



COMPASSION
in world farming



Food Business

HIGHER WELFARE SYSTEMS FOR RABBITS

Practical options



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CAGED RABBIT PRODUCTION

In conventional production, breeding does are typically housed individually, and production is most often based on an all-in-all-out system: the doe remains in the same cage as her litter until the kits are weaned at 30-35 days, when the doe is removed and placed in a new cage, while the growing rabbits remain in the same cage until slaughter. Both breeding and growing rabbits are typically housed in conventional barren cages, while enriched cages make up a smaller percentage of conventional rabbit production (dimensions taken from EFSA, 2020¹):

- **Conventional barren cages:** Barren cages are by far the most common system used for rabbit production globally. In the EU barren cages range in size from 43.5 – 102 cm x 38 – 46 cm (l x b) and range in height from 32 – 39 cm. This gives a total available floor area of 3,300 – 4,700 cm² (or 450 - 600 cm² per growing rabbit*). Conventional cages are constructed entirely of wire mesh, including the flooring, and no enrichment is provided.
- **Enriched cages:** A small percentage of does and growing rabbits in the EU are housed in slightly larger cages (95 – 102 x 38 – 52.5 cm, l x b). Enriched cages are higher than conventional cages (60 – 80 cm) and include a platform, which gives a total available floor area of 4,370 – 6,400 cm² (< 600 cm² per growing rabbit*). Plastic footrests may be added to the flooring and limited enrichment may be provided e.g. wooden gnawing blocks.

* For rabbits with an average slaughter weight of 2.3 kg kept at a stocking density of 40 - 50 kg/m² for conventional cages and 40 kg/m² for enriched cages. Stocking densities taken from European Commission: Directorate-General for Health and Food Safety, Commercial rabbit farming in the European Union – Overview report, Publications Office, 2017, <https://data.europa.eu/doi/10.2772/62174>.

INTRODUCTION

Rabbits kept for meat production are most commonly housed in small, barren cages, leading to serious welfare issues and diseases due to high stocking densities and limited space which restricts movement, uncomfortable wire flooring leading to painful foot lesions, high mortality rates, and a lack of behavioural opportunities in a barren environment. Breeding rabbits are most typically housed individually in cages for their entire productive life, so additionally suffer from lack of adult social contact.

Rabbits in caged systems are unable to perform important highly motivated behaviours which can lead to stress, abnormal behaviours, and a weakened immune system. As a result, industrialised rabbit farming has by far the highest rate of antimicrobial usage among terrestrial farmed animals, which accelerates the development of antimicrobial resistance and increases the risk to human health.

Consumers are increasingly concerned about the welfare of farmed rabbits and, with the upcoming cage ban in the EU, there is an urgent need to invest in cage-free alternatives. Ensuring that these alternatives provide what the animal needs and are practical for farmers is key to a successful transition.

This document shares practical information for food companies and producers planning their transition to cage-free rabbit systems, covering:

- Welfare issues in caged rabbit production.
- The business case for a transition to cage-free rabbit production.
- Key features of rabbit housing to ensure good welfare.
- An overview of commercially available cage-free alternatives for growing rabbits.
- Recommendations on higher welfare housing for does.
- Assessing rabbit welfare using animal-based welfare outcome measures.



© Compassion in World Farming, Barren cage with plastic footrest



© Compassion in World Farming, Enriched cages

THE BUSINESS CASE FOR CAGE-FREE RABBIT PRODUCTION

Consumer perception of rabbit farming

Consumers are increasingly concerned about how their food is produced and the welfare of the animals involved. Studies across the EU, North America, Latin America, Asia and Australia indicate that animal welfare concerns have become more important to consumers over the past two decades. The 2023 EU Eurobarometer on Animal Welfare² revealed that 91% of EU citizens believe it is important to protect the welfare of farmed animals, and 84% believe the welfare of farmed animals should be better protected than it is now. Additionally, 89% of EU citizens surveyed believe it is important that farm animals are not kept in individual cages.

Production and consumption of rabbit meat in Europe is declining, partly attributable to rising criticism of welfare conditions. Studies from various countries around the world show that housing and rearing conditions of rabbits are important factors for consumers. Declining consumption of rabbit meat is particularly evident among younger consumers, who are often more conscious of animal welfare and as well as the environmental impact of the food they buy. See our **Information Sheet 2 – Consumer Perception of Rabbit Meat Production** for more information.

Changes in legislation in Europe

There is currently no species-specific EU-wide legislation setting down the minimum standards for the welfare of farmed rabbits. However, following the successful European Citizen’s Initiative “End the Cage Age”, signed by 1.4 million citizens, the European Commission gave a clear commitment in June 2021 to introduce a legislative proposal to ban the use of cages for farmed animals, including rabbits. Although proposals have yet to be published, this cage ban, when it comes into force, will change the face of rabbit production in the EU. Some forward-thinking countries, including EU Member States Belgium and Austria, have already enacted their own legislation setting minimum standards for rabbit production, including the banning of cages (Table 1 and see Annex I for more details).



TABLE 1. Countries with national legislation prohibiting the use of cages for rabbit farming

Cage type	Countries prohibiting
Barren cages for fattening rabbits	EU: Austria, Belgium, Germany, The Netherlands Non-EU: Switzerland
Barren cages for does	EU: Austria, Belgium, Germany, The Netherlands Non-EU: Switzerland
Enriched cages for fattening rabbits	EU: Austria, Belgium
Enriched cages for does	Belgium (from 2025 dependent on research outcomes for a suitable group housing system)

Companies leading the way to a cage-free future for rabbits

In countries without a national cage ban for rabbits, proactive producers and food companies are voluntarily phasing out cages, successfully transitioning to cage-free systems for growing rabbits. In France, leading producers have adopted cage-free pen systems, resulting in an estimated increase in cage-free rabbit production from 1% to 11% of the total production between 2015 and 2022³. Notably, several producers who have transitioned to cage-free pen systems are on a continuous journey to further improve their systems, with the addition a wintergarden for some and/or bedding for others.

The adoption of higher welfare cage-free standards is a great way to raise brand values and be seen as a leader on a key societal concern (i.e. caged farming), while reducing reputational risk.

Since the launch of Compassion’s **Good Rabbit Award** in 2015, 29 companies, including **Carrefour France, Système U, Les Mousquetaires, Colruyt Belgique, Danone ELN, BreFood, Terrena Nouvelle Agriculture, LDC Nature d’Eleveurs, Elior France, and Compass Group France, Lapin & Bien, ADM, and White Oak Pastures** have been recognised for their commitments to use cage-free systems for meat rabbits in their supply chain, set to benefit over 9 million rabbits annually.





Good Rabbit Award



Compassion's **Good Rabbit Award** is designed to applaud companies committing to adopt higher welfare cage-free systems for growing rabbits and breeding does within five years.

Companies committing to adopt higher welfare standards for growing rabbits only are eligible for a Good Rabbit Commendation.

Eligibility criteria

Meat rabbits:

- Space allowance: minimum 800 - 1500 cm² per rabbit and 180 cm pen length, no pen height restriction.
- Comfortable non-wire flooring.
- Enrichment: platforms, hiding spaces, gnawing materials, fibre provision, dawn-dusk lighting transition and natural light in new buildings.
- No routine use of antibiotics.

Breeding does:

- Cage-free housing with no pen height restriction.
- Group during part of the lactation and measures in place to minimize aggression.
- Comfortable non-wire flooring.
- Enrichment: nesting material, platforms, hiding spaces, gnawing materials, fibre provision, dawn-dusk lighting transition and natural light in new buildings.
- No routine use of antibiotics.

Find out more about the Good Rabbit Award [here](#).

KEY FEATURES OF HIGHER WELFARE SYSTEMS FOR GROWING RABBITS

What does a rabbit need?

Rabbits are crepuscular, most active around dawn and dusk, and typically live in small, territorial groups. Shortly before parturition, rabbit does will seek out a suitable site and construct a nest. The doe encloses the kits in the nest and will only return once a day for a short feed. At 2-3 weeks old the kits emerge from the nest and start to consume solid plant material (up to 30 meals in a 24-hour period). Eating and gnawing on plant material provides plenty of coarse fibre, important to avoid digestive disorders, and helps the rabbit wear down their teeth which grow continuously throughout their life.

Although rabbits will spend a large proportion of their day resting (12-14 hours), they have a high motivation for locomotion when active. Young rabbits, in particular, engage in intense locomotor play which involves hopping and jumping, running at speed often in a zigzag, twisting their torso while in the air, head flicking, and/or kicking their hind legs. Rabbits can travel between 15-70cm in a single hop. Growing rabbits may also show active antipredator behaviours. As prey animals, rabbits spend a significant amount of time alert, scanning their surroundings. A typical vigilance posture involves the rabbit sitting or rearing up on their hind legs with their ears erect, and often rabbits will seek a higher vantage point in order to perform this behaviour. Rabbits' highly sensitive senses of vision, hearing and smell enable them to quickly identify a potential threat in their environment and react accordingly - rabbits may thump their hind foot in warning and flee to safety.

Inability to perform highly motivated behaviours can lead to frustration, abnormal behaviours such as repeated biting of the cage bars or even the ears of other rabbits, and chronic stress.



© Compassion in World Farming



© Compassion in World Farming, Rabbits resting fully stretched out

Space

Sufficient space is important for rabbits to allow them to rest comfortably, but also to allow them to perform a varied repertoire of active behaviours.

- Space Allowance:** When rabbits are relaxed and comfortable, they will lie with their legs fully stretched out from their body. This position also helps thermoregulation. How much space an animal needs can be calculated by the amount of space used for different postures and activities. This space requirement can be scaled for different body weights using the allometric equation $A=kW^{0.67}$, where A is space in m^2 /animal, W is the liveweight in kg and k is a constant which depends on the animal's body position/posture. Based on this, a growing rabbit (with an average slaughter weight of 2.3 kg) needs a space allowance of at least 800 cm^2 to rest comfortably as well as perform basic behaviours such as standing, feeding and drinking (see Table 2). Ideally a growing rabbit should be provided with sufficient space to perform active behaviours like play, in which case a space allowance of $\geq 1200 cm^2$ is needed (for a 2.3kg rabbit).

TABLE 2. Recommended space allowances and stocking densities for growing rabbits based on final slaughter weight

Slaughter weight (kg)	Better*			Best†		
	cm^2 /rabbit	rabbits/ m^2	kg/m^2	cm^2 /rabbit	rabbits/ m^2	kg/m^2
2.1	751	13	28	1118	9	19
2.3	798	13	29	1188	8	19
2.5	844	12	30	1256	8	20
2.7	889	11	30	1323	8	20
2.9	933	11	31	1388	7	21

* Allometric calculation based on $k = 0.0457$ for basic behaviours

† Allometric calculation based on $k = 0.068$ for active behaviours

- Total available space:** Not only is the space allowance per rabbit important, but the total amount of space available can also impact the behaviours that a rabbit can perform. EFSA considers a rabbit to be restricted in movement if it is unable to perform three consecutive hops due to limitations on available horizontal space¹. A horizontal space of at least 180 cm is recommended to allow for consecutive hopping. Greater total available space enables growing rabbits to perform even more active behaviours, like play.



© Compassion in World Farming, Large pens give more available space

- Vertical space:** In a typical sitting posture, with their ears erect, growing rabbits require up to 30 cm. Rabbits may also explore and investigate their environment by standing upright on their hind legs while leaning against part of their enclosure. For upright postures, adult rabbits can reach heights of 70-80 cm. To ensure rabbits can stretch up to their full height, open top enclosures or pens are required.



© Compassion in World Farming, Rabbit rearing up

Flooring

Rabbits consistently show a preference for plastic slats over wire flooring. More supportive flooring reduces the risk of pododermatitis and enables the animal to be more active. Floor hygiene is a key element for rabbit comfort – rabbits prefer to spend time lying and resting on cleaner/dryer surfaces. Bedding can increase the comfort of the flooring but ought to be well managed to prevent excessive soiling. Reducing stocking density can also benefit the pen hygiene and allow for the provision of more comfortable flooring.



© Kauffland/Bauer Kaninchen Spezialitäten GmbH



© Compassion in World Farming, Platform use

Enrichment

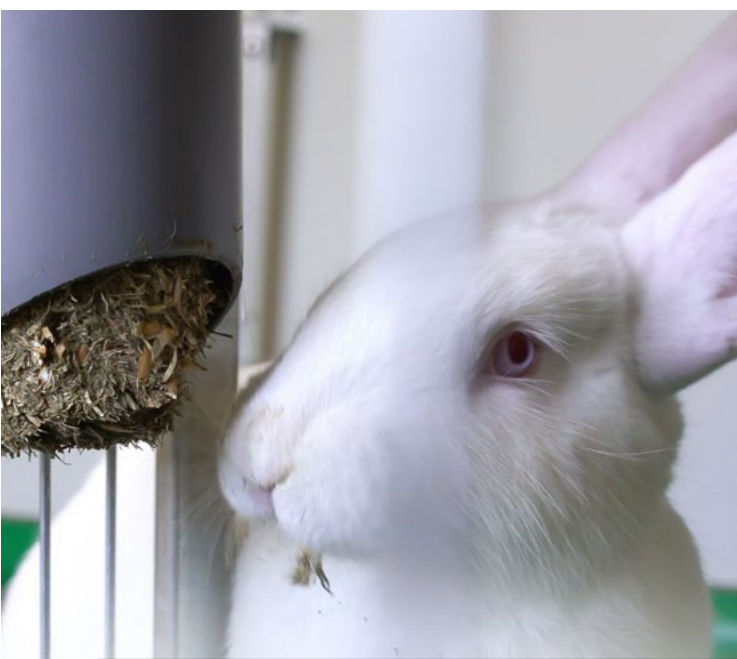
Providing rabbits with a varied and stimulating environment facilitates their natural behaviour.

- **Platforms:** Rabbits benefit from different levels within their pen, such as platforms. Rabbits are motivated to gain access to platforms and when platforms are present will show more active behaviours, including jumping on top of and down from the platform, which improves bone strength. Platforms provide additional surface area upon which a rabbit can rest or scan the environment, and a place to hide underneath.



© Compassion in World Farming, Rabbit hiding in tunnel

- **Hiding Places:** Rabbits prefer to remain under shelter in daylight. Rabbits without a place to hide show more abnormal and restless behaviours, indicators of poor welfare and discomfort. Specific hiding places, such as tubes, barriers, enclosed boxes, or artificial burrow systems can allow rabbits to escape from aggressive individuals and to feel safe in an enclosed space whilst resting.



© Kaufland/Bauer Kaninchen Spezialitäten GmbH, Gnawing material



© Compassion in World Farming, Natural light

- **Lighting:** Rabbits are most active in the morning and evening, which is controlled internally and by external factors such as light. The lighting regime should include natural light, and must ensure 8 hours of continuous light (min 20 lux and ideally ≥ 40 lux) and 8 hours of continuous darkness (< 0.5 lux), as well as dawn and dusk transitions of at least 30 minutes and up to two hours so rabbits can establish their daily rhythm.

Diet

Provision of good quality fibre is essential to reduce the risk of post-weaning digestive problems in growing rabbits. Providing forage blocks and other organic materials such as hay and straw contributes to a high fibre diet and enhances gut health (helping gut movement and controlling the gut microbiota) and also serves as gnawing material, ensuring good oral health, while reducing abnormal behaviours.



© Compassion in World Farming, Fibre provision

Antibiotic usage

The use of robust breeds and the provision of a better environment can help to reduce the reliance on antibiotics in rabbit farming. Antibiotics should not be used routinely throughout the production cycle.



© White Oak Pastures

ADDITIONAL REQUIREMENTS FOR BREEDING DOES

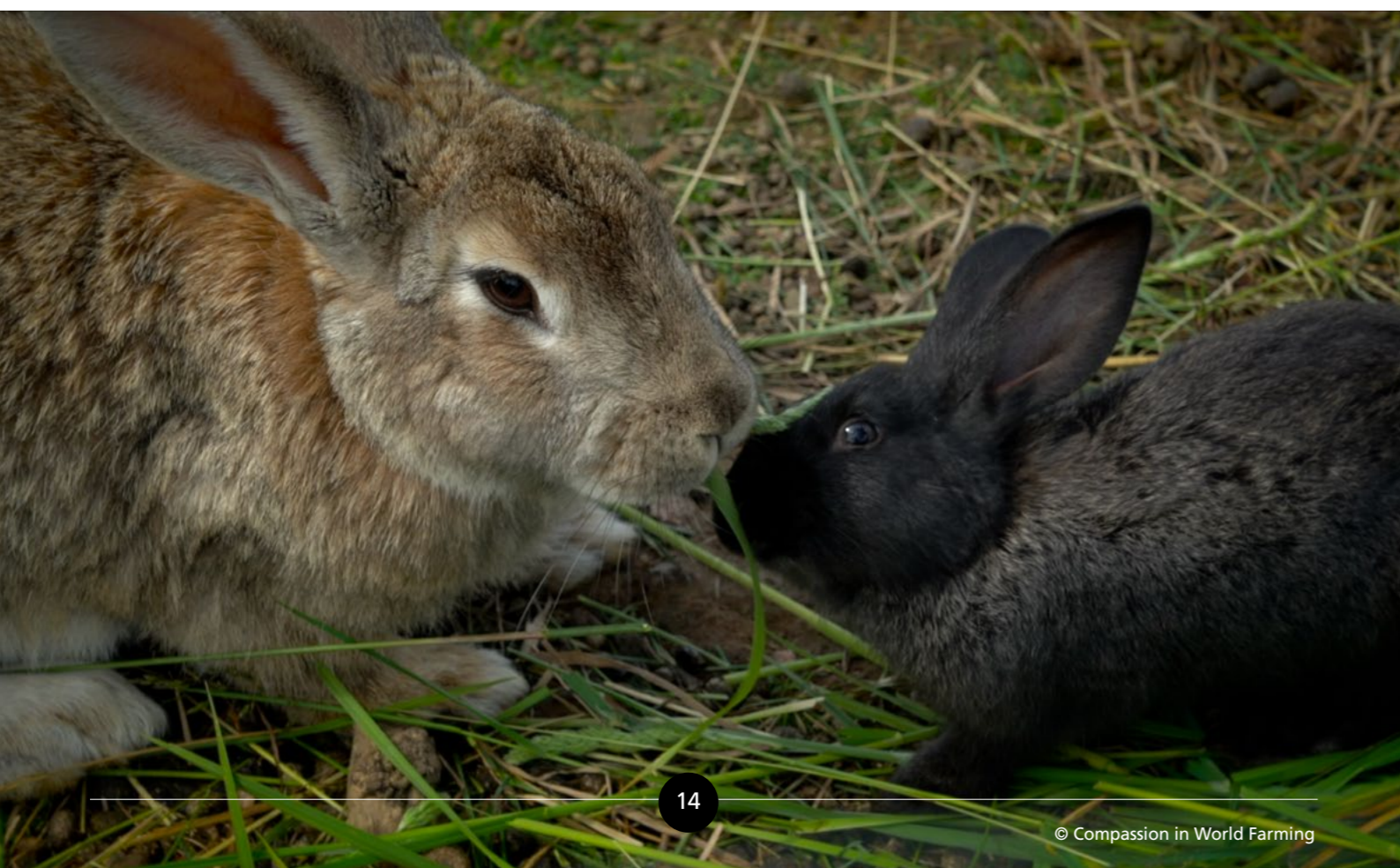
Breeding does also require sufficient space to hop, stand upright unhindered, and move away from their kits when they start to emerge from the nest. Comfortable supportive flooring (e.g. plastic/bamboo slats) will reduce the risk of pododermatitis and enable the doe to move comfortably. Does also need platforms to stand upon and hide under, hiding places to feel safe, gnawing material to ensure good oral health, and natural light to stimulate behaviour. A good environment and a good diet will reduce the risk of stress and disease and can reduce the need for antibiotics. In addition, does need:

Social contact

Group housing of breeding does enables positive social interactions, such as allogrooming and lying in close contact with other adults, both common behaviours in wild rabbits; but also involves agonistic interactions to defend their litter, territory or position in the social hierarchy. Due to aggression between does, commercial housing systems which enable adult social contact are not commonly used. However, research has demonstrated that breeding does can be housed at least part-time in groups if they are provided with a stable social environment, sufficient space, adequate nesting facilities, and additional enrichment and physical barriers in the housing to minimise aggression.

Nesting material

To construct their nest, does prefer dry long-cut organic material such as dried grass over wood shavings. If multiple materials are provided, does will often mix materials to create their nest, even using their own fur. Providing does with appropriate nesting material and in sufficient quantity is paramount as the quality of the nest can be critical for kit survival. Maternal behaviour, often triggered by changes in light, may be prevented if does are denied free access to the nest.



COMPASSION IN WORLD FARMING'S RECOMMENDATIONS FOR HIGHER WELFARE RABBIT FARMING SYSTEMS

Caged systems have a low welfare potential as they inherently restrict rabbits' movement, behaviour and comfort by design. Higher welfare cage-free systems for growing rabbits include park systems, large pen systems, pen systems with a wintergarden, and outdoor cage-free systems.

Minimum recommendations for growing rabbits

- **Adequate space** that allows rabbits to rest undisturbed, move freely and have space for behavioural expression. At least 800 cm² per rabbit is needed for basic behaviours while ≥ 1200 cm² is preferable to allow active behaviours.
- **Sufficient pen length** (> 180 cm) and no height restriction to perform active behaviours and rear upright on their hind legs.
- **Comfortable flooring** (no wire mesh) to prevent pain or discomfort.
- **Platforms** to provide additional space, allow rabbits to perform vigilance behaviours and hide underneath.
- **Hiding places** to provide opportunities to escape any perceived danger.
- **Fibre provision** (hay or straw) and gnawing material for good oral and digestive health.
- **Natural light** including dawn and dusk periods so rabbits can establish their daily rhythm.
- **Outdoor access** via a wintergarden and ideally pasture access to enable the rabbits to engage in grazing behaviour.
- **No routine use of antibiotics** throughout production cycle.
- **Regular scoring of welfare outcomes** to identify any welfare issues and to set targets for improvements, such as mortality, skin lesions, disease incidence, body condition scoring, group behaviour, and reaction to humans.

Additional recommendations for breeding does

- **Adequate space** that allows does to move freely and keep their distance from their kits when they leave the nest or avoid other does (min 6000 cm²/doe).
- **Sufficient pen length** (> 180 cm) and no height restriction to perform active behaviours and rear upright on their hind legs.
- **Group housing** to allow for adult social contact, at least during later lactation, with measures in place to reduce aggression. Individual housing may be needed during kindling and nursing to avoid aggressive encounters and to allow temporary isolation.
- **Appropriate nesting material** such as long cut organic materials are preferred and free access to the nest should be provided.
- **Opportunities to escape** other does as well as kits through additional space, hiding places, and barriers within the pen.
- **Additional enrichment** provided at time of mixing to avoid fighting between does.
- **Monitoring the incidence of injuries** when mixing does.
- **Behavioural observation** to identify any submissive and dominant does that may need to be moved to another group.

HIGHER WELFARE CAGE-FREE ALTERNATIVES FOR GROWING RABBITS

Housing systems which offer more space (increased space allowance and increased horizontal and vertical space), comfortable flooring, and enable growing rabbits to perform more of their species-specific behavioural repertoire (such as vigilance, gnawing, hiding, hopping and play) have a higher welfare potential.

A number of cage-free housing systems for growing rabbits exist and are used commercially:

- **Park systems:** Small elevated enclosures with no height restriction and at least 180 cm in length. They typically house up to 32 growing rabbits, and in some cases more, and provide between 563 and 800 cm² per rabbit. Only systems which provide ≥ 800 cm² would be considered an acceptable cage-free alternative. Platforms, gnawing material, and hiding spaces are generally provided. Although some park systems have wire mesh flooring, only park systems with non-wire flooring can be considered acceptable cage-free systems.
- **Pen systems:** Large indoor slatted or solid floored pen systems with no height restriction. Pen systems house growing rabbits in far larger numbers than park systems and therefore offer the rabbits more total available space. They typically provide a space allowance from 800 cm² - 1500 cm² per rabbit. Pen systems include platforms which maximise the available space and enrichment such as gnawing material and hiding spaces. Some pen systems offer the possibility of providing the rabbits with bedding material such as straw.
- **Pen systems with a wintergarden:** Some indoor pen systems provide an additional covered outdoor area. A wintergarden is an area with a solid roof but where at least one wall is constructed of open mesh to provide natural light and an outdoor climate. Wintergardens provide more space, while still offering protection, as well as natural light and fresh air, and more opportunities for behavioural expression.

- **Cage-free outdoor systems:** Cage-free outdoor systems generally provide the rabbits with access to an uncovered outdoor area with vegetation/pasture. Outdoor access provides natural light, fresh air, and a choice of environment, while providing access to pasture allows rabbits to perform a wider behavioural repertoire, including grazing and foraging behaviour. Pasture access is associated with increased activity and reduced fearfulness. Systems with outdoor access ought to use more robust cross-breeds and provide adequate shelter and protection from predation. Outdoor cage-free systems can take two forms: mobile-housing systems and free-range systems. Both of these systems can also be organic if they meet the minimum requirements laid out in EU Council Regulation 2018/848 (see Annex I).

- **Mobile housing:** Rabbits have access to a movable shelter with an attached outdoor run. Flooring may be on the pasture directly, or quite often, wire mesh. The housing and attached run is moved around the pasture at intervals. To be considered cage-free, mobile housing should meet the minimum standards listed on page 15.

- **Free-range:** Free-range systems provide rabbits with unrestricted access to a larger area of pasture with fixed housing on the pasture in the form of huts or shelters.



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WELFARE POTENTIAL OF PRODUCTION SYSTEMS FOR GROWING RABBITS*

✗ not typically provided – provided but insufficient in some systems ✓ typically provided (and to what extent)

	Standard cages	Enriched cages	Park systems	Pen systems	Pens with bedding	Pens with wintergardens	Cage-free outdoor systems	
							Mobile housing	Free-range
Space to rest	✗	✗	✓	✓✓	✓✓	✓✓	✓✓	✓✓✓
Space to hop	✗	✗	✓	✓✓	✓✓	✓✓	✓	✓✓✓
Space to play	✗	✗	✗	✓✓	✓✓	✓✓	–	✓✓✓
Space to rear	✗	–	✓✓	✓✓✓	✓✓✓	✓✓✓	–	✓✓✓
Comfortable flooring	✗	–	✓	✓	✓✓	✓	✓✓	✓✓✓
Hiding places	✗	✗	✓	✓✓	✓✓	✓✓	✓✓	✓✓
Gnawing material	✗	–	✓✓	✓✓	✓✓	✓✓	✓✓	✓✓✓
Dawn/Dusk transitions	✗	✗	✓✓	✓✓	✓✓	✓✓✓	✓✓✓	✓✓✓
Natural light	✗	✗	–	–	–	✓✓✓	✓✓✓	✓✓✓
Choice over environment	✗	✗	✗	✗	✗	✓✓	✓✓	✓✓✓
Grazing opportunities	✗	✗	✗	✗	✗	✗	✓✓	✓✓✓
Digging opportunities	✗	✗	✗	✗	✓	✗	–	✓✓✓

* For many production systems, no minimum standards exist and therefore practices may vary within each. This table is based on information gathered from EFSA (2020)¹, Belgian legislation⁴ and some certification standards (see Annex II), as well as what is known by Compassion to be current practice to the best of our knowledge.

PRACTICAL EXAMPLES OF HIGHER WELFARE SYSTEMS FOR GROWING RABBITS

Park systems for growing rabbits

Minimum legal standards for the housing of growing rabbits in cage-free systems have been in place in Belgium since 2016⁴. The indoor park system was developed in Belgium in response to increasing public concern about conventional barren cages. The then Minister of Agriculture, via the Belgian Animal Welfare Council, established a working group on rabbits to find an alternative to cage-housing of rabbits. This working group included a broad range of stakeholders from NGOs, to breeder associations, to processors and members from the retail industry, as well as relevant experts⁵. They concluded that none of the existing housing systems met all of rabbits' behavioural needs, but the park system guarantees better welfare than barren and enriched cages for fattening rabbits⁵.

Park systems are small, elevated enclosures with no height restriction and at least 180 cm in length. Since their development, park systems have been adopted by producers in a number of EU countries where design features may differ from what is prescribed in Belgian legislation.

A combi-park system is a type of park housing where individual doe enclosures can be converted into a park system by taking away internal barriers between adjacent enclosures once the doe is removed at weaning. In such systems it is important that the removal of any barriers leaves

a sufficiently open area for the growing rabbits to move and play, free of internal barriers which may hinder movement.

The standard Belgian park system for growing rabbits include the following components⁴:

- **Space:** Groups are made up of at least 20 animals with a maximum occupancy of 12.5 rabbits/m². Growing rabbits must be provided with ≥ 800 cm² per rabbit. Parks must be ≥ 180 cm in length and should have no height restriction. Platforms can be included in the calculation of the available surface area provided they do not exceed 40% of the floor area.
- **Flooring:** At least 80% of the floor area must be made from non-wire mesh material*. Flooring must form a flat, rigid and stable non-slip surface. They must allow good drainage of urine, faeces and water without hygienic risk to other rabbits.
- **Enrichment:** Must be provided as soon as rabbits are weaned and always available thereafter. **Platforms** (at a height of ≥ 25 cm), **hiding spaces** (tunnels) and **gnawing material** (e.g. wood blocks, straw, hay, carrots and other suitable material) must be provided. The lighting schedule must include at least eight hours of darkness and eight hours of light with a minimum intensity of 20 lux, and a gradual **dawn/dusk transition period** of at least 30 mins between lighting periods.

* Typically, plastic-slatted flooring is used in park systems.

Park systems that meet the minimum recommendations set out by Compassion (page 15) can be considered cage-free. However, due to the inherent limitations on total available space, enclosure width, and opportunities for complex enrichment, they have a lower welfare potential for growing rabbits than pen systems with a higher total larger available space and potential for more complex enrichment (see section on large pen systems, page 20).



© Compassion in World Farming, Park system

CASE STUDY - KAUFLAND & BAUER: PARK SYSTEM FOR GROWING RABBITS



Hier bin ich richtig

Kaufland, part of the Schwarz Group, is a leading retail chain with over 1500 stores in eight countries across Europe. In 2009, Kaufland became the first retailer in Germany with 100% of its fresh rabbit meat sourced from cage-free pen systems, followed by 100% of its frozen rabbit meat in 2011. In close collaboration with its German supplier Bauer Kaninchen-Spezialitäten, Kaufland developed a new large combi-park housing system in 2018 in line with Haltungsform Level 2 requirements (see Annex II). While this system has several benefits for growing rabbits (see below), breeding does, although still individually housed, also benefit from more space (7900 cm² per doe, no height restriction), plastic-slatted flooring, a platform, and gnawing materials.

"We are proud of the rabbit systems we have developed. Even before there were legal minimum requirements nationally or across Europe, we initiated a pilot project to promote a cage-free form of production which has now developed into a new benchmark."

Anna Spiess, Purchasing CSR/Animal Welfare, Kaufland

Kaufland is continuously evolving their rabbit system and, together with Bauer, is currently trialling further innovations - a housing system with bedding and an outdoor climate (in line with Haltungsform Level 3, Annex II)



© Kaufland/Bauer Kaninchen Spezialitäten GmbH, Park housing system for growing rabbits



© Compassion in World Farming, System with bedding and outdoor climate

Benefits for the Rabbits

- ✓ **Space:** Three adjacent open-topped parks, connected via internal doors, house 81 growing rabbits. The total surface area is 9.1 m², including a floor area of 6.6 m² (3 x 213 x 104 cm) plus platforms of 2.5 m² (3 x 213 x 39 cm). This gives a space allowance of 1100 cm²/rabbit.
- ✓ **Flooring:** 100% plastic slatted flooring (floor: 45% perforation, 11 mm slat/slot width; platforms: 15% perforation).
- ✓ **Enrichment:** Platforms (37.5% of the floor area, 35 cm height from floor), as well as wooden blocks and compressed forage blocks for gnawing and additional fibre (9 of each per park) are provided. Windows (3% of the floor area of the barn) provide natural light.
- ✓ **Antibiotics:** No routine use.

Benefits for the Farmer

- ✓ The strong relationship between Bauer and Kaufland guarantees a market for the rabbits and supports innovation in housing design.
- ✓ **Hygiene:** good system design (e.g. hinged surfaces which can be tilted, rounded slats for better drainage) and the all-in-all-out model allow for thorough cleaning between cycles.
- ✓ **Ergonomic design:** The elevation and narrow depth of each park facilitates observation and catching of the rabbits, while the counterweighted doors reduce the risk of injuries to the farmer during management procedures.
- ✓ Manure is sold to a local biogas facility, and the liquid waste is returned and used for fertiliser.
- ✓ Farmers report 4-5% mortality.
- ✓ Pleasant work environment.



© Compassion in World Farming, Large pen

Large pen systems for growing rabbits

While no standards exist for indoor pen housing of growing rabbits, various designs have been used commercially, particularly in Germany and France. Pen housing offers additional benefits for animal welfare over park systems. Compared to park systems, pen systems generally house larger groups of rabbits so although the space allowance per rabbit can be similar to the requirements for park systems, rabbits have a larger total available space. Some large pen systems even operate with a higher space allowance per rabbit, providing additional comfort for the rabbits. This facilitates more active behaviours, such as hopping and play in growing rabbits. This extra space also allows for the inclusion of more complex enrichment. Additionally, some older and many newer pen systems include natural light in their design as it is a requirement of some national legislation/guidelines as well as NGO recommendations and certification standards. Well-designed pen systems can be attractive to producers as they can accommodate the same number of growing rabbits in a similar amount of space as caged systems through the clever use of space (for example, pen systems take advantage of the space that would have been taken up by walkways in caged systems).

Typical large pen systems for growing rabbits include the following components:

- **Space:** Groups are made up of at least 40 animals but can be over 300 rabbits. Growing rabbits are provided with $\geq 800 \text{ cm}^2$, and in some systems $\geq 1500 \text{ cm}^2$ per rabbit. Platforms increase the available surface area. Pen systems can range widely in size (from twice the floor area of park systems up to a floor area of 19 m^2 , based on Compassion's knowledge of existing pen systems). Large pens are open at the top so provide unlimited vertical space for the rabbits.
- **Flooring:** No wire mesh flooring. While plastic slatted flooring is the most common type used in pen systems, some may use other materials (e.g. bamboo slats) or even solid flooring with bedding.
- **Enrichment:** While the variety and type of enrichment can vary in large pen systems, the larger space available compared to park systems allows for more complex enrichment. Platforms are typically provided, as well as hiding places, which can be as simple as plastic tunnels or more complex artificial burrow systems. Gnawing material is also commonly provided, such as gnawing blocks or, preferably, compressed forage blocks or even hay racks. Producers with large pen systems often incorporate natural light into their lighting schedule which allows for changing light patterns over the day.



A voluntary transition to cage-free farming for growing rabbits is underway in France, with an estimated increase in cage-free rabbit production from 1% to 11% of the total production between 2015 and 2022³. In 2019, LOEUL & PIRIOT, the leading French rabbit processor (representing 60% of the French rabbit meat industry), joined forces with two other key players – CPLB, Groupe CAVAC and TERRENA, to establish the Eleveurs et Bien association. The association launched the brand Lapin & Bien in January 2020 to allow the promotion and marketing of meat from rabbits raised according to cage-free higher welfare standards. Lapin & Bien production currently makes up 10% of the total production of LOEUL & PIRIOT (over 800,000 fattening rabbits per year, 5-6% of the national production), supplied by 24-25 farms.



© Lapin & Bien, Night quarters



© Compassion in World Farming, Lapin & Bien pen system

"We developed the Lapin & Bien brand based on a more humane rearing system – a better way to farm that is also economically viable. We then sell at the right price to customers looking for high-value and high-quality products. It gives consumers more choices, particularly at a time of increased living costs - there are organic and free-range options but there is also this higher welfare product."

Matthieu Loeul, ALPM President

Benefits for the Rabbits

- ✓ **Space:** Open-topped pens measure at least 10 m^2 and up to m^2 and rabbits have a space allowance of $\geq 800 \text{ cm}^2$ per rabbit.
- ✓ **Flooring:** 100% plastic slatted flooring for pen floors and platforms.
- ✓ **Enrichment:** Platforms (25-40% of the floor area) are present in every pen. Rabbits have access to a spacious night quarters – an artificial burrow system running along one side of the pen. Burrow systems contain internal platforms and are entirely enclosed aside from the arched entrances. They provide a spacious area of low light for the animals to hide and/or rest. Gnawing blocks of compressed alfalfa and straw are provided and windows allow natural light into the shed.
- ✓ **Antibiotics:** No routine use.

Benefits for the Farmer

- ✓ Farmers receive a 10% price premium for rabbits compared with conventional caged rabbits.
- ✓ No loss of production. Lapin & Bien pen systems require the same space to produce the same number of animals as caged systems.
- ✓ Pens are designed to be durable and to facilitate hygiene maintenance, ease of monitoring and access via hinged lid and removable panels of artificial burrow system.
- ✓ Farmers report less than 2% mortality.
- ✓ Pleasant work environment.

FURTHER EVOLUTION OF PEN SYSTEMS

Pen systems with bedding material

Providing bedding to growing rabbits has multiple potential benefits. Solid flooring with clean straw bedding provides additional comfort and supports active behaviour in rabbits. Bedding materials that may be used for rabbits include straw, hay, sawdust - with straw and hay having the additional advantage of providing gnawing opportunities. Hay and straw are preferred gnawing material for rabbits and provision of hay contributes to a high fibre diet, enhances both gut health (helping gut movement and controlling the gut microbiota) and oral health, while reducing abnormal behaviours. Providing hay allows the rabbit to forage to a small degree as they would do in the wild, while straw bedding provides additional material to manipulate. Housing rabbits in solid-floored pens with straw bedding is not common commercial practice due to concerns over hygiene and labour. However, provided the hygiene of the system can be well maintained through regular addition of fresh bedding and lower stocking densities, it is possible to house rabbits in higher welfare systems that include bedding. Bedding may be used throughout the pen, or provided in specific areas.



Pen systems with a wintergarden

Some rabbit producers have gone a step further and provide rabbits with an additional covered outdoor area called a wintergarden. A wintergarden is an area with a solid roof but where at least one wall is constructed of open mesh to provide natural light and an outdoor climate. They provide additional space, as well as natural light and fresh air, and more opportunities for behavioural expression while still offering protection for the animals from the elements and predators. Providing areas of different climatic conditions gives rabbits a choice over their own environment, and offers opportunities for individuals to escape from or avoid other individuals, reducing the risk of aggression. Systems with wintergardens report high use of the outdoor area, particularly in the morning and evening when rabbits are most active, which is independent of weather conditions, and rabbits show a higher use of the outdoor space when indoor conditions are less favourable (less sanitary conditions or higher temperatures)^{6,7}.

Commercial pen systems with wintergardens are already used for rearing rabbits for both the French and German markets. While no official standards exist, these commercial systems typically provide:

- **Space:** Groups are made up of at least 20 animals but are more often larger – up to 150 rabbits. Systems with wintergardens often provide the rabbits with more space than pen and park systems, with 1140 to 1500 cm² per rabbit, including platforms to increase the total available surface area. There is no height restriction in either the indoor pen or wintergarden.
- **Flooring:** No wire mesh flooring. Slatted flooring made from plastic or soft bamboo have been used both for the indoor flooring and the flooring in the wintergarden, as well as the platforms.
- **Enrichment:** Pen systems with wintergardens typically include similar enrichments to large pen systems. Platforms are provided, and wooden or plastic tunnels serve as hiding places. Gnawing material can consist of compressed forage blocks of alfalfa and straw, and/or, ideally, ad libitum hay and straw distributed in racks or on the floor. Natural light is available in the wintergarden but also in the barn through windows and openings.



CASE STUDY - ADM: WINTERGARDEN FOR GROWING RABBITS



Le lapin,
en toute liberté !

ADM is a French service provider for producers of various species, including rabbits, offering farming system concepts, feed, nutrition and health

consultancy. ADM recognised that their customers, the producers, were concerned about attracting younger people to rabbit farming and that societal expectations were changing on animal welfare and antibiotic usage. Since 2018, ADM has collaborated with their customers in the rabbit sector to develop an innovative alternative to caged housing. From this, the LAPETY WELLAP rabbit concept was born - an indoor pen housing with attached wintergarden which is always available to the rabbits, enabling them to express their natural behaviours as much as possible. ADM's cage-free system is currently operational in two farms in France. There are plans for 10 new sheds to be built or converted by the end of 2025, with the potential to up the total production to 150,000 rabbits per year.



© Compassion in World Farming

"The system also makes it easier for farmers seeking to enter the market, as it incurs lower costs compared to traditional cage systems."

Chantal Davoust, Rabbit Nutrition Expert, ADM

Benefits for the Rabbits

- ✓ **Space:** The LAPETY WELLAP system consists of an indoor pen of 6 m² and an outdoor wintergarden of 4 m². Groups of 100 rabbits are each provided with a space allowance of 670 cm² indoors and 470 cm² outdoors (1140 cm² in total). Rabbits can access the wintergarden 24 hours per day via two short tunnels in the barn walls. Pens have no height restriction.
- ✓ **Flooring:** 100% plastic slatted flooring for pen floors and platforms.
- ✓ **Enrichment:** Platforms (up to 40% of the floor area) are present both indoors and in the wintergarden. Plastic tunnels provide hiding spaces and a block of compressed forage material (alfalfa and straw) provides material to gnaw. Natural light enters the barn through transparent panels between the pen and the wintergarden, which can be removed in summer to increase air flow in the barn.
- ✓ **Antibiotics:** No routine use.

Benefits for the Farmer

- ✓ Lower initial investment costs for new producers compared to investing in caged production (€400 per doe vs. €800-1000).
- ✓ Increased production capacity compared to cage production thanks to the optimised use of space in the shed.
- ✓ Reduced energy costs – LAPETY WELLAP system benefits from natural light and ventilation.
- ✓ Farmers receive a price premium for rabbits from this system.
- ✓ LAPETY WELLAP system is designed to ensure ease of monitoring, management, and catching e.g. lowered walkways reduce the need to bend/stoop during catching.
- ✓ The system is made from durable materials and was designed to ensure good hygienic conditions.
- ✓ Mortality was reported to be 3.8% in 2023.
- ✓ Pleasant work environment.

CASE STUDY - BREFOOD: WINTERGARDEN FOR GROWING RABBITS



BreFood is a German wholesaler, supplying cage-free rabbit meat to renowned retailers across Germany such as Kaufland, Edeka, Netto, Globus and others. Rabbit welfare is at the centre of their business model. Since 2009, BreFood has stood out as a leader in cage-free rabbit farming, holding 70% of the market share and producing 1400 tons of rabbit meat a year. BreFood has worked with its Chinese supplier to develop cage-free pen systems for rabbits. In 2022 they further evolved their system with the addition of a wintergarden on some of their supplying farms. In Spring 2022, five sheds with an estimated total capacity of 800,000 fattening rabbits per year were converted to add a wintergarden. The aim is to increase production in this system to one million fattening rabbits annually.



© BreFood, Rabbits in a wintergarden



© Compassion in World Farming

"We are proud to be cage-free and to partner with retailers who are just as passionate about animal welfare as we are, putting it at the heart of our joint business practices. We believe this is the future of the industry."

Ricarda-Maria Heidmeyer, General Manager, BreFood

Benefits for the Rabbits

- ✓ **Space:** Rabbits are housed in groups of 80 animals in large spacious pens, with a generous space allowance of up to 1500 cm² per rabbit. Pens are divided into two roughly equal sized areas, the indoor pen and the wintergarden which can be accessed at any time by the rabbits via small entrances which limit drafts. Neither the indoor pens nor the wintergarden have any height restriction.
- ✓ **Flooring:** Flooring is composed of wide bamboo slats both indoors and in the wintergarden.
- ✓ **Enrichment:** Platforms are present both indoors and in the wintergarden. Tunnels provide hiding spaces and rabbits are provided with gnawing material and ad libitum hay and straw in every pen. Natural light enters the barn through windows and entrances to the wintergarden.
- ✓ **Antibiotics:** No routine use.

Benefits for the Farmer

- ✓ BreFood reports a 2-3% reduction in mortality rate with the transition from cages to cage-free pen systems.
- ✓ There is minimal use of antibiotics attributed to good hygiene standards.
- ✓ Pleasant work environment.

CAGE-FREE OUTDOOR SYSTEMS FOR GROWING RABBITS

Whilst rabbit farming with outdoor access remains niche in Europe, it has a higher welfare potential than indoor-only systems. Outdoor access provides fresh air, a natural day/night rhythm, the possibility to choose between environments, and importantly, the possibility to forage and graze on vegetation which is key for good digestive health, and the possibility to dig where access to pasture is not restricted. The main hazards for poor welfare of rabbits in outdoor systems are exposure to climatic conditions as well as management of biosecurity¹, both potentially leading to health problems. These issues can be addressed by improving shelters, providing additional shelter through trees, a good feeding strategy, and regular monitoring of the animals. Providing adequate and sufficient shelter is important to enable rabbits to cope with any fear of predation, while ensuring good anti-predator barriers are in place and regularly checked reduces the actual risk of predation in outdoor systems. Robust rabbit cross-breeds should be used to cope with weather variations. Outdoor production systems generally take two forms, mobile housing or free-range systems, both of which can also be organic if they meet the minimum requirements laid out in EU Council Regulation 2018/848 (see Annex I).

Mobile housing systems

Outdoor mobile housing systems are used by some small farms to provide outdoor access under organic standards, such as in France. Housing generally consists of an enclosed section with an outdoor run, which can be moved at intervals to provide fresh grass and prevent disease due to faeces build-up on the ground. The design of mobile housing can vary widely from small low cages on the ground to large mobile enclosures. Mobile housing offers the rabbits the possibility to graze on pasture while protecting them from predation. To be considered truly cage-free and have a higher welfare potential, mobile housing should provide sufficient horizontal, vertical and total space to enable growing rabbits to perform key behaviours such as resting, rearing, and play. Any flooring should be comfortable (no wire mesh), and ideally the housing should sit directly on the pasture. Additionally, adequate and comfortable shelter is important for the rabbits to feel safe and protected from the elements.

Free-range systems

Rabbits in free-range systems have a large area of pasture always available. Housing can vary from an indoor sheltered enclosure to hutches and shelters directly on the paddock. Pasture must be rotated, with rest periods varying from two months to more than six months between each group of fattening rabbits to reduce the risk of disease build-up on the land. Providing a large area of pasture provides the rabbits with plenty of space to play and a stimulating environment, and enables them to express key behaviours not possible in indoor systems, such as foraging, grazing, and digging.



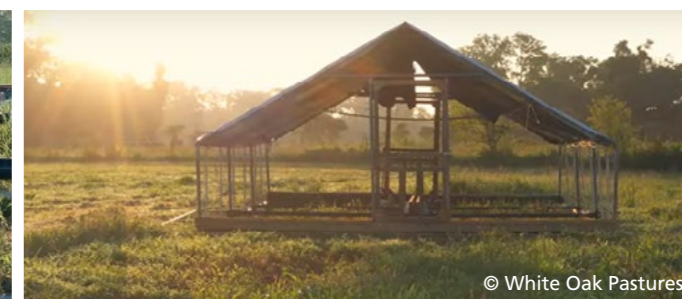
CASE STUDY - WHITE OAK PASTURES: MOBILE HOUSING FOR GROWING RABBITS



White Oak Pastures is a 3000 acre family farm in Georgia, U.S.A. Since 1995, White Oak Pastures has transitioned from conventional farming practices to regenerative farming practices, rearing 10 different animal species, including rabbits. Growing rabbits are reared in mobile housing systems on pasture from 5 weeks of age until slaughter at 15 weeks. The innovative Rabbitat developed by White Oak Pastures is a large mobile

housing system for up to 30 rabbits (currently 35% of production with an aim of increasing this to 50% by the end of 2025 and thereafter 100% of production, i.e. 520 rabbits/year). The Rabbitat provides a large area directly on the pasture for the rabbits to move and play and even dig (more than 6 x 6 m) and at the same time reduces the frequency at which the housing needs to be moved (every 5-7 days vs. daily in smaller mobile housing systems). The high covered roof means that the rabbits have plenty of space to rear, but are still protected from predation and poor weather.

For additional information on this system, see: <https://www.youtube.com/watch?v=hrXBZPVd6IY>



"We strive to raise our rabbits in a way that closely mimics the experience a wild rabbit would have in nature. They are happily raised on pasture, where they can express natural behaviors and have space to run, dig, and hide."

Jodi Harris Benoit, Director of Farm Experience, White Oak Pastures

Benefits for the Rabbits

- ✓ **Space:** The Rabbitat measures ~6.1 x 6.1 m (floor area: ~37 m²) and houses up to 30 rabbits, resulting in a very generous space allowance of 1.2 m² per rabbit. The Rabbitat has sufficient vertical space for the stockperson to stand up straight.
- ✓ **Flooring:** The Rabbitat sits directly on the pasture with no wire flooring in between. A panel frame on the outside ensures no rabbit can escape.
- ✓ **Enrichment:** Plastic-floored platforms (> 4500 cm², 1 per 5 rabbits) also provide hiding places underneath. The rabbits have permanent access to foraging material, which varies depending on the season, and the Rabbitat is moved onto a patch of fresh pasture every 5 to 7 days. This allows the rabbits to graze freely, and having direct access to the pasture allows them to select what and when to eat, and even permits them to dig. The Rabbitat gives the rabbits access to natural light and fresh air, while also protecting them from the risk of predation and poor weather.
- ✓ **Antibiotics:** No routine use.

Benefits for the Farmer

- ✓ The spacious Rabbitat only needs to be moved every 5-7 days (vs. daily for typical small mobile housing systems) reducing the workload for the farmer.
- ✓ The Rabbitat forms part of the regenerative approach to farming at White Oak Pastures. The rabbit manure, which has the highest nitrogen content of any livestock, can be used 'cold' (i.e. without any processing) to enrich the soil and benefit the cultivation of crops.
- ✓ Pleasant work environment.

HIGHER WELFARE CAGE-FREE SYSTEMS FOR BREEDING DOES

Cage-free systems for breeding does allowing at least partial group housing are not yet available at commercial scale. While some small-scale outdoor production allows to keep does in groups, indoor alternatives to individual cage housing are almost non-existent. There is ongoing work in Belgium to trial partial group housing of does in a combi-park system, but more research into successful cage-free group housing of does is still very much needed.

To provide does with adult social contact, the following criteria need to be taken into account:

- **Space, barriers, hiding places:** There will always be a level of aggressive interaction amongst does to establish a hierarchy, so providing a good space allowance (min. 6000 cm²/doe) and additional places to hide (tunnels, barriers) gives does the opportunity to escape or avoid others.
- **Enrichment:** Providing extra manipulable material at the time of mixing can serve as a diversion during this critical moment. Long straw or hay or fresh forage in sufficient quantities can keep the does busy.
- **Small and stable groups:** Maintaining a stable group as much as possible, from at least the first insemination, helps does to establish a hierarchy that will be easier to recover after any separation period. When a new doe is introduced to an existing group, careful monitoring of the new arrival is critical. The best time to introduce a new doe into an existing group is when the familiar does are mixed after a period of separation. Aggression is lower in smaller groups, particularly when individuals are already familiar with each other.
- **Partial group housing:** Separating does prior to birth and during early lactation, reduces the risk of multiple does nesting in one box and cannibalism of kits by competing does. Research results vary on which day is best to regroup the does but waiting at least until the kits have emerged from the nest (typically in the 2nd-3rd week after birth) is advised as does may be less stressed in later lactation and the presence of kits may serve to disrupt any aggressive encounters⁸. Additionally, as fights mostly occur at night time, it may be possible to separate does at night only to minimise aggression and allow for social contact⁹.
- **Monitor & Intervene:** The most intense aggression occurs in the first hour after mixing. Stockpeople should monitor the does in this period and intervene in any encounter that is turning severely aggressive. Staff should identify any does that are too dominant or too submissive and may need separate them from the group. Does should be regularly monitored for lesions. Lesions should never reach a severe state, and if so, immediate intervention is required.
- **Selection:** Use genetic strains that are selected for a calmer temperament. A close relationship with the genetic company is pivotal to obtain this strain, since this is not a common selection trait for the intensive commercial sets.

Trials on group housing of does should be initially carried out on a small scale and in a low-risk environment. We recommend taking a stepwise approach by trialling group housing of young/ non pregnant stock first, before trialling partial group housing on a small number of breeding does, separating the does a couple of days before parturition and at least until the kits have emerged from the nest, and incorporating as many practices known to reduce aggressive interactions as possible.



© Compassion in World Farming, Group housing of rabbit does

WELFARE OUTCOMES IN GROWING RABBITS

Welfare outcomes are animal-based measures which reflect an animal's physical wellbeing and increasingly their behavioural expression and mental wellbeing. Whilst provision of certain resources (inputs) in the rabbits' environment is necessary to increase the welfare potential of a system, measuring animal-based outcomes indicates whether that potential has been met. Regularly scoring appropriate outcome measures can help to identify welfare problems and be used to set targets or benchmark for improvements through an active programme.

DISEASE INCIDENCE

WHAT: Record incidence of sick and injured rabbits in the farm and the type of illness.

WHY: Sick and injured rabbits need additional attention; early recognition, treatment or culling is key to reducing suffering and suboptimal performance and limiting the spread of diseases.

HOW: Signs of illness should be detected as early as possible so a contingency plan can be put in place. Check every pen at least twice a day for any signs of disease (e.g. nasal or ocular secretions, coughing, sneezing, dermatitis, neck torsions, mange, diarrhoea, prostrated rabbits), being careful to check on the hiding places of the pen.

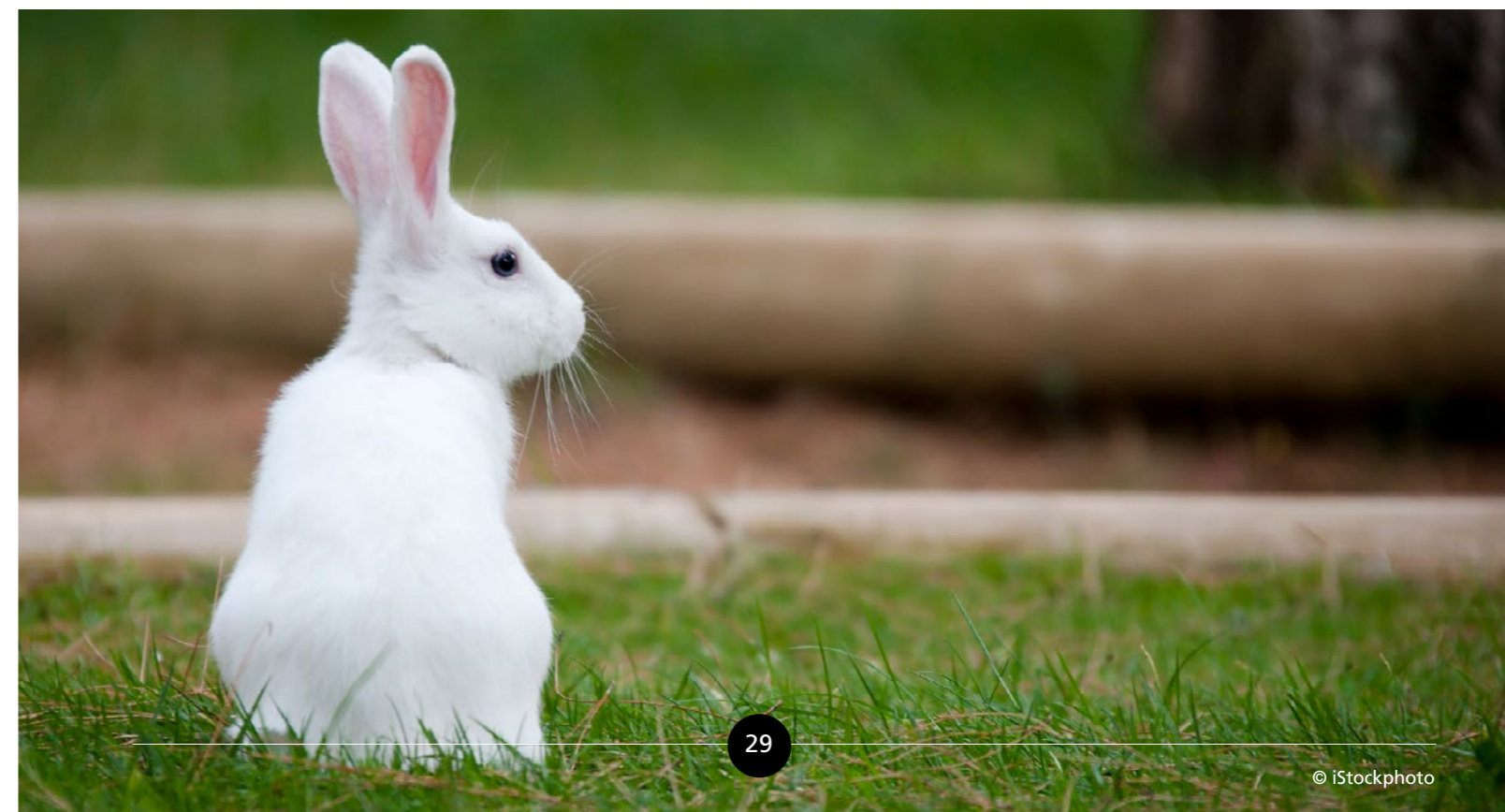
MORTALITY

WHAT: Record the number of growing rabbits dead or culled and the causes.

WHY: Mortality may be due to chronic injury, disease, suboptimal management or environmental conditions, and indicates pain, suffering, suboptimal performance, and loss to the business.

HOW: Record whenever an animal is removed due to death on farm or culled and the reason. Selecting a system that is easy for the stockperson to use will help to get more information.

TARGET: Ideal target: ≤ 5% mortality within the last 3 months with culling constituting at least 40% of the mortality rate.



BODY CONDITION & BODY SIZE

WHAT: Assess and monitor changes in body fat reserves (condition) or deviations in body size of growing rabbits.

WHY: Body condition or body size in comparison to other individuals of the same age can be an indication of whether rabbits are receiving adequate nutrition or suffering from disease.

HOW: For body condition, score the number of animals categorised as lean (bones easily palpated, sharp flat or concave rump, spine protruding) or for body size look for any animal half the size of their pen mates.

TARGET: Ideal target: 0% of lean or small animals. Acceptable target: Up to 1% of lean/small animals.

SKIN LESIONS

WHAT: Assess prevalence and severity of lesions.

WHY: In growing rabbits skin lesions usually have an infectious or inflammatory origin. The most common ones are located around the eyes and ears, but can be present in any part of their bodies.

HOW: Growing rabbits should be monitored for any sign of wounding and infectious disease (wounds sores or dry or red skin patches, abscesses, eye lesions or ear lesions). Moderate/fresh lesions: Open/unhealed lesions > 2 cm. Severe lesions: Open/unhealed lesions > 5 cm.

TARGET: Ideal target: Body lesions: ≤ 0.4% moderate wounds, 0% severe; Ear lesions: ≤ 2% old, 0% fresh. Acceptable target: ≤ 1% moderate wounds, ≤ 0.4% severe; Ear lesions: ≤ 5% old, ≤ 1% fresh.

CLEANLINESS

WHAT: Assess the number of wet or dirty animals.

WHY: The cleanliness of the rabbits can give an indication of the cleanliness of the housing which can be affected by poor housing design or inappropriate housing material, as well as inadequate management practices. Inadequate sanitary condition of the animals or facilities can lead to discomfort in the animals and contribute to infections and pathologies.

HOW: Growing rabbits should be monitored for wet patches on their fur or if the body is dirty (moderate: 10-30% of the body is dirty; severe: > 30% of the body is dirty).

TARGET: Ideal target: < 1% of animals wet, ≤ 0.5% moderately dirty (0% severely dirty). Acceptable target: < 2% of animals wet, ≤ 1% moderately dirty (≤ 0.5% severely dirty).

RABBIT SIGNALS

WHAT: Observing the behaviour and the body language of the rabbits can give an indication of their wellbeing.

WHY: To ensure good welfare, it is important to understand not only the physical health of the animals, but also their mental wellbeing. This can be inferred by watching how the animals behave with each other and in their environment.

HOW: Observe the animals and look for any signs of positive or negative signals (below).

TARGET: The majority of the rabbits should be in a 'happy state' – displaying positive behaviour signals. Too many negative signals are an indication that something is not right with the housing and/or management, and improvements should be made to address the cause.

Positive behaviours

- ✓ **Play behaviour:** Hop, jump, and run at speed often in a zigzag. Twist their torso while in the air, flick their head, and/or kick their hind legs.
- ✓ **Exploration:** Explore the pen and enrichment, and readily approach the stockperson or allow the stockperson to approach.
- ✓ **Postures:** Animals fully stretched (but not panting) can be an indicator of comfort and sufficient space.
- ✓ **General activity:** Rabbits perform consecutive hops, jumping up and down from platforms, standing upright with both front paws off the ground.

Negative behaviours

- ✗ **Thermal stress:** Panting, red ears (too hot); shivering/huddling (too cold).
- ✗ **Flightiness:** Flighty rabbits have a high fear level, indicating poor stockmanship, suboptimal environments or predator activity. Flighty animals can hurt themselves when trying to escape.
- ✗ **Aggression:** Fights, biting, or chasing between rabbits.
- ✗ **Stereotypic behaviours:** Continuous biting/chewing or scratching on areas of the housing.

Qualitative Behaviour Assessment (QBA): QBA is a tool to assess an animal's body language and the way in which they interact with their environment, which can provide simple and rapid on-farm assessments of both positive and negative mental states. For example, using QBA, rabbits which had frequent positive interactions with humans were rated as more Affectionate/Interested than rabbits which had not received such handling by trained observers who were unaware of the handling style received by the rabbits.

Measures and targets have been adapted from existing industry protocols and scientific papers:

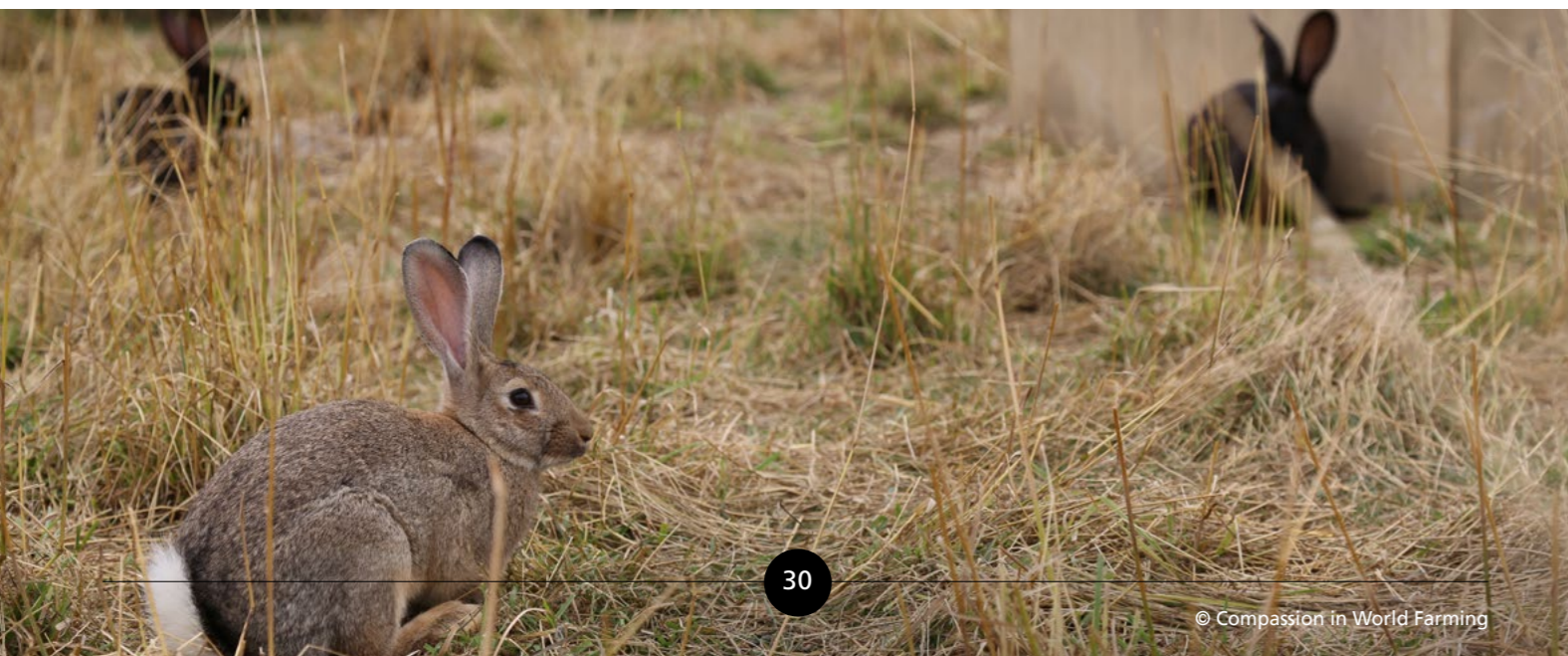
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CONCLUSION

Cage-free housing systems which take into account the needs of the rabbits by providing them with more space and a more comfortable and stimulating environment have a higher welfare potential than caged systems. Improvements to conventional cages (i.e. enriched cages) have little additional benefits for the animals and much of the same welfare issues persist.

For growing rabbits, a variety of cage-free alternatives are already being used successfully, which can meet the basic needs of the animals by offering rabbits more space to rest, to hop, and to stand upright, opportunities to hide, play and gnaw, while providing a high fibre diet, natural light and comfortable flooring. The welfare potential of cage-free systems increases from parks to pens, and again to pens with straw bedding and/or wintergarden access. Systems with spacious outdoor access and good shelter have the highest welfare potential for growing rabbits. Regular monitoring of welfare outcome measures can ensure the housing system is delivering the expected welfare benefits.

For breeding does, there is an urgent need to develop successful cage-free housing systems that can meet the social and space needs of the does, but also minimise aggression between does and losses for the farmer. Partial group housing of small stable groups of does is encouraged, provided aggression is closely monitored and sufficient space, enrichment, and barriers are provided within the housing to help reduce aggression.

Transitioning to cage-free systems can also be beneficial to rabbit farmers, through for example lower investment costs and a similar production capacity compared to conventional cages, a reduction in mortality and antibiotic use, and/or price premiums received for cage-free production. Many farmers who have made the switch report a more pleasant work environment despite some additional labour involved, thanks to more positive human-animal interactions.

Switching to cage-free rabbit farming can also protect brand reputation and mitigate the risk of negative media associated with caged production. Cage-free rabbit farming can also benefit the rabbit industry by attracting new and young farmers into the rabbit industry.

Most importantly, investing in well-designed cage-free systems for rabbits is considered to be a future-proof investment in the face of upcoming changes to the European legislation and evolving consumer expectations.

ANNEX I

National legislation/guidelines for growing rabbits in Europe

EU



There is currently no species-specific EU legislation covering the welfare of rabbits on farm, they are covered by general EU animal welfare legislation, including Council Directive 98/58/EC (as amended).

EU Organic



EU Organic rules on production and labelling of organic products include regulations on rabbit nutrition, housing and husbandry for both breeding and fattening rabbits and came into force in 2018 (Regulation (EU) 2018/848)¹⁰.

Housing: No cages.

Space: No dimensions specified.

Flooring: Solid construction (not slatted).

Enrichment: Rabbits must be provided with a raised platform, a covered shelter, dark hiding places and gnawing material via pasture and supplementary straw and hay. At least 60% forage in diet.

Light: Access to natural light via outdoor access.

Bedding: Ample dry bedding strewn with litter material provided in the rest area.

Antibiotic use: Routine use not permitted.

Outdoor access: Outdoor run with vegetation required, access to pasture when possible.

Austria



Austria banned the keeping of rabbits for meat production in cages in 2012. Minimum standards for rabbits in Austria are laid down in the 1st Animal Husbandry Ordinance, Annex 9¹¹.

Housing: Pens or outdoor enclosures.

Space: Dependent on weight and group size: Groups < 40 rabbits: < 1.5 kg: 1000 cm²/rabbit; ≥ 1.5kg: 1500 cm²/rabbit, 50 cm minimum pen height. Groups > 40 rabbits: < 1.5 kg: 800 cm²/rabbit; ≥ 1.5kg: 1200 cm²/rabbit, 50 cm minimum pen height.

Flooring: No wire mesh floors. Flooring must have ≥ 8 mm slat width and ≤ 10 mm slot width.

Enrichment: Platforms (≥ 25% floor area) or darkened hiding spaces, gnawing material and hay/straw provision.

Light: Transparent surfaces (≥ 3% of the floor area) to allow daylight & minimum 20 lux in the barn.

Bedding: Required on solid flooring.

Antibiotic use: Not specified.

Outdoor access: Not required.

Belgium



Belgium first introduced legislation to protect the welfare of farmed rabbits in 2014. From 2016, cages for meat rabbits have been banned in favour of park systems¹². While individual cages for does were meant to be phased out by 2021 in favour of group housing in enriched park systems, this deadline has been shifted to 2025¹³.

Housing: Park systems.

Space: Groups are made up of at least 20 animals with a maximum occupancy of 12.5 rabbits/m². Growing rabbits must be provided with ≥ 800 cm² per rabbit. Parks must be ≥ 1.80 m in length, and pens should have no height restriction.

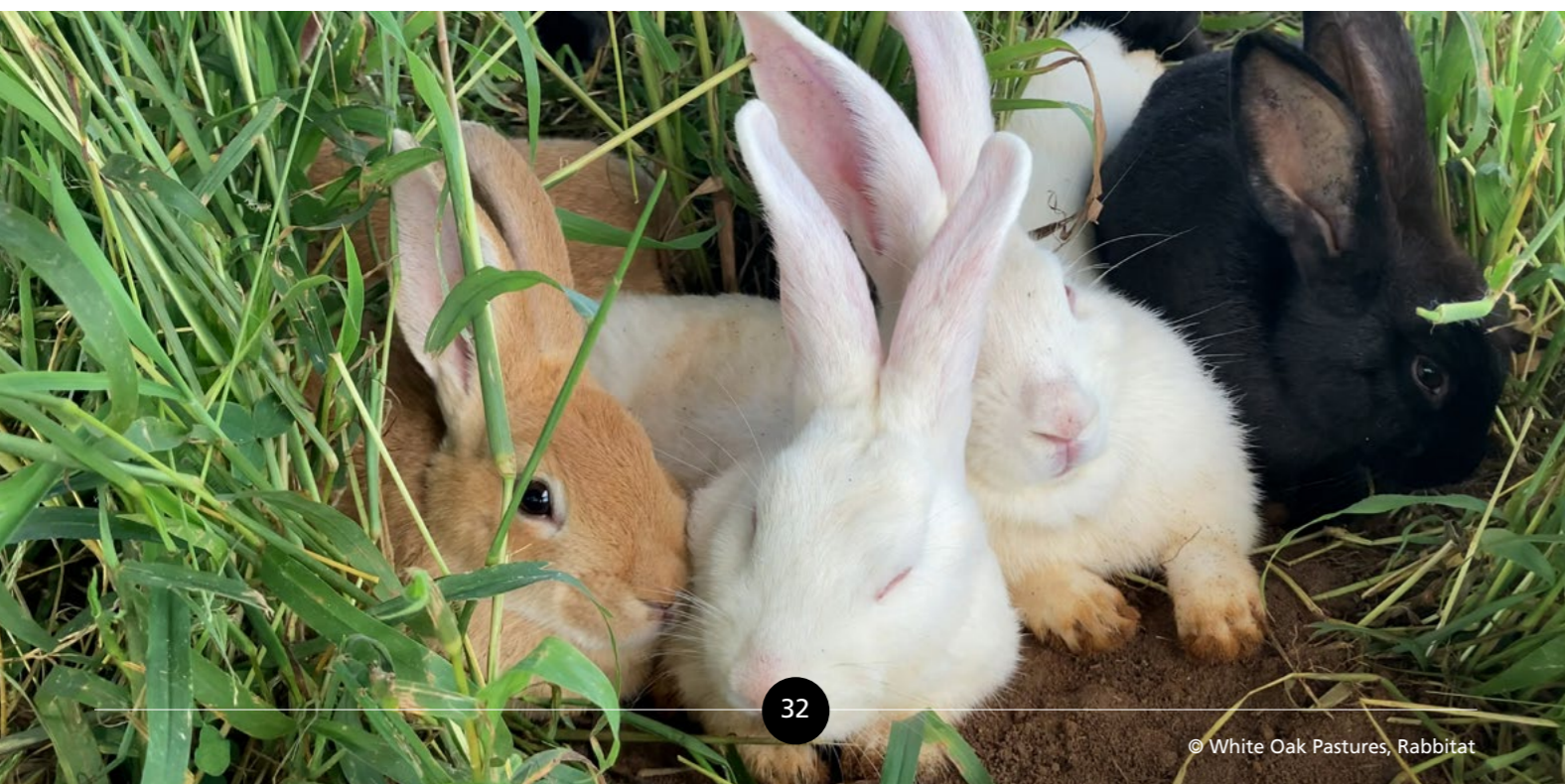
Flooring: At least 80% of the floor area must be made from non-wire mesh material.

Enrichment: Platforms (at a height of ≥ 25 cm), hiding spaces (tunnels) and gnawing material (wood blocks, straw, hay, carrots or other suitable material) must be provided.

Light: The lighting schedule must include at least eight hours of darkness and eight hours of light with a minimum intensity of 20 lux, and a gradual dawn/dusk transition period of at least 30 mins between lighting periods.

Bedding, antibiotic use: Not specified.

Outdoor access: Not required.



Germany



Germany has minimum requirements for the keeping of farmed rabbits in force since 2014¹⁴.

Housing: Conventional barren cages banned.

Space: Total space allowance of at least 1000 cm² per rabbit (floor area: 700 cm² + platform: floor area \geq 300 cm per rabbit for groups of \geq 25 rabbits). The total available area must be \geq 8,000 cm² (min 80 x 60 cm), with a minimum height of 60 cm over at least 70% of the floor area.

Flooring: No wire mesh floors. Flooring must have \leq 11 mm slot width and equivalent slat width, platforms \leq 15% perforation.

Enrichment: Platforms (up to 40% of the floor area) must be provided, and rabbits must have access to a darkened area and coarse-textured roughage such as straw or hay and gnawing material.

Light: Transparent surfaces (\geq 5% of the floor area) to allow daylight required in new buildings. Minimum 40 lux in the barn, dawn and dusk transitions of \geq 30 minutes required.

Bedding, antibiotic use: Not specified.

Outdoor access: Not required.

Italy



Although there is no national legislation, in 2021, the Italian Ministry of health published guidelines for rabbit breeding¹⁵.

Housing: Recommend housing in enriched cages, conventional cages only for exceptional cases.

Space: Minimum surface area of 4400 cm² (75 x 38 cm, l x b), with a minimum height of 25 cm and at least 50 cm over 950 cm² of the floor area. Maximum stocking density of 40 kg/m² (16 rabbits at a weight of 2.5 kg). For replacement rabbits, these minimum dimensions can be reduced to 50 x 38 x 40 cm, l x b x h).

Flooring: Plastic footrests required on wire mesh floors.

Enrichment: Platforms, tubes/tunnels, and gnawing material should be provided.

Light: The lighting regime must include at least 8 hours of continuous darkness and 8 hours of continuous light with a gradual transition (30 mins – 2 hours) between lighting periods, while natural light is recommended for new buildings.

Bedding: Not required.

Antibiotic use: Not specified.

Outdoor access: Not required.

Netherlands



Conventional barren cages are banned in the Netherlands since 2016¹⁶.

Housing: All farmed rabbits in the Netherlands are now housed in either enriched cages or parks¹⁷.

Space: 600 cm²/rabbit for groups \geq 5 rabbits, with a minimum height of 40 cm.

Flooring: Plastic footrests required on wire mesh floors.

Enrichment: Gnawing material should be provided.

Light: The lighting regime must include at least 8 hours of darkness and 8 hours of light, at least four hours consecutive of each. Light intensity should be at least 20 lux during the light period.

Bedding, antibiotic use: Not specified.

Outdoor access: Not required.

Switzerland



Minimum standards for farmed rabbits in Switzerland are specified in TSchV 455.1 since April 2008¹⁸.

Housing: Not specified.

Space: 800 cm²/rabbit for groups \geq 40 rabbits (1000 cm²/rabbit groups \leq 40 rabbits). Minimum enclosure height of 40 cm (under 2.3 kg) or 50 cm (over 2.3 kg), at least part of enclosure should be high enough for animals to sit upright. Minimum available surface area: Rabbits < 2.3 kg: 3400 cm² without platforms, 2800 cm² with platforms; rabbits over 2.3kg: 4800 cm² without platforms, 4000 cm² with platforms (of which 2800 cm² is floor area).

Flooring: Not specified.

Enrichment: Platforms not required but enclosures must be equipped with a darkened area. Coarse-textured food such as hay or straw provided daily, gnawing material.

Light: Not specified.

Bedding: Rabbits must be provided with bedding (exception for rooms with air conditioning)

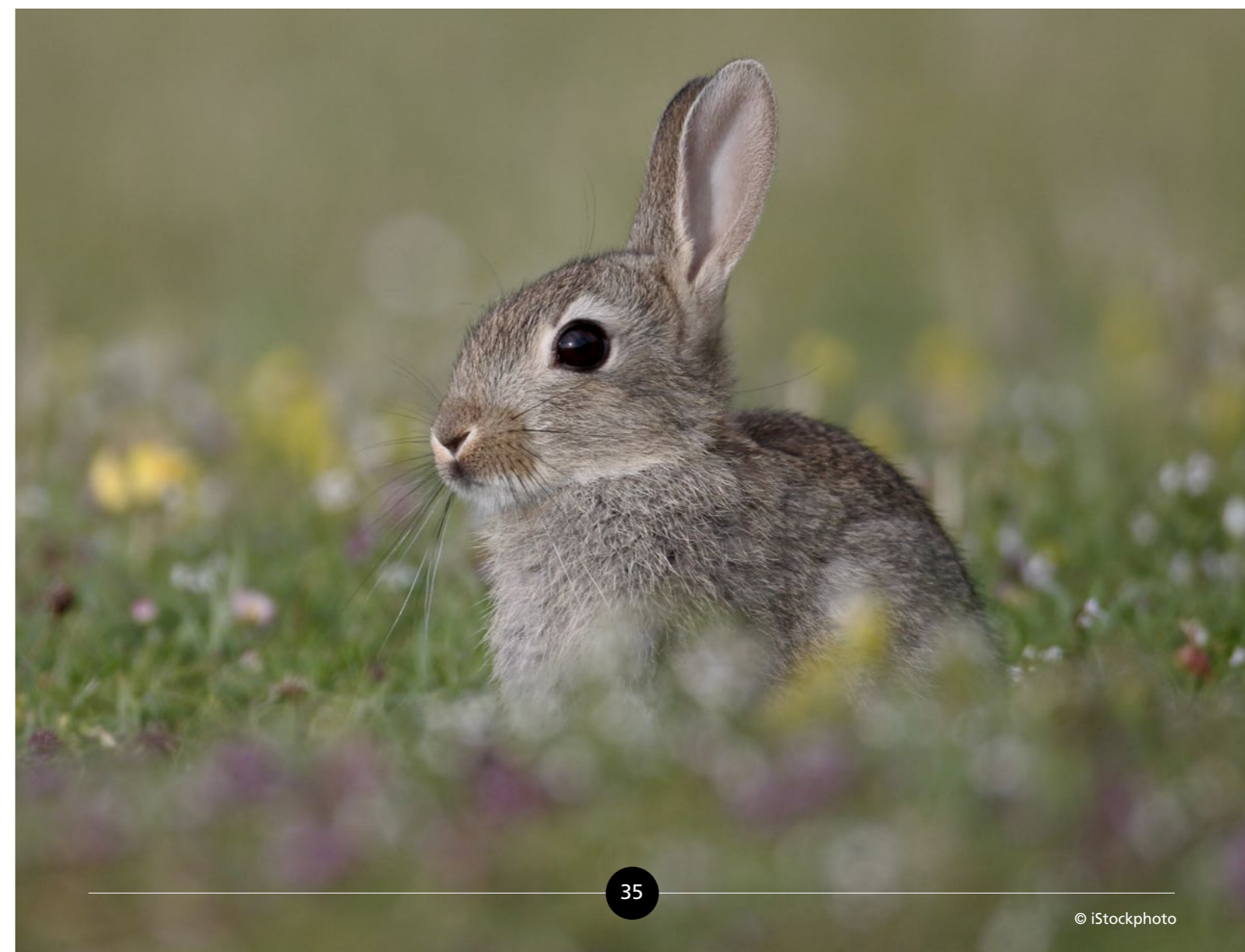
Antibiotic use: Not specified.

Outdoor access: Not required.

UK



Minimum standards for the protection of rabbits in the UK are laid down in The Welfare of Farmed Animals (England) Regulations 2007 (as amended, and related Regulations in other parts of the UK), which require sufficient space for all rabbits to lie on their sides at the same time and sufficient height for rabbits to sit upright on all four feet without their ears touching the top of the cage or hutch.



ANNEX II

EXISTING CERTIFICATION SCHEMES FOR GROWING RABBITS

✗ not specified – required to some degree or recommended only ✓ required (and to what extent)
 ✓ required by national legislation (– for new buildings only)

		EU Organic (EU)	Codiplan PLUS (Belgium)	Beter Leven 1* (The Netherlands)	Label Rouge fermier (France)	Welfair* (Spain)	Haltungsform 1 (Germany)	Haltungsform 2 (Germany)	Haltungsform 3 (Germany)	Haltungsform 4 (Germany)	Haltungsform 5 (Germany)
Housing	Cage-free	✓	✓	✓	–		✗	✓	✓	✓	✓
Space	≥ 800 cm ² /rabbit	✗	✓	✓	✗		✓✓	✓✓	✓✓✓	✓✓✓	✓✓✓
	≥ 1.8 m pen length	✗	✓	✓	✗		✗	✓	✓	✓	✓
	No height restriction	✗	–	✓	✓		✗	✓	✓	✓	✓
Flooring	No wire mesh	✓	–	–	✓		✗	✓	✓	✓	✓
Enrichment	Platforms	✓	✓	✓	✓		✓	✓	✓	✓	✓
	Hiding places	✓	✓	✓	✓		–	–	✓	✓	✓
	Gnawing material	✓	✓	✓	✓		✓	✓	✓	✓	✓
	Hay/Straw	✓	✗	✓	–		✓	✓	✓	✓	✓
Light	Daylight	✓✓	✗	–	✓		–	–	✓	✓✓	✓✓
	Dawn/Dusk	✓✓	✓	✓	✓		✓	✓	✓✓	✓✓	✓✓
	Intensity 20 lux	✓	✓	✗	✗		✓✓	✓✓	✓✓	✓✓	✓✓
Bedding	Bedding provision	✓	✗	✗	–		✗	✗	✓	✗	✓
Antibiotics	No routine use	✓	✗	✗	✗		✗	✗	✗	✗	✓
Outdoor Access	Wintergarden/Run/Free-range	✓✓	✗	✗	✗		✗	✗	✓	✓✓	✓✓

*Welfair: Standards not publicly available. An outcomes-based certification scheme based on the Welfare Quality® and AWIN protocols

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Published February 2025.