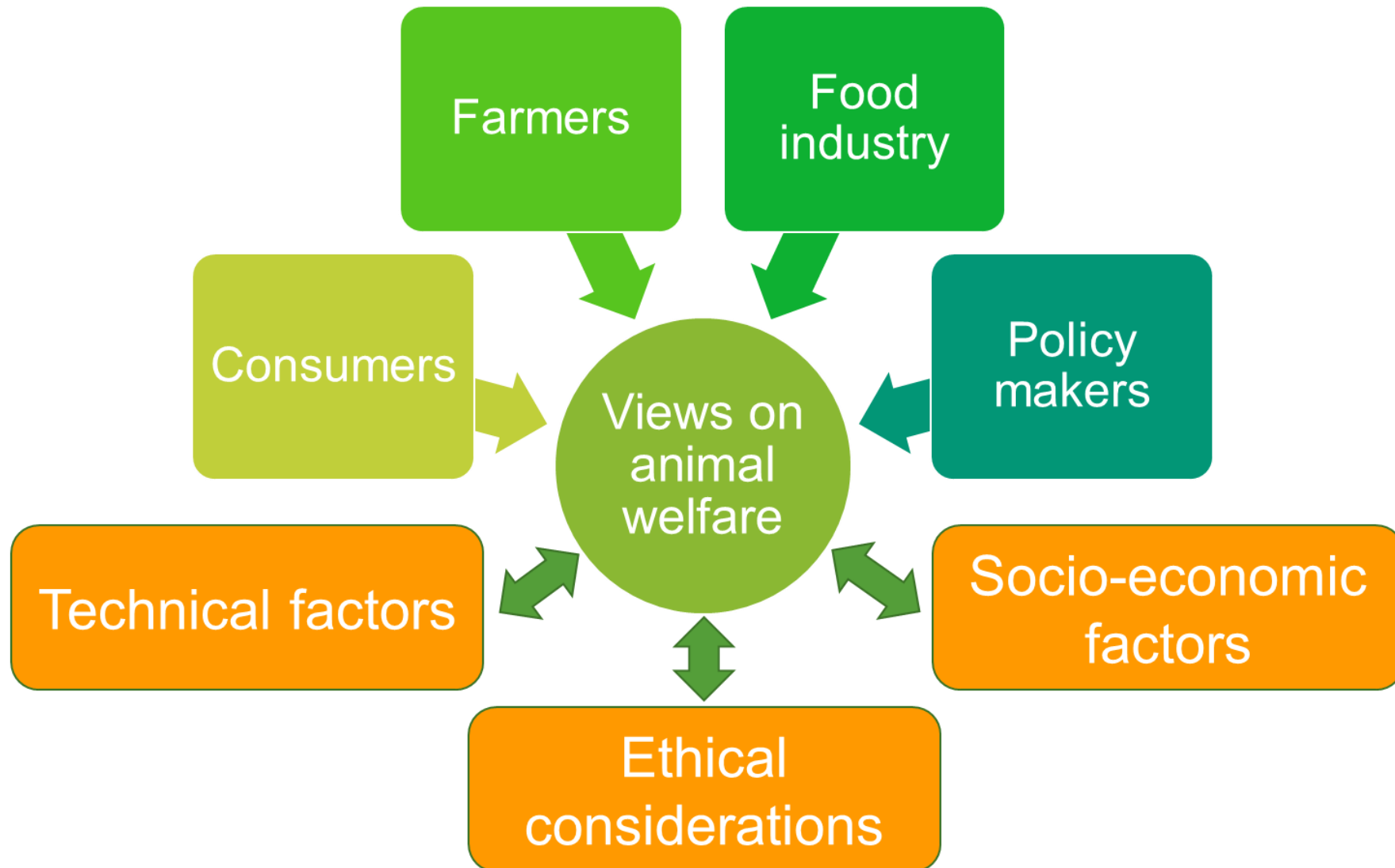
Jarkko Niemi, Minna Väre, Katriina Heinola & Petra Thobe



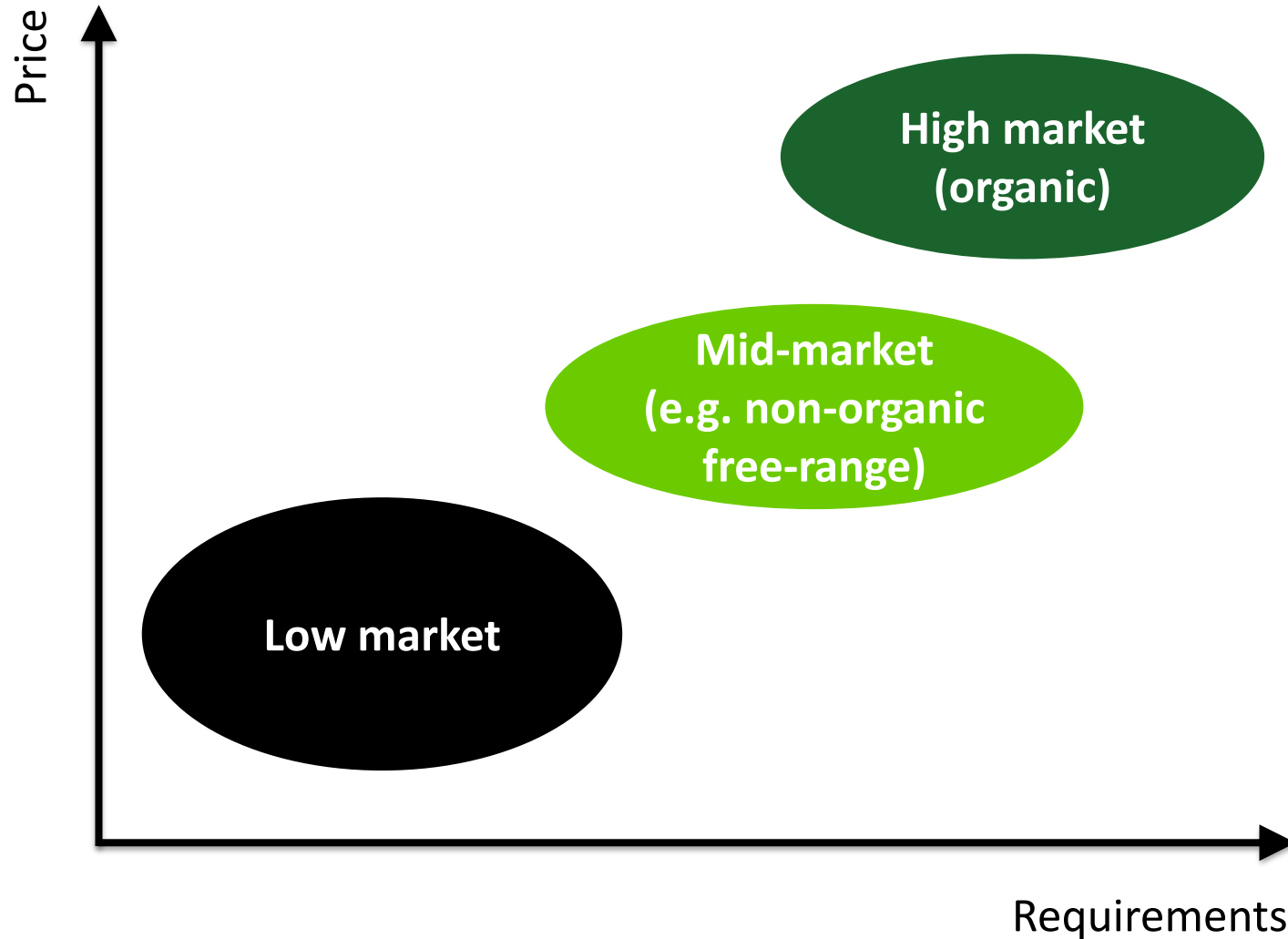
PPILOW final conference, Brussels

11-12 June 2024

CHALLENGE: Socio-economic factors can prevent or boost welfare improvements



PPILOW focuses on high & mid-market farming systems



PPILOW When does a market opportunity exist?

Application
(e.g. practice)



Customer



Market
opportunity

- A viable business must be profitable business
- Economic evaluation of costs and revenues is an essential part of evaluating a business model, but a business model is a broader concept
- ➔ How value is generated and how does the structure of value chain contribute?
- High challenge likely increases the costs, and hence the price, but also makes it more difficult to copy the business idea.

What did the public think?



PPILOW How do you perceive the conventional indoor production of poultry and pigs (median responses)?

In most of the countries, citizens had either “neutral” or “negative” perceptions on **conventional indoor** production of poultry and pigs
(Exception: Romania with “positive” views)

	Unpleasant / Pleasant	B	Safe / Safe	Unethical / Ethical
FI	3.00		3.00	2.00
DK	3.00		3.00	3.00
RO	4.00		4.00	4.00
GB	2.00		2.00	2.00
DE	2.00		2.00	2.00
BE	2.00		2.00	2.00
NL	3.00		3.00	3.00
FR	2.00	2.00	2.00	2.00
IT	2.00	2.00	2.00	2.00
All	2.00	2.00	3.00	3.00

PPILOW How do you perceive non-organic outdoor production of poultry and pigs? (median responses)?

	Unpleasant / Pleasant	Bad / Good	Unsafe / Safe	Unethical / Ethical
FI	4.00	4.00	4.00	4.00
DK	4.00	4.00	4.00	4.00
RO	4.00	4.00	4.00	4.00
GB	4.00	4.00	4.00	4.00
DE	3.00	4.00	3.00	3.00
BE	3.00	4.00	3.00	3.00
NL	3.00	4.00	3.00	3.00
FR	4.00	4.00	4.00	4.00
IT	4.00	4.00	4.00	4.00
All	4.00	4.00	3.00	4.00

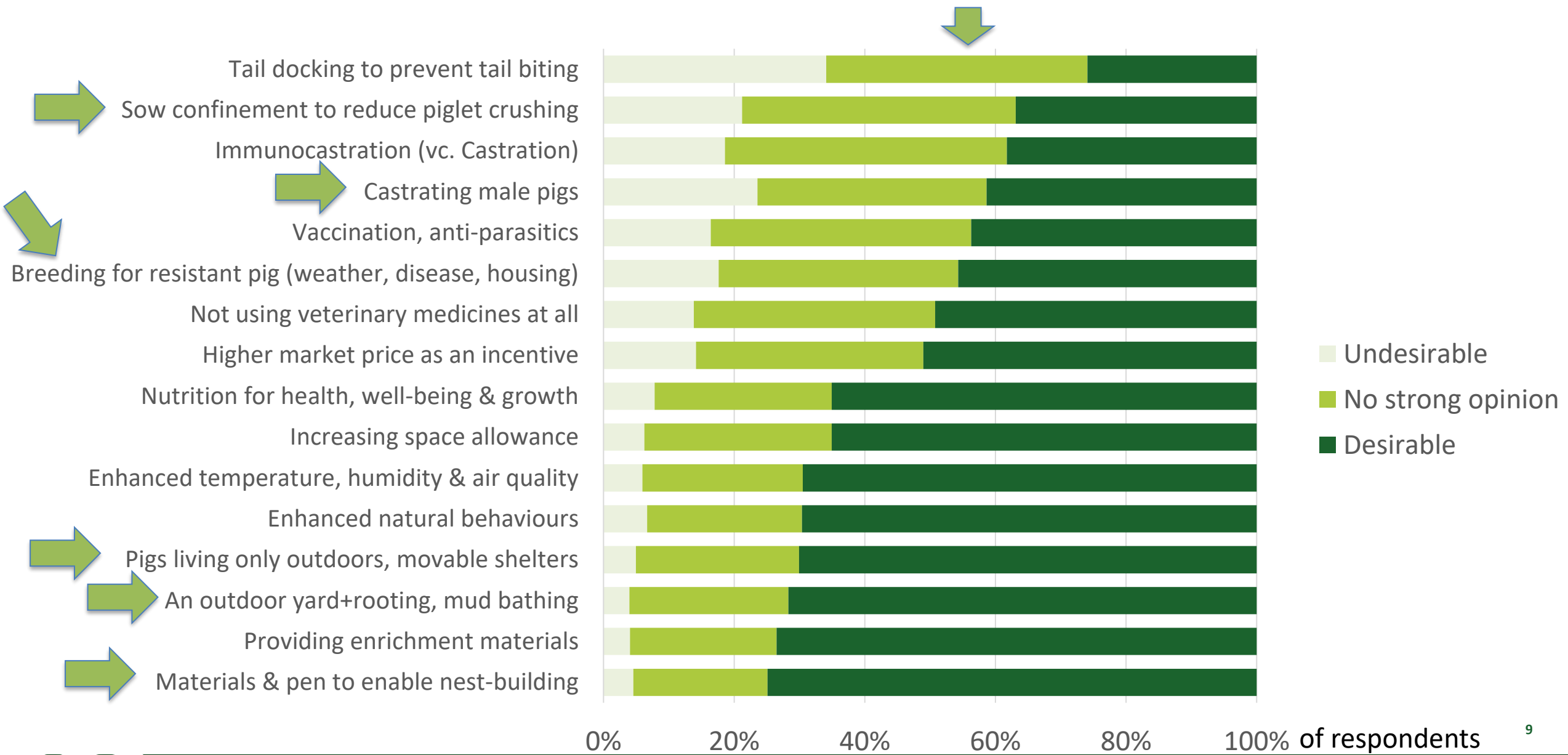
In all countries, citizens had “neutral or “positive” perceptions on non-organic outdoor production

PPILOW How do you perceive organic production of poultry and pigs (median responses)?

	Unpleasant / Pleasant	Bad / Good	Unsafe / Safe	Unethical / Ethical
FI	4.00	4.00	4.00	4.00
DK	4.00	4.00	4.00	4.00
RO	4.00	4.00	4.00	4.00
GB	4.00	4.00	4.00	4.00
DE	4.00	4.00	4.00	4.00
BE	4.00	4.00	4.00	4.00
NL	4.00	4.00	4.00	4.00
FR	4.00	4.00	4.00	4.00
IT	4.00	4.00	4.00	4.00
All	4.00	4.00	4.00	4.00

In all countries, citizens had “positive” perceptions on **organic production** compared to conventional indoor production

PPILOW Citizens' views on how desirable *some* measures are in *pig* production



PPILOW Citizens' views on how desirable *some* measures are in *poultry* production

Beak trimming to avoid feather pecking

Breeding for resistant birds

➔ Vaccines & anti-parasitics

Higher market price (incentive)

➔ Not using veterinary medicines at all

➔ Avoid the killing of one day old male chicks

Nutrition for health, well-being & growth

Enhanced temperature, humidity, air quality

Only outdoor rearing in movable shelters

Rearing slow-growing birds

Enhanced expression of natural behaviours

Limit flock size for socialisation & health

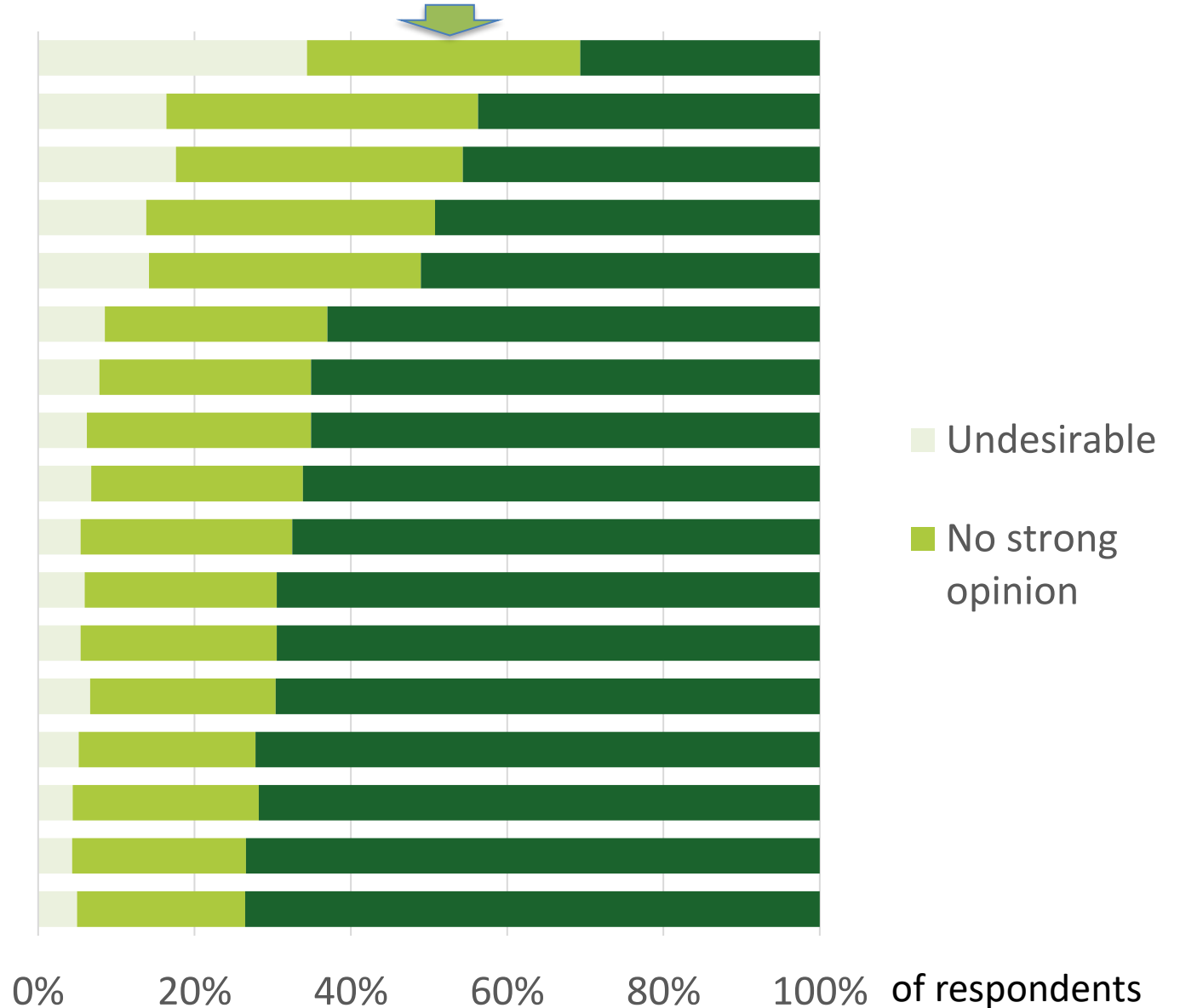
Increasing space allowance

➔ A field with trees, bushes & natural elements

Perches or platforms to increase mobility

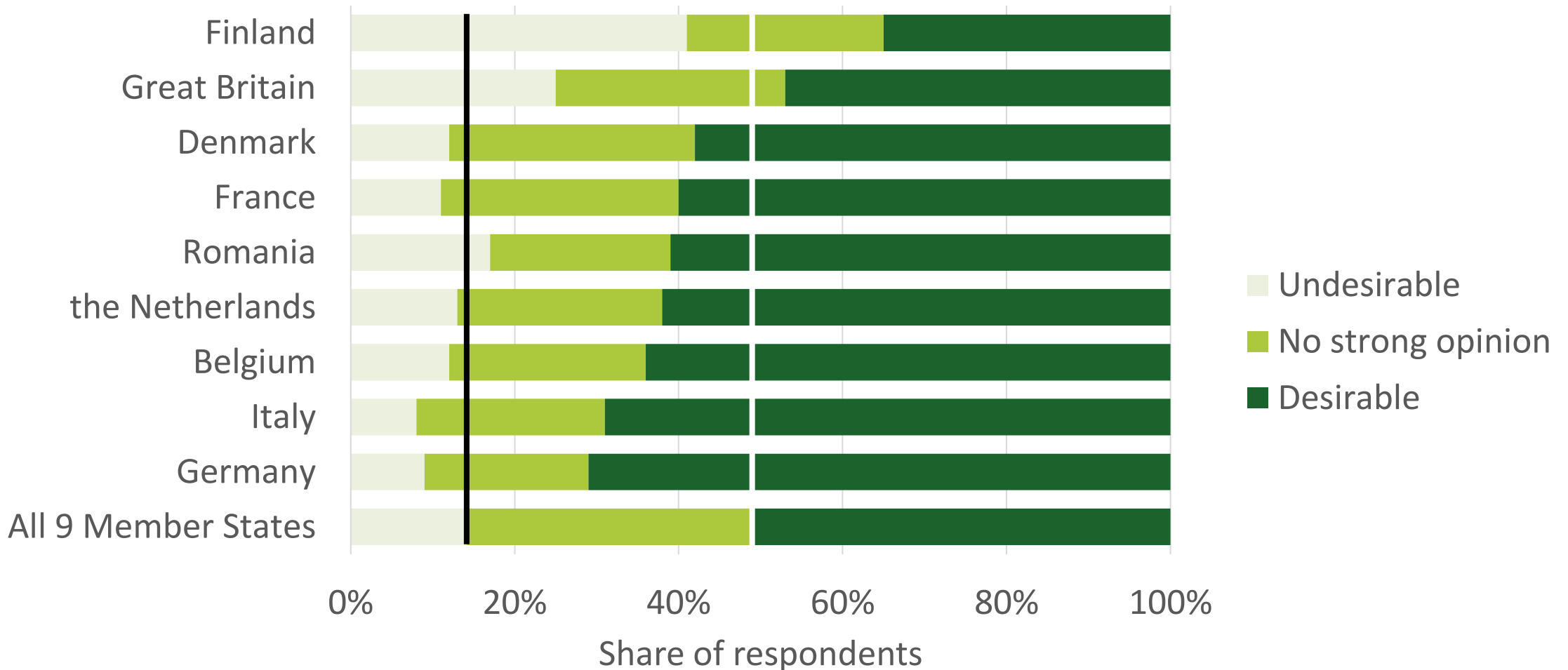
Fences & housing to protect from predators, weather

Enhance bedding for health, hygiene, rest comfort



PPILOW There were some differences in the desirability of measures between countries

The public's desirability for not using veterinary medicines (including antibiotics) to treat illness – Not a straight forwards question: Treating sick animals ⇔ Combatting antimicrobial resistance.



PPILOW Knowledge level and effect on knowledge on the desirability of the practices

Slow-growing breed	5.1
Outdoor access	4.5
Enhanced bedding	4.3
Restricted flock size	4.2
Natural behaviour	3.9
Adjusting nutrition for well-being	3.3
Space allowance	3.2
Condition control	3.2
Enrichments for mobility	3.0
Beak trimming	0.6
Avoid killing male chicks	ns

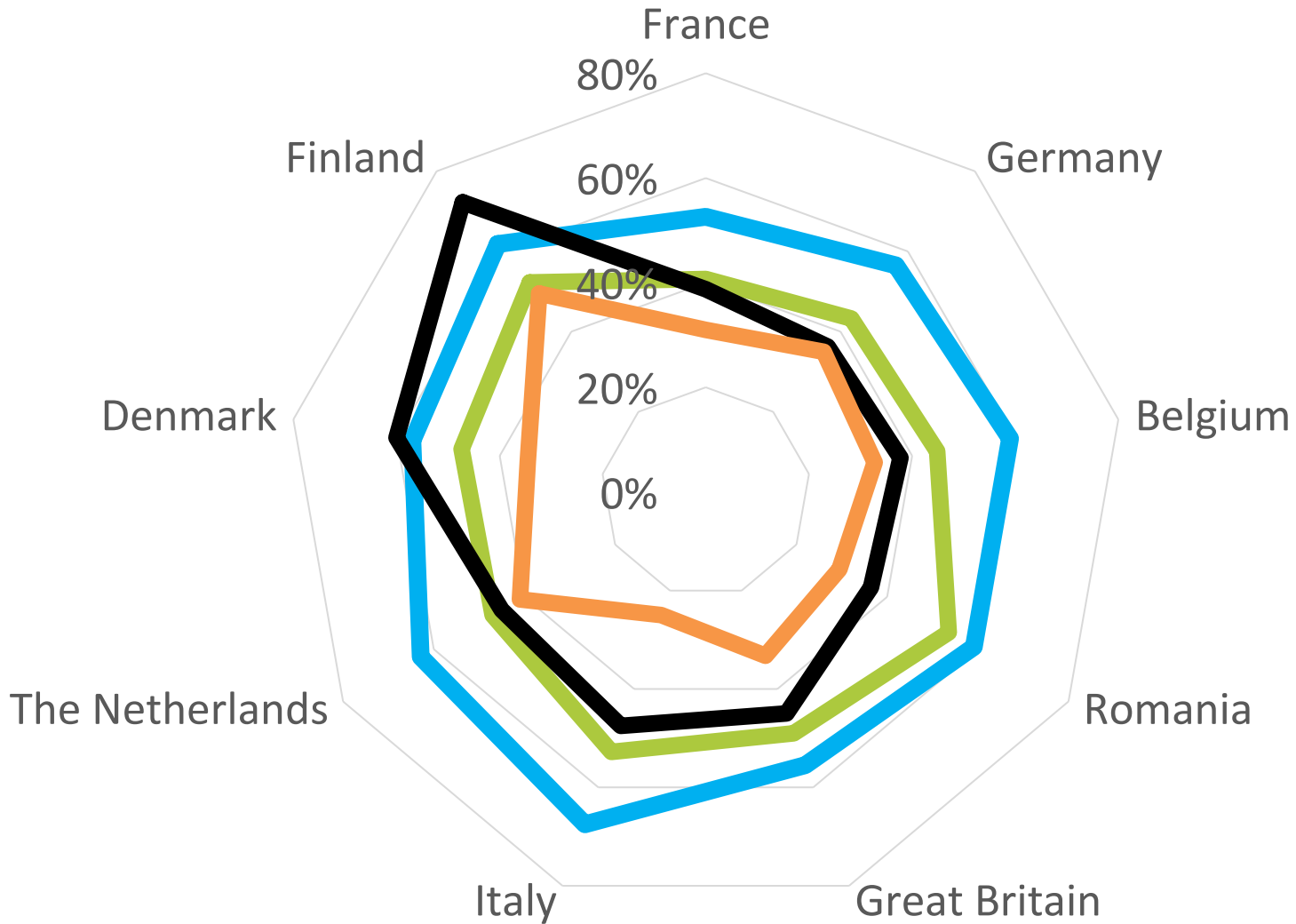
Knowledge:
 "I don't know": 8 %
 Little knowledge: (0-4 correct answers): 72 %
 Lots of knowledge (5-8 correct answers): 21 %

Statement	Correct answer
Birds can roam freely outdoors for 24 hours a day	No
Birds can roam outdoors for a limited time	Yes
Birds can roam freely indoors	Yes
Birds are prone to fighting	No
Incurs higher production cost	Yes
Birds are fed a diet that is free from genetically modified feed materials	Yes
Birds are not treated with antibiotics	No
The beaks of the birds are not trimmed	Varies by country

PPILOW Are different actors a trustworthy as a source of animal welfare information?

Source of information	% trust in this group
Veterinarians	67 %
Universities & research organisations	65 %
Consumer organisations	60 %
Farmers	56 %
Associations of organic production	56 %
Civil society organisations	53 %
Authorities	47 %
Interests groups	41 %
Food retailers	38 %
Traditional media	35 %
Colleagues	33 %
Food processors & manufacturers	31 %
Social media	20 %

PPILOW An index showing how trustworthy different groups are as a source of welfare information

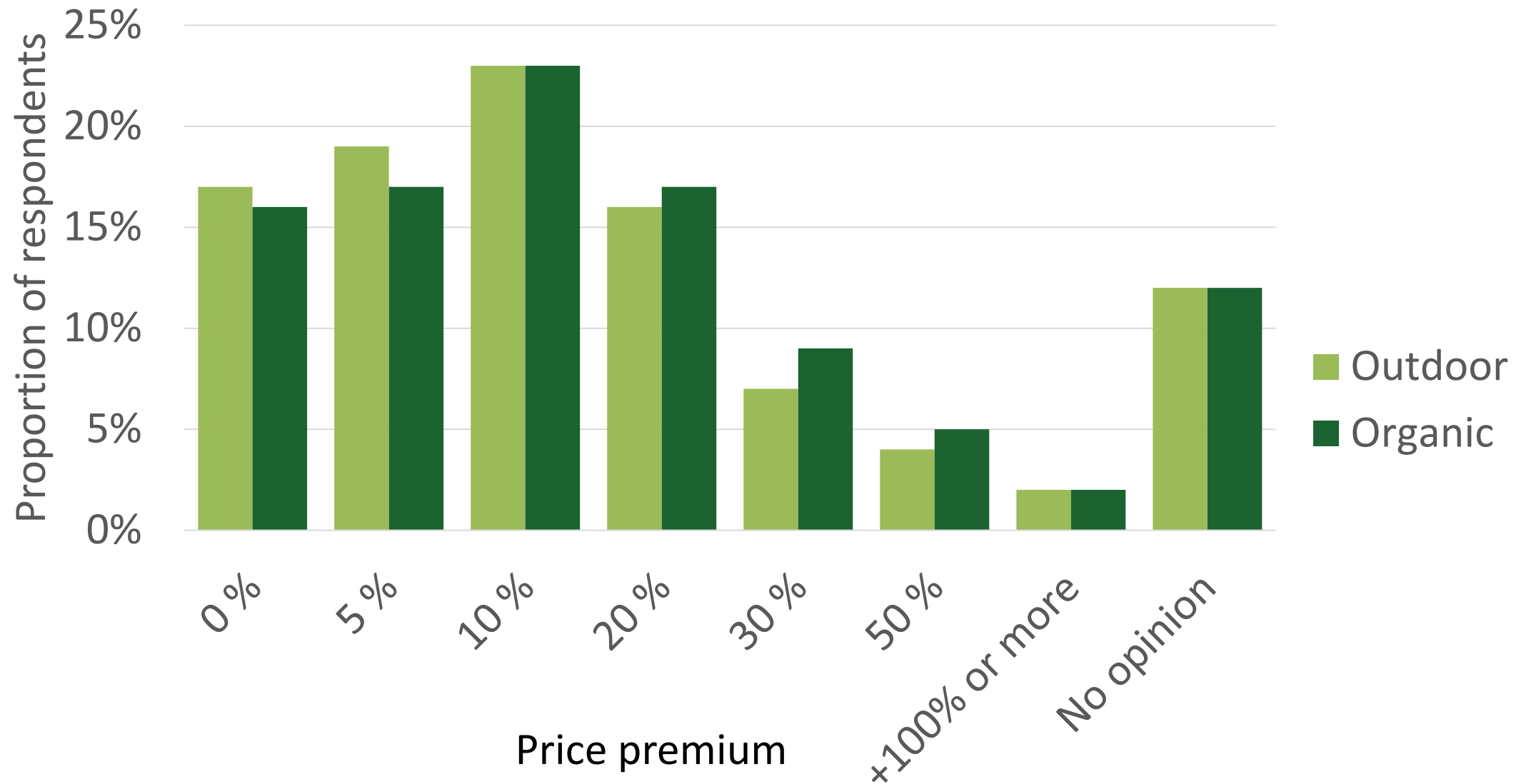


- Supply chain stakeholders
- Civil society, R&D, consumer organisations
- Authorities
- Media

According to an EFA, the respondents in nine countries differ considerably in their trust:

- Finland, Denmark, Romania and Great Britain: More trust in value-chain actors than NGOs and academic organizations.
- Germany, Belgium, the Netherlands and Italy: More trust in NGOs and academic organizations.
- France: Low trust on all actors

PPILOW Willingness to pay a premium for organic or outdoor production's products





PPILOW Proportion of respondents who considered a measure applicable in pig production

Measure	Pigs	
	Applicable	Uncertain
Enrichments for pigs to explore	91 %	4 %
Materials and pen design to build a nest	87 %	7 %
Adjusting nutrition for health, well-being, growth	85 %	9 %
Enhancing the opportunities for natural behaviours	80 %	15 %
Using vaccines and anti-parasitics	78 %	11 %
Genetically more resistant animals	74 %	15 %
Access to an outdoor yard, rooting, mud bath	69 %	19 %
NOT docking the tails	72 %	13 %
Enhanced temperature, humidity & air quality control	67 %	24 %
Additional space	69 %	19 %
Catration under pain relief and anaesthesia	63 %	30 %
Outdoor rearing only, movable shelters	52 %	28 %
Confining the sows	48 %	31 %
Not using veterinary medicines at all	44 %	33 %
Raising entire male pigs	20 %	52 %
Immunocastration	19 %	39 %

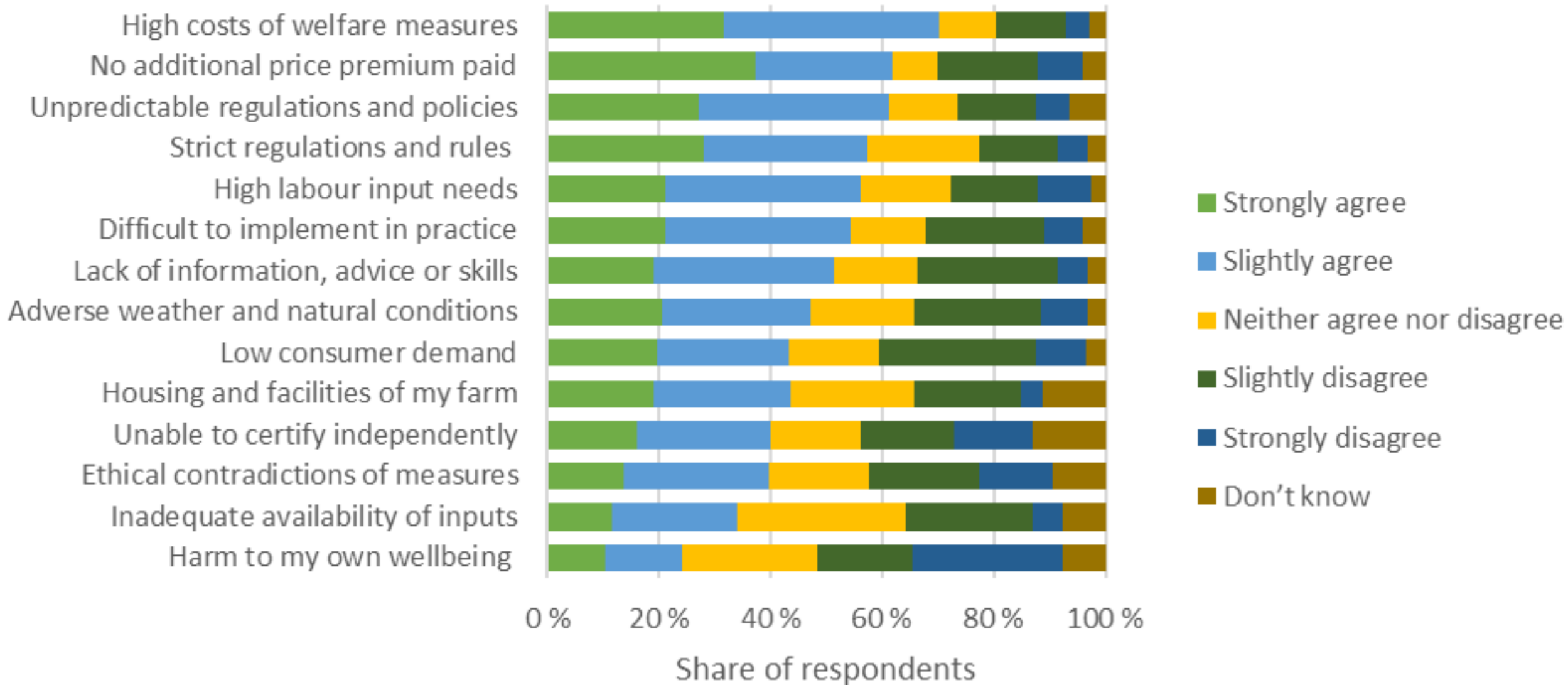
PPILOW Proportion of respondents who considered a measure applicable in poultry production

Measure	Laying hens		Broilers	
	Applicable	Uncertain	Applicable	Uncertain
Access to a pasture with trees, bushes, hides etc.	77 %	15 %	63 %	22 %
Adjusting nutrition for health, well-being, growth	74 %	20 %	70 %	9 %
Perches or platforms to increase mobility	71 %	18 %	63 %	24 %
Enhancing the opportunities for natural behaviours	69 %	28 %	67 %	13 %
Enhanced quality and care of bedding for health, hygiene & rest comfort	69 %	20 %	76 %	4 %
NOT trimming the beaks	68 %	14 %	39 %	37 %
Fences and housing to protect the birds	66 %	20 %	76 %	9 %
Enhanced temperature, humidity & air quality control	58 %	28 %	67 %	7 %
Genetically more resistant animals	58 %	34 %	52 %	28 %
Using vaccines and anti-parasitics	57 %	29 %	67 %	9 %
Additional space	51 %	40 %	46 %	37 %
Using methods alternative to the killing the DOCs	46 %	31 %		
Lower flock size	42 %	37 %	46 %	39 %
Rearing a slow-growing chicken	42 %	34 %	50 %	41 %
Rearing male birds of a dual-purpose breed			24 %	33 %
Not using veterinary medicines at all	34 %	42 %	30 %	48 %
Outdoor rearing only, movable shelters	29 %	26 %	22 %	41 %

PPILOW Some were measures considered beneficial but inapplicable? (% of respondents, poultry)

Measure	Laying hens		Broilers	
	Applicable	Uncertain	Applicable	Uncertain
++ Access to a pasture with trees, bushes, hides etc.	77 %	15 %	63 %	22 %
++ Adjusting nutrition for health, well-being, growth	74 %	20 %	70 %	9 %
++ Perches or platforms to increase mobility	71 %	18 %	63 %	24 %
++ Enhancing the opportunities for natural behaviours	69 %	28 %	67 %	13 %
++ Enhanced quality and care of bedding for health, hygiene & rest comfort	69 %	20 %	76 %	4 %
+ NOT trimming the beaks	68 %	14 %	39 %	37 %
++ Fences and housing to protect the birds	66 %	20 %	76 %	9 %
Enhanced temperature, humidity & air quality control	58 %	28 %	67 %	7 %
Genetically more resistant animals	58 %	34 %	52 %	28 %
++ Using vaccines and anti-parasitics	57 %	29 %	67 %	9 %
+ Additional space	51 %	40 %	46 %	37 %
+ Using methods alternative to the killing the DOCs	46 %	31 %		
Lower flock size	42 %	37 %	46 %	39 %
Rearing a slow-growing chicken	42 %	34 %	50 %	41 %
+ Rearing male birds of a dual-purpose breed			24 %	33 %
+ Not using veterinary medicines at all	34 %	42 %	30 %	48 %
Outdoor rearing only, movable shelters	29 %	26 %	22 %	41 %

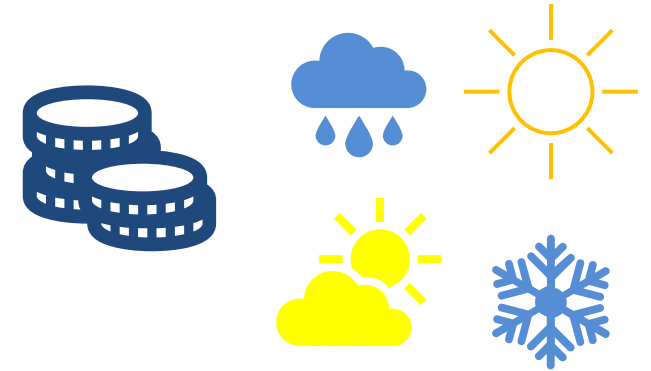
PPILOW Practitioners' views about barriers to improve animal welfare



PPILOW What are the barriers for improving animal welfare?

- **Common factors**

- Lack of a price premium
- Unpredictability of rules and regulations
- Strict rules and regulations



- **Farm-specific factors**

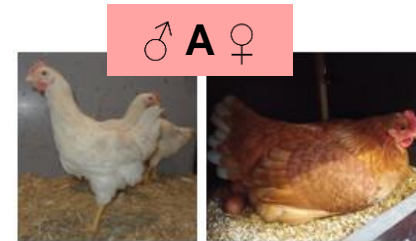
- Cost of implementing measures
- Measures are difficult to put into practice
- Increase in labour costs
- Production conditions on the farm
- Lack of information, advice and skills



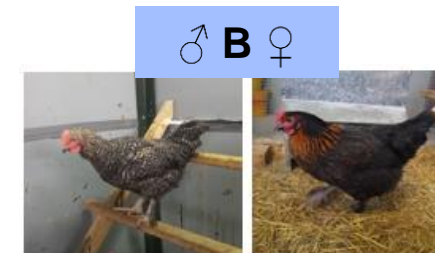
PPILOW Objectives

Aim of the study: to compare performance, behaviour and welfare of three different dual-purpose genotypes rear in three different countries, Denmark, France and Germany under organic conditions

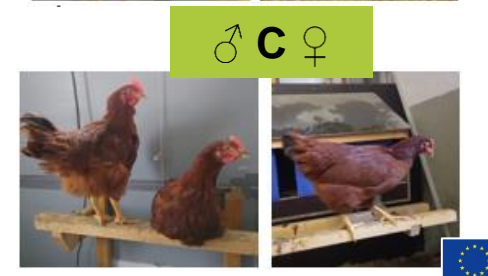
Genotype A : dual-purpose cross breed (meat production)



Genotype B: dual-purpose rustic breed



Genotype C : dual-purpose cross breed (eggs production)



© Photos /
Pluschke

Which dual-purpose genotypes uses the least resources while producing the highest output to be economically viable?



© Thünen-Institut, Helen Pluschke



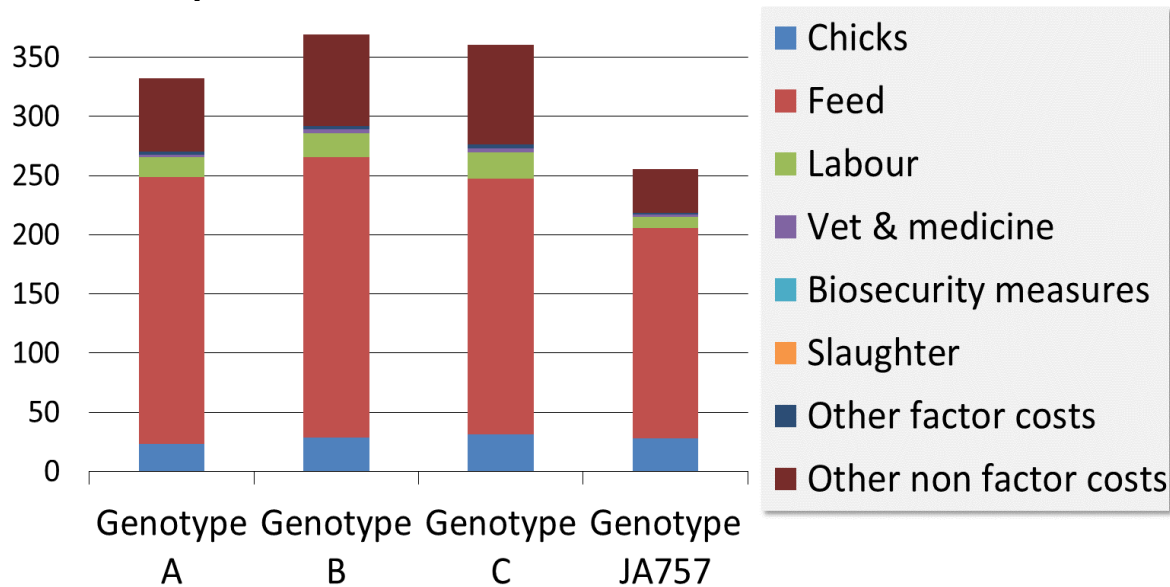
© Thünen-Institut, Helen Pluschke

PPILOW Are the animal welfare measures economically viable?

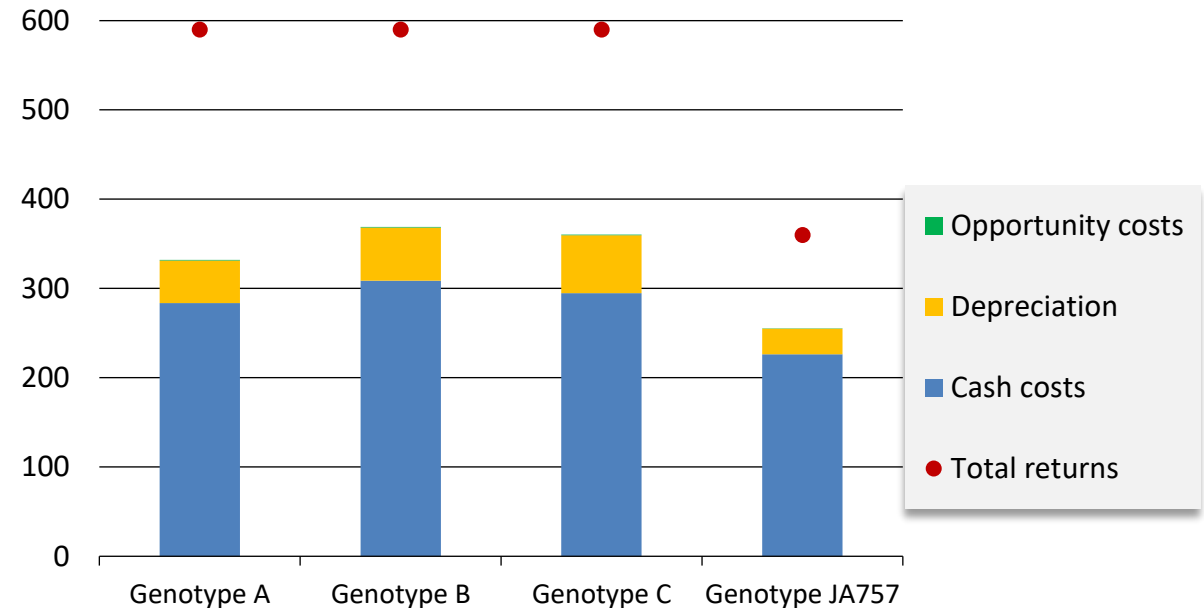
Example: Trial of novel dual-purpose genotypes on-station

On-station trials of the males in Germany

Comparison of production costs (EUR/100kg live weight)



Total costs, returns and profitability (Euro/100 kg live weight)

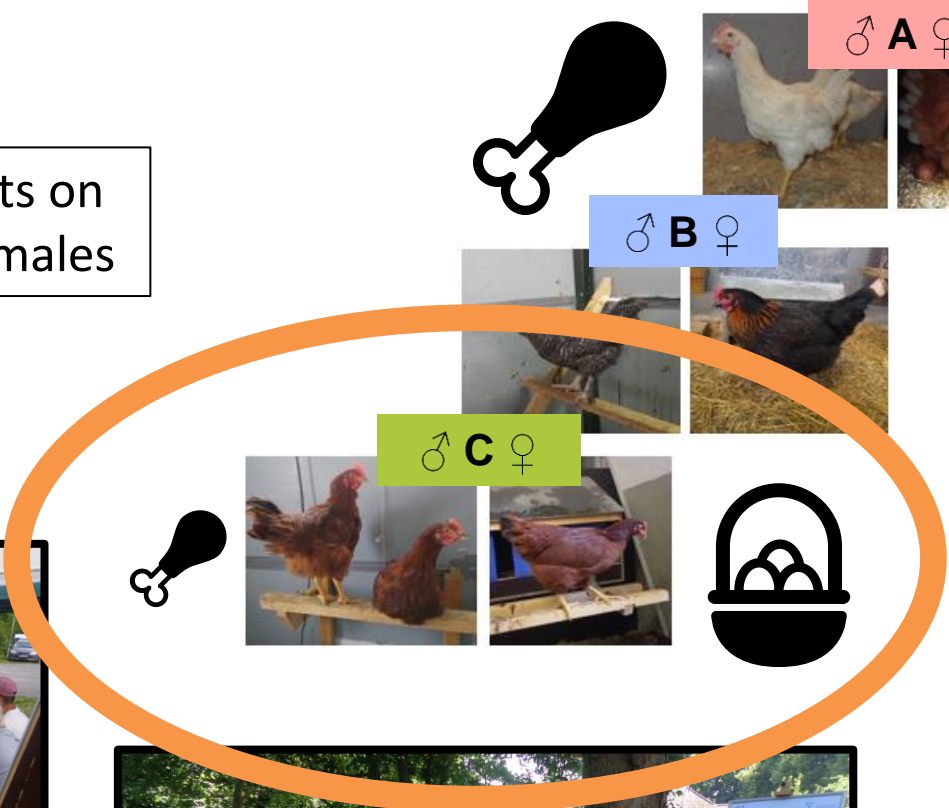


- Genotype (GT) A: lowest production costs among dual purpose GTs. Full cost differences: GT A to control group JA 757: 70 €/100 kg live weight.
- GT C to control group JA 757: 107 €/100 kg live weight.

- It is more profitable to rear Genotype A males.
- Rearing GTs A, B and C males is profitable in the short, medium and long term as the production is able to cover cash, depreciation and opportunity costs

PPILOW Genotypes & National Practitioner Group decision

On-station results on the fattening of males



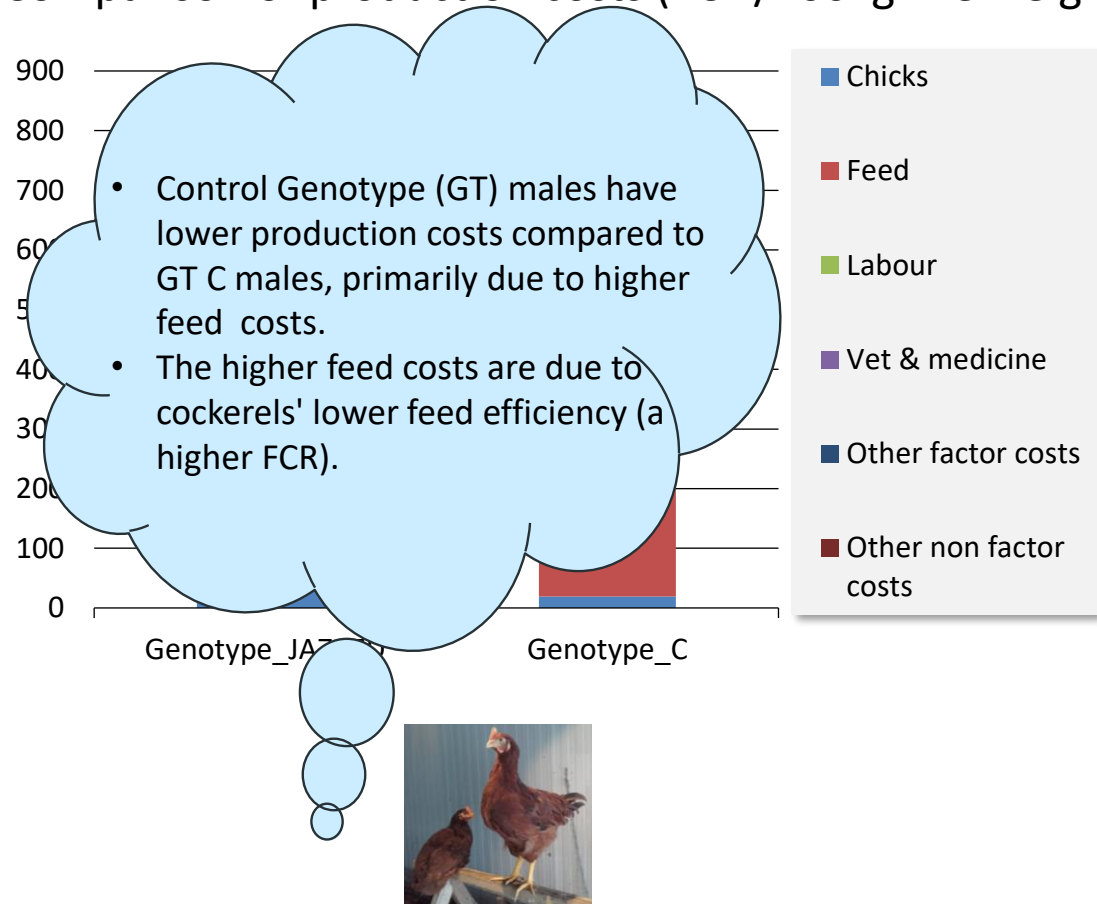
On-station results on the egg production of laying hens



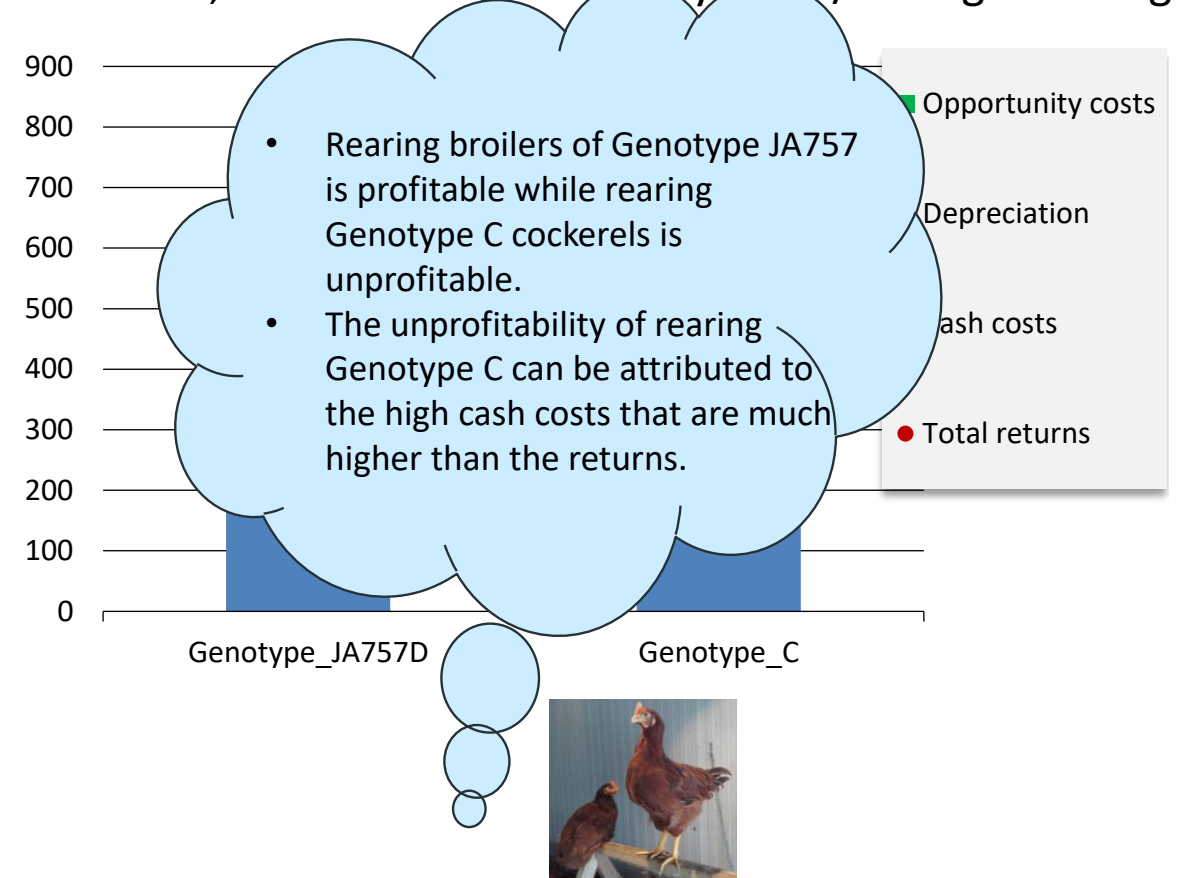
Based on these results, the NPG in each country selected the most promising genotype to be tested on the farm

On-farm trials in Germany

Comparison of production costs (EUR/100kg live weight)

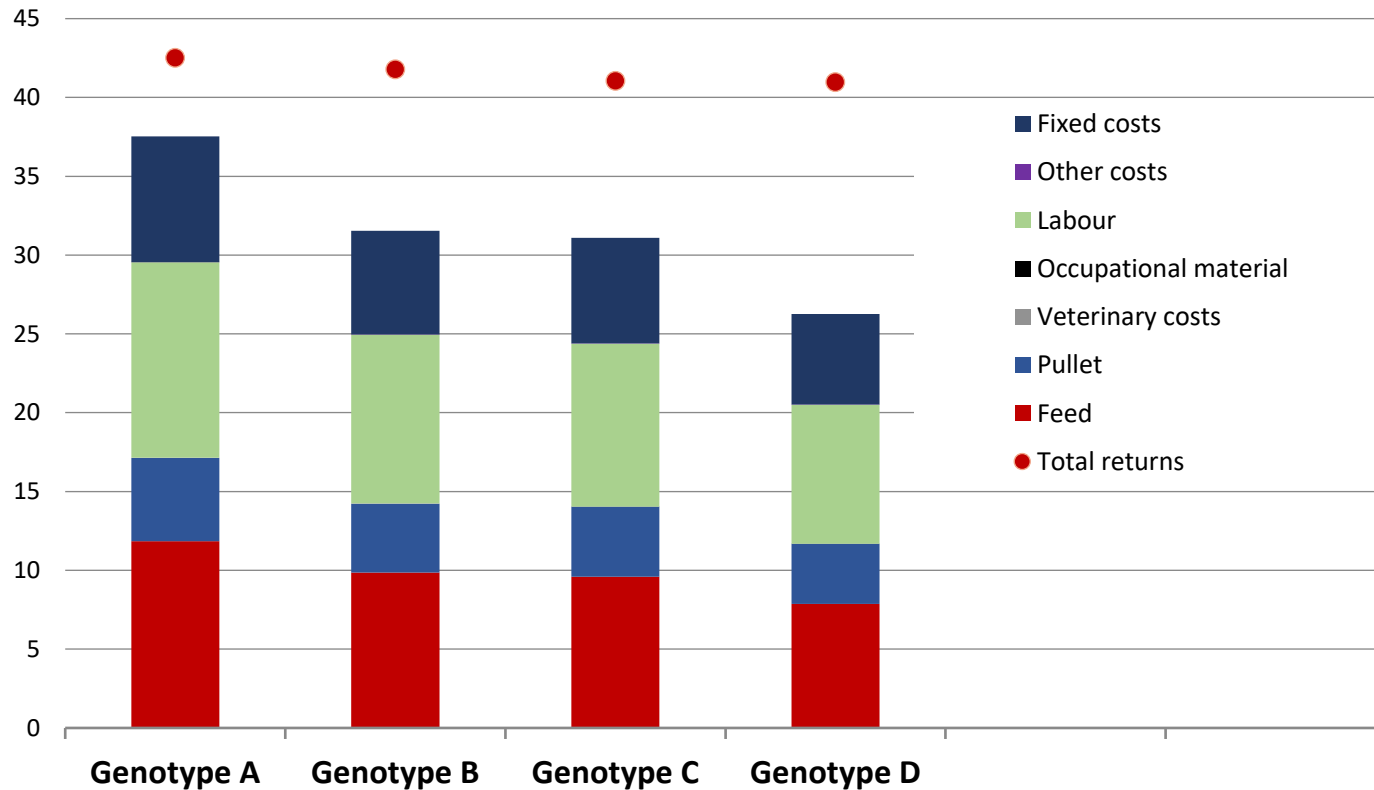


Total costs, returns and profitability (Euro/100 kg live weight)



On-station trials of Females in Germany

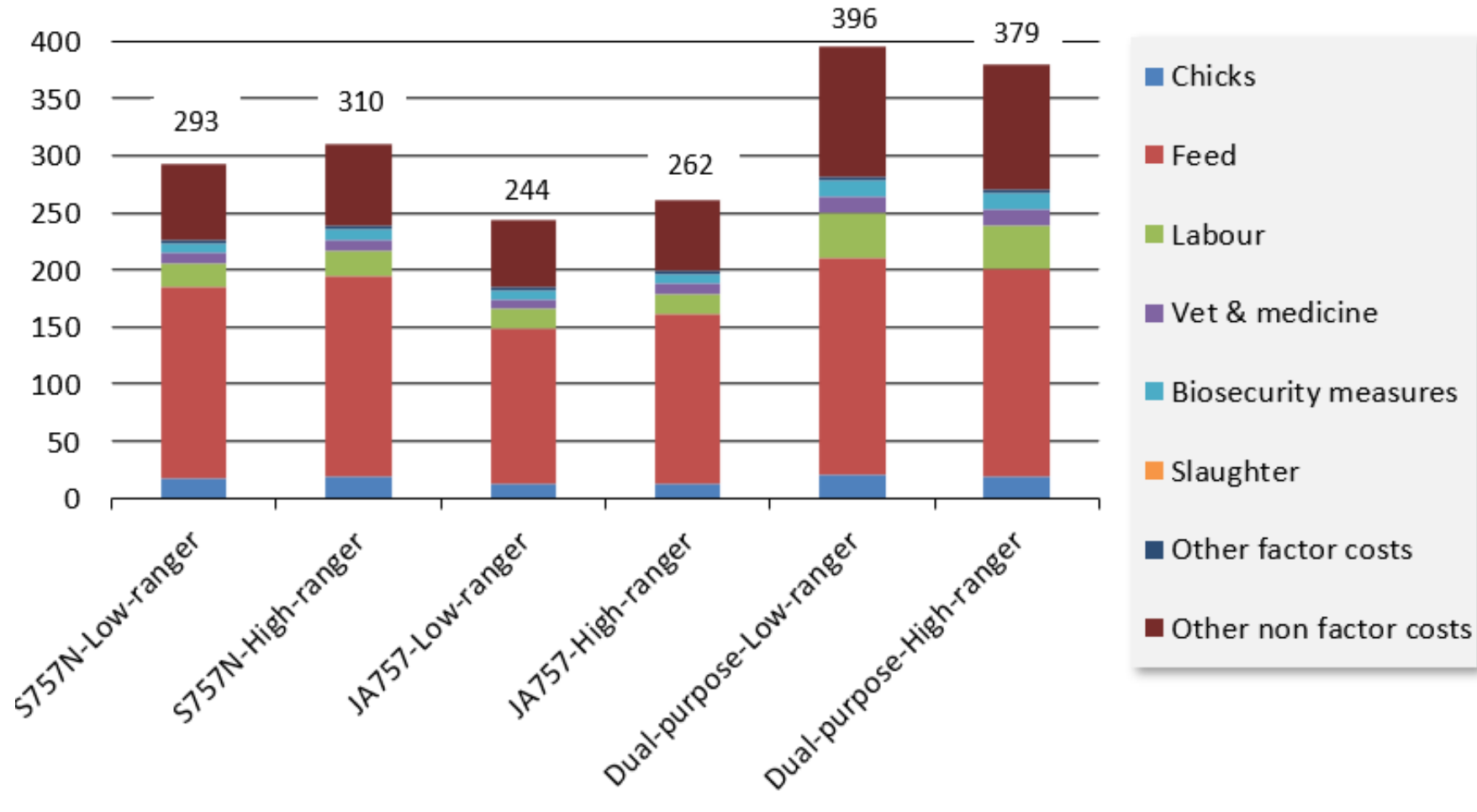
Total costs, returns and profitability (Euro cent/egg)



- Egg price fix barn: 34 cent/egg
Egg price mobile barn: 38 cents/egg
- Production costs 18-43% higher for dual-purpose hens compared to high performing layers.
- All genotypes are profitable under the given price assumptions.

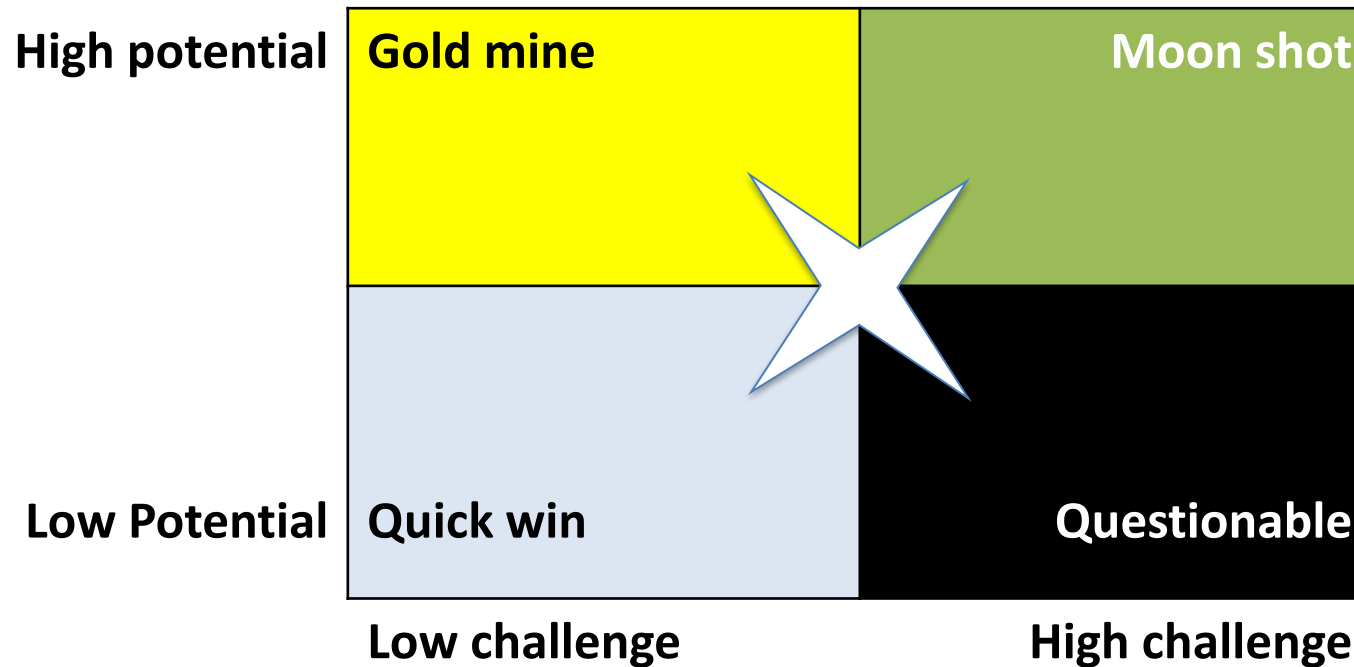


Comparison of production costs (EUR /100 kg live weight)





PPILOW Attractiveness of a market opportunity



- High potential may mean high volume and low profit margin.... or high margin
- High challenge to realise an opportunity likely increases the costs, but also makes it more challenging to copy the business idea → Uniqueness.

Customer segments that you are targetting

What problem(s) they have? Who are early adopters?

Value proposition:

Clear and compelling message: Why your product is worth buying.

Solution: What are the top features?

Comparison: How things are done today?

Channels to reach the customers

How you will make money?

Costs & resources needed?

How & how much revenue is collected?

Metrics to measure your performance

Competitive advantage: How you can retain it? Is it easy to copy?

PPILOW – A business model suggestion with dual-purpose breeds

COSTS

Enrichment, labor, foraging material, planting outdoor area, marketing logistics. • Feed price & feed efficiency may be lower, less disease losses?

VALUE PROPOSITION

More ethical sustainable premium organic eggs & chicken • The birds can explore outdoors, express natural behaviors, are healthier and there are less antibiotic residues

- Welfare is monitored & cared all their life
- Slow & local food

CHANNELS

Multi-channel • Open, transparent & interactive, offer an alternative food solution, emphasize naturalness

TARGET SEGMENTS

Ethically conscious consumers doubting the mainstream farming

- Smaller households, senior citizens, consumers appreciating local food
- Customers with high WTP for quality • Vegetarians who eat eggs?

REVENUES

Price premium? Sell directly to consumers? Subscriptions? Will consumers buy small chicken?

RELATIONS

Collaborate with local stores, restaurants, welfare organisations, sell online • Branding, raise awareness • Social media & open days

PPILOW – A business model suggestion for entire male pigs

COSTS

No castration, less piglet mortality. Enrichments, labor, yard maintenance, huts, new genetics, boar taint? Lower feed cost per kg. • Lower productivity? less diseases?

REVENUES

Price premium? Sell directly to consumers? Subscriptions? Boar taint may reduce sales revenue.

VALUE PROPOSITION

Less pain on animals • The pigs can explore outdoors, express natural behaviors, are healthier and there are less antibiotic residues • Leaner meat • Welfare is monitored & cared all their life • Slow & local food

CHANNELS

Multi-channel • Open, transparent & interactive, offer an alternative food solution, emphasize naturalness

TARGET SEGMENTS

Ethically conscious consumers doubting the mainstream farming and appreciate high-quality meat • Customers with high WTP for quality • Consumers of special meats and local products.

RELATIONS

Collaborate with local stores, restaurants, welfare organisations, sell online • Branding, raise awareness • Social media & open days

PPILOW Stakeholder workshop conclusions – key measures to promote high welfare low-input outdoor and organic farming systems

- Ensure a level playing field across Europe.
- As the number of organic/low-input farms is small and the businesses are often small scale, ensure that the markets operate transparently and that unfair trading practices and excessive price margins in the value chain are prevented, for example through regulation.
- Public awareness-raising and promotion measures among consumers – for example communication with restaurants to promote organic products.
- Animal welfare assessments, a harmonized animal welfare label and sharing animal welfare information to consumers as tools to valorize animal welfare improvements in consumer segments that are willing to pay for premium products and to increase financial attractiveness to farmers.
- Funding to welfare improvements.
- The Common Agricultural Policy (CAP) as an instrument to support local and small-scale high animal welfare farms to enter the markets.

- The degree of “acceptance” of a measure is related to the legal and industry provisions in each country (e.g. beak trimming, killing of DOCs)
- Promotion requires an appropriate communication strategy adapted to the specific demand in a region/country.
- Communication between the stakeholders of the production chain (retailers/producers)
- The citizens’ desirability of measures vary between the countries
- Actors’ views about barriers to improve animal welfare vary depending on their stage in the production chain.
- Citizens and consumers have different demands for products and for animal husbandry. This affect business models and needs to be taken into account when developing innovations.

Several members of the project have contributed to this work:

Jarkko Niemi, Minna Väre, Katja Lähtinen, Katriina Heinola, Jarmo Mikkola, Tricia Parrott, Laura Van Vooren, Saskia Kliphuis, Lisa Baldinger, Petra Thobe, Anna Zuliani, Monica Coletta, Raffaella Ponzio, Caterina Accotto, Laurent Alibert, Christine Roguet, Elsa Delanoue, Vasile Cozma, Marina Spinu, Laura Warin, Martina Re, Sophie Herremans, Ninfa Rangel Pedersen, Sanna Steinfeldt, Claire Bonnefous, Anne Collin

Thank you for your attention



www.ppilow.eu