

# Practical Alternatives to Industrial Animal Farming in Latin America

Case studies from Argentina, Brazil,  
Colombia and Costa Rica



**WSPA**

World Society for the Protection of Animals

## About us

The World Society for the Protection of Animals (WSPA) is an international animal welfare organisation with its headquarters in London UK, and with 13 other offices worldwide. Holding consultative status with the United Nations and observer status with the Council of Europe, the WSPA forms the largest federation of animal welfare organisations in the world with more than 140 different countries through its network of over 800 member societies.

The WSPA works to alleviate animal suffering using a combined and collaborative approach encompassing hands-on work, educational initiatives, lobbying and awareness campaigns. Areas of work include stray animal control, humane education, disaster relief, farm animals and commercial exploitation of wildlife. The WSPA is also working for a Universal Declaration on Animal Welfare (UDAW), aiming to achieve global consideration of the welfare of sentient animals and recognition of animal welfare as an issue of importance within the social development of nations worldwide.

## The WSPA's Farm Animal Welfare Programme:

The WSPA's Farm Animal Welfare Programme is opposed to industrial animal farming, which is a system of raising animals using intensive 'production line' methods that maximise the amount of meat produced while minimising costs.

The WSPA believes that animals should be reared free-range or, if they are kept indoors, they should be farmed in ways that allow them to perform their natural behaviours.

They should be given plenty of space to prevent overcrowding, bedding such as straw, good ventilation and preferably fresh air.

Cages, confining stalls/crates and tethering should not be used.

Herd/flock sizes should be kept reasonably small – they should be appropriate for the species.

Animals should not be selectively bred for increased productivity when this leads to ill-health or pain, as is the case with fast-growing meat chickens and high-yielding dairy cows.

Painful mutilations such as tail-docking, beak-trimming and tooth-clipping should not be carried out.

For further information about the WSPA's Farm Animal Welfare Programme, please visit [www.wspafarmwelfare.org](http://www.wspafarmwelfare.org) - our portal for governments and animal welfare organisations.

## Industrial Animal Farming

Poultry and pigs are the most intensively farmed animals in the world today. As of 2005, 57 billion poultry and 1.3 billion pigs are slaughtered for human consumption annually. Latin America is the third largest producing area after North America and the Far East.<sup>1</sup>

The majority of these animals are reared on industrial animal farms that confine them in cages or crates, or crowd them together in vast barren sheds. Not only does this severely compromise the welfare and health of the animals, but the outputs of industrial farming also pose significant risks to human health, the environment and food security.

### What is industrial animal farming?

Industrial animal farming is a system of raising animals using intensive 'production line' methods that maximise the amount of meat produced while minimising costs.

Industrial animal agriculture is characterised by high stocking densities and/or close confinement, forced growth rates, high mechanisation, high capital input and low labour requirements. Examples include battery cages for laying hens, sow stalls for pigs, dry lots for cattle and veal crates for calves.

### Egg-laying hens:

In 2005 over 5.6 billion egg-laying hens were reared worldwide<sup>1</sup>, the majority of which were housed in battery cages. These cages, stacked on top of each other, allow for little movement. In this system, hens do not have the opportunity to scratch or dust-bathe. They do not have access to a nest for egg-laying. They cannot stretch or turn around freely. These behaviours have an innate basis, and have evolved with the species for thousands of generations. Preventing them causes frustration, and other behavioural problems of crowding are aggression, feather-pecking and cannibalism. Being so restricted also causes the birds' bones to become brittle and snap through lack of exercise.

### Chickens:

Although they are not caged, most of the world's 'broiler' chickens are raised under intensive confinement. Broilers are stocked in high densities (up to 20 birds/m<sup>2</sup>), with each shed generally containing 12,000 birds or more. Selective breeding forces broilers to grow at accelerated rates, with fast-growing strains reaching slaughter weight in 42 days or less (a chicken's natural life span is around seven years). Chickens raised in industrial animal farms often suffer from lameness as their juvenile skeletons struggle to support this abnormal growth. Many also die of heart attacks because their hearts are not strong enough to support their disproportioned bodies. Heart failure due to abnormally fast growth rates is now one

of the major causes of carcase condemnation in broilers worldwide.<sup>2</sup>

### Pigs:

Sows raised in industrial animal farms often spend most of their time confined in narrow crates where they are unable to turn around, nest, root, or exhibit other natural behaviours. Sows kept in stalls and tether systems often suffer a range of health problems such as foot injuries, lameness, and long-term pain from infected cuts and abrasions. Lack of exercise leads to weakened bones and muscles and greater levels of urinary infections. The pigs may suffer heart problems, which can be made evident by higher mortality due to stress when the animals are being transported for slaughter. Many sows also suffer from respiratory problems, such as lung infection due to low air quality inside industrial units.<sup>3</sup>

## Global Trends

Scientific analysis in the European Union (EU) has led to industrial animal agriculture being restricted on animal welfare grounds. Starting in 2013, the prolonged use of sow stalls will not be allowed in the European Union. Some progressive countries are moving away from sow stalls faster than the legislation requires. Sow stalls are already banned in Great Britain, Sweden and Denmark. The Netherlands banned crates in 2005, and Finland implemented a ban in 2006. Similar legislation has been passed in the Philippines. In November 2002, the citizens of Florida voted to amend the state's constitution to make sow stalls illegal.

Similar advances are being made in the poultry farming industry. In 1999 the EU passed legislation to ban battery cages by 2012. The Austrian government went a step further by passing legislation to ban all cages, including the enriched cage, by 2009.<sup>4</sup> Switzerland was the first country to ban cages in 1992, since which time Swiss poultry producers have successfully demonstrated that it is possible to make more humane husbandry systems work on a commercial scale.<sup>5</sup>

In the USA no federal legislation exists for farmed animals, except for rules on slaughter and live transport. However, a number of recent developments look set to change the state of the country's agriculture forever.

In 2002 Florida became the first state to ban gestation crates (sow stalls). In 2006, Arizona voters followed Florida's lead and approved an initiative to ban both veal crates and gestation crates throughout the state. In 2007, the largest pig producer in the United States, Smithfield Foods, announced that they were beginning a ten-year phase-out of gestation crates. The same year, Maple Leaf, the largest pig producer in Canada, followed suit by announcing they will also phase-out their use of gestation crates for sows.

A number of food retailers, manufacturers, restaurants and caterers are also starting to change their policies. In 2007, Burger King, the world's second-largest hamburger chain, announced the adoption of a number of animal welfare policies and has implemented a

purchasing preference for cage-free eggs and crate-free pork. Ice-cream producer Ben & Jerry's is also phasing-out its use of cage eggs.

Whilst industrial animal farming systems are being legislated against or phased out in Europe and North America, they are on the rise in Latin America and Asia. According to the International Food Policy Research Institute (IFPRI), Latin America will be one of the world's leading producers of animal products by 2020 and much of that meat will be produced in industrial systems.<sup>6</sup>

There is strong evidence to support this: In 2005, of all the world regions\*, Latin America was the:

- Largest producer of cattle meat (over 15 million metric tonnes),
- Third-largest producer of chicken meat (approximately 15 million metric tonnes),
- Fourth-largest producer of pig meat (approximately 5 million metric tonnes),
- Fourth-largest producer of hen eggs (over 6 million metric tonnes).

Brazil is the largest producer and exporter of poultry meat in the world, producing over 8,668,000 million metric tonnes in 2005. Within Latin America, Brazil is also the largest producer of pig-meat, generating 3,110 million metric tonnes in 2005.

\* United Nation's Food and Agriculture Organisation (FAO) regional category.

## So what are the alternatives?

The global market for free range and organic produce around the world has grown significantly in recent years. In Europe, the UK is among the leaders of the organic boom with an organic sector worth £1.6 billion in 2005, an increase of 30% on the previous year.<sup>7</sup> Although sales are concentrated in Western Europe and North America, the market for organic food products is growing across the world.

Growing consumer purchasing power and increased awareness of organic production methods is strengthening consumer demand and organic production in less developed countries. For example, in Thailand, India, the Philippines and parts of Latin America, regional markets for organic produce are developing as farmers grow crops for consumers in their region.<sup>7</sup>

Humane and profitable alternatives to intensive farming do exist. In this study, the World Society for the Protection of Animals (WSPA) takes a closer look at alternative systems in four Latin American countries. As pigs and chickens are the most numerous and intensively farmed animals in the world today, this study will focus on alternative production systems for pig meat, egg production and chickens for meat.

The data for this study were collected in 2004/05. It is worth noting that although the WSPA fully supports and applauds the work undertaken by the farmers and institutions documented in this study, the WSPA is opposed to practices such as beak-trimming

and tooth-clipping which were being carried out on some of the farms featured. In partnership with Food Animal Initiative, the WSPA has set up the Model Farm Project, which aims to establish an international network of development and demonstration farms. These show that humane and sustainable farming is a practical and viable reality. For further information, please visit our website at [www.modelfarmproject.org](http://www.modelfarmproject.org)

**Farm name:** Fazenda Casa Branca / Milton de Azevedo Gonçalves, Brazil

**Type of farm:** Organic

**Certification:** Biodynamic Institute of Botuctu (IBD)

**Number of animals on farm:** 700

**Type of pigs reared:** Breeding and fattening

**Stocking density:** 1 pig/10m<sup>2</sup> (indoors) and 5 pigs/10 hectares (outdoors)

**Breed:** 'Traditional' Large White, Landrace, Pietran, Duroc, Piwhite

**Weaning age:** 24 days

**Pregnancies per year:** 2.5

**Piglets per litter:** 12 – 13

**Slaughter age:** 120 – 180 days

**Slaughter weight:** 120kg

**Antibiotics:** Artificial antibiotics are not used. Instead, natural antibiotics (propolis and garlic) are used.

**Customers:** Marca: Frigorifico Casa Branca (White House), local market, other cities and states, supermarkets, Carrefour

**Transport to slaughter:** Pigs walk to the on-farm slaughterhouse.

grown on the farm. All pigs have access to the outdoor enclosure where they spend their time foraging, eating, interacting with others and exploring their environment. The farmer believes the enriched environment is the reason his pigs do not have any behavioural problems. The indoor section of the enclosure is used mainly for eating, drinking and sleeping and is kept clean and dry by regularly adding fresh straw. To minimise stress at slaughter, which can have a negative effect on the quality of the meat, the pigs are calmly walked to the on-farm slaughterhouse. Farm employees are trained in humane and passive handling techniques, using only their voices to control the pigs.

**Farmers' names:** Nelson Morais & Maria de Lourdes Morais, Concórdia, SC, Brazil

**Type of farm:** Organic broiler farm

**Certification:** City Hall Cooperative (natural feeding, semi-confined, no antibiotics, no chemicals)

**Number of animals on farm:** 1,100

**Breed:** 041 Embrapa. Mix of fast and moderate growth

**Stocking density:** 10 birds/m<sup>2</sup> (indoors) and 3.7 birds/m<sup>2</sup> (outdoors)

**Slaughter age:** 90 days

**Slaughter weight:** 2.5kg

**Antibiotics:** Not used

**Customers:** Supermarkets

**Transport to slaughter:** 30 minutes



Fazenda Casa Branca rears breeding sows and fattening pigs and is the only farm in Brazil with organic certification. The pigs are fed a diet of maize enriched with minerals and homeopathic medicines

This farm is part of the successful City Hall Cooperative. The Cooperative carries out regular inspections of the 30 farms in its programme and provides training and supervision when required. This farm has recognised the need for a stimulating outdoor area for the chickens. The outdoor enclosure is enriched with trees and pumpkin and Chayote shrubs, allowing the birds to spend the daylight hours foraging, dust-bathing and exploring. Foraging outside supplements the birds' diets and in turn keeps feed costs low. To prevent hock-burns, clean fresh wood shavings are added to the inside of the enclosure daily or weekly depending on the humidity.



Farmer's name:	Izonir Maltaro, Peritiba, SC, Brazil
Type of farm:	Free-range broiler chickens Producers' Association of Peritiba
Certification:	None
Number of animals on farm:	600
Breed:	Embrapa 041
Stocking density:	16 birds/m <sup>2</sup> (indoors) and 2.4 birds/m <sup>2</sup> (outdoors)
Slaughter age:	90 days
Slaughter weight:	2 – 2.1kg
Antibiotics:	Terramincina used only to treat diarrhoea
Customers:	Local markets
Transport to slaughter:	30 minutes

The farmer perceives a number of benefits of using this breed of chicken – it can also be used for egg production, is resistant to a number of illnesses, and thrives off a varied diet including pumpkin, cabbage and watermelon. The farmer favours this slow-growing breed, as mortality is often higher with fast-growing breeds and birds tend to be inactive and generally unhealthy. The outdoor enrichment and ground scattering of food means that the chickens spend much of their time engaged in foraging activities. The litter from the indoor enclosure (based on wood shavings) is put directly back onto the crop soil. The final product is sold to the surrounding community as Frango Verde (green broiler), a label that is promoted as 'natural and healthy'.



**Farm name:** Greentree S.A.  
**Type of farm:** Organic free-range laying hens  
**Certification:** Organización Internacional Agropecuaria (OIA) certified  
**Number of animals on farm:** Maximum capacity of 12,500  
**Breed:** Hy-Line Brown\*  
**Stocking density:** 8 birds/m<sup>2</sup> (indoors) and 2 birds/m<sup>2</sup> (outdoors)  
**Slaughter age:** 96 weeks  
**Antibiotics:** Not used  
**Customers:** Chain supermarkets (Carrefour, Coto, Jumbo), gourmet retailers and health food stores  
**Transport to slaughter:** 30 – 40 minutes



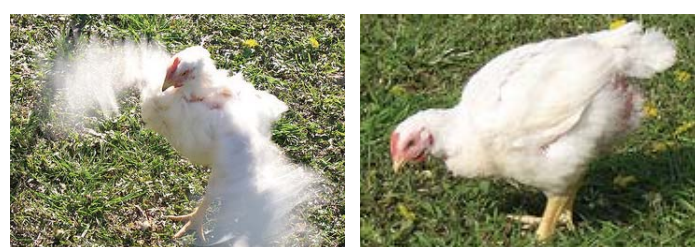
Hens on this farm are allowed outside between 10.30am and 6.30pm. During this time, they spend their time carrying out important natural behaviours such as dust-bathing, exploring, running and chasing, pecking and foraging, and basking in the sun. In the inside enclosure, the deep bedding of sunflower seed husks is added to daily and changed monthly to prevent a build-up of ammonia. The waste is then sold as fertiliser to local producers. Hens make full use of the nest boxes and perches, which the farmer believes contribute to their overall productivity and well-being. Feed is provided in aluminum troughs, and water through automatic drinking fountains. Beak-trimming is not practised on this farm. The farmer believes that considerate stockmanship (including reduced

light intensity and noise levels) calms the hens, and cannibalism can be minimised or completely avoided. The eggs are marketed as 'from free-range birds', 'from on-ground free-range birds', 'respecting animal welfare' and 'from happy hens'.

\*The WSPA does not support the use of fast-growing broiler breeds and actively promotes the use of slower-growing breeds.

**Farm name:** Diadema  
**Type of farm:** Free-range broiler farm  
**Certification:** National Agro-alimentary Sanitation and Quality Agency (SENASA)  
**Number of animals on farm:** 3,000  
**Stocking density:** 8-9 birds/m<sup>2</sup> (indoors) and 2.5 birds/m<sup>2</sup> (outdoors)  
**Breed:** Ross Hybrid  
**Slaughter age:** 70 days  
**Slaughter weight:** 2.2kg  
**Antibiotics:** Not used  
**Customers:** Local shops, hotels and restaurants  
**Transport to slaughter:** 60 minutes

The broilers on this farm are very active and take full advantage of the outdoor pasture area. The trees at the edge of the pasture provide shelter, which encourages the birds to range, dust-bathe and exercise. The farm has a very low mortality rate of less than 1%, and the percentage of lameness per flock is around 0.7%. Clean fresh bedding eliminates the problem of hock burns, while heart problems within the flock are very low and only become a problem during extremely hot periods. At the time of slaughter, birds are carefully caught by hand to minimise the risk of injury and transported to a nearby slaughterhouse less than 60 minutes away. SENASA has strict policies regarding transport, lairage and slaughter; for example, birds cannot be held in lairage for more than three hours.



**Farmer's name:** Don Marco Vega, who produces for RICURA, Costa Rica

**Type of farm:** Free-range broiler farm

**Certification:** None

**Number of animals on farm:** 5,000+

**Stocking density:** 1 chicken/m<sup>2</sup> (indoors) and 8 birds/m<sup>2</sup> (outdoors)

**Breed:** Cobb 500 (fast-growing)

**Slaughter age:** 49-56 days\*

**Slaughter weight:** 2.2kg

**Antibiotics:** Not used. A papaya seed mix is used to prevent parasitic outbreaks.

**Customers:** RICURA buy the chickens and re-sell them to Corporation de Supermercados Unidos (CSU)

**Transport to slaughter:** 3 hours

**Farmer's name:** Bryan Palma, Costa Rica

**Type of farm:** Free-range broiler farm

**Certification:** None

**Number of animals on farm:** 13,000 to 15,000

**Stocking density:** 7 birds/m<sup>2</sup> (indoors) and 3-5 birds/m<sup>2</sup> (outdoors)

**Breed:** Cobb 500\*

**Slaughter age:** 49 days

**Slaughter weight:** No available data

**Antibiotics:** Used twice during the growing cycle

**Customers:** Two supermarket chain stores, Automercado and Hipermas

**Transport to slaughter:** 2.5 hours



This free-range broiler farm is located in La Rita in Guapiles, two hours from the capital, San José. The farmer embarked upon free-range farming after consultation with agricultural experts from EARTH University. The birds on this farm have continuous access to an outdoor enclosure, where they have areas for dust-bathing, scrub for foraging and trees to shelter from the midday sun. Feed is provided in hoppers and is enriched with pro-biotics. The farm has a low mortality rate of 2% and, unlike birds on some conventional industrial farms, the birds on this farm do not suffer from any behavioural problems, lameness, hock burns or heart problems. The bedding in the indoor enclosure is kept clean and dry with fresh wood shavings. At the time of slaughter, the birds are bought by a company called PIPASA, which has strict policies on transport and slaughter. The final product is marketed under the company's own label, Zaragoza.

\*The WSPA does not support the use of fast-growing broiler breeds and actively promotes the use of slower-growing breeds.

This farmer's aim is to provide his chickens with an environment that 'allows them to feel comfortable doing what they want.' The outdoor enclosure is enriched with trees, bushes and herbal plants such as guayaba, papaya, plantain and yucca. There is an area for dust-bathing, helping to control parasites in the birds' feathers. Gates to the indoor enclosure are left permanently open, allowing birds total freedom. The indoor enclosure is split into two sections, permitting flock rotation and easy cleaning. Temperature and humidity control devices are installed inside, and the floor is kept clean and comfortable with a thick layer of rice peel. This allows build-up of micro-organisms to neutralise ammonia. Providing the birds with a stimulating environment has benefited the farmer, who has a low mortality rate of only 1.7% and has only experienced two parasite outbreaks in four years. When the birds reach slaughter age, they are transported at night to reduce heat stress. In a separate venture, the farmer tried rearing 'heavy chicken', which weigh up to 5 kilos, but quickly gave up as the birds suffered frequent cardio-respiratory problems.



\*The WSPA does not support the use of fast-growing broiler breeds and actively promotes the use of slower-growing breeds.

NB. Due to circumstances beyond the farmer's control, this farm is no longer operating. However, Bryan Palma can still be contacted on (506) 3944068 for further information about practices used on the farm.

<b>Farm name:</b>	Granja El Castillo, Colombia
<b>Type of farm:</b>	Free-range pig farm
<b>Certification:</b>	None
<b>Number of animals on farm:</b>	Over 1,300
<b>Type of pigs reared:</b>	Breeding and fattening
<b>Stocking density:</b>	15 pregnant sows/hectare and 1 lactating sow and circa 10 piglets/18m <sup>2</sup>
<b>Breed:</b>	<sup>3</sup> / <sub>4</sub> Landrace and Large White and <sup>1</sup> / <sub>4</sub> Duroc
<b>Weaning age:</b>	35 days
<b>Pregnancies per year:</b>	2.2
<b>Piglets per litter:</b>	10.4
<b>Slaughter age:</b>	Approximately 190 days
<b>Slaughter weight:</b>	120kg
<b>Antibiotics:</b>	Not used
<b>Customers:</b>	Local restaurants and specialty shops
<b>Transport to slaughter:</b>	When pigs reach 20 kilos, they are transferred to a local farm for further fattening.

All the enclosures on this farm are made out of natural materials sourced from the local area. The farm benefits from its own biogas digester to process manure and used bedding. The farmer favours this breed, because the animals adapt well to novel environments, are resistant to many local diseases and parasites, and are good breeders. However, they do suffer from photo-sensitivity. Pigs are fed a diet of soy, rice flour, wheat bran, maize, minerals and bran. This is provided in feeding troughs for lactating or weaning pigs and scattered on the floor in the gestation area to encourage foraging. The outdoor area is enriched with shrubs, trees (calabash), grass and wallowing pools. Wood shavings are used as bedding in the indoor farrowing enclosures and weaning corrals. Breeding sows are also provided with shavings, but prefer to gather their own additional nesting material from the outdoor enclosure. The pigs on this farm are extremely active, choosing to spend most of their time outside foraging. An infusion of cinnamon and marjoram is used to reduce E. coli, and *Gliricidia sepium* is used to refresh bedding. The mortality rate on the farm is 1% for weaned piglets and adults. Apart from enjoying a low mortality and disease rate on the farm, the farmer also receives up to 10-12% more for his lean and flavoursome pork.

## Practical alternative teaching institutions

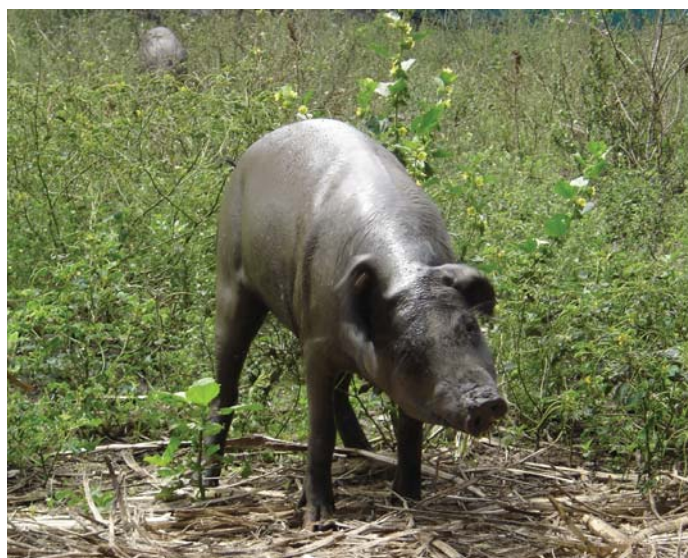
<b>Farm name:</b>	Guatiguara – Animal Production Centre (Universidad Cooperativa de Colombia), Colombia
<b>Type of farm:</b>	Indoor 'loose-housed' pig farm
<b>Certification:</b>	None
<b>Number of animals on farm:</b>	50 – 60 pigs
<b>Type of pigs reared:</b>	Sows and fattening pigs
<b>Stocking density:</b>	1 pregnant or farrowing sow/10m <sup>2</sup> and 1 fattening pig/m <sup>2</sup>
<b>Breed:</b>	Various breeds including Landrace, Yorkshire and Pietrain and Duroc cross
<b>Weaning age:</b>	35 days
<b>Pregnancies per year:</b>	Statistics not available
<b>Piglets per litter:</b>	10 to 11
<b>Slaughter age:</b>	5.5 to 6 months
<b>Slaughter weight:</b>	90 – 95kg
<b>Antibiotics:</b>	Not used

Although this farm is not operating at a commercial level, it is a good example of how humane and sustainable farming can work in practice. As in many semi-intensive systems in Europe, the pigs on this farm are housed indoors. Tail-docking is not practised, as pigs are sufficiently stimulated and spend their time running, playing, resting and rooting in a deep bedding of wood shavings. Male pigs are castrated, but anaesthetic is used to minimise stress and discomfort. Piglet mortality on the farm is extremely low. The stockman attributes this to the design of the gestation area, which provides the sow with sufficient space to move around without injuring her piglets and a 1m<sup>2</sup> creep box for the piglets to seek shelter. Therapeutic treatments from traditional medicines are used to treat diseases. In the event of a disease outbreak, a sample is taken to determine what the disease is and what treatment needs to be administered. Other diseases are prevented through the farming practices employed on the farm; for example, weaning at 35 days prevents health problems such as diarrhoea.



<b>Farm name:</b>	CLEM-SENA, Valle del Cauca, Colombia
<b>Type of farm:</b>	Organic – free-range
<b>Certification:</b>	None
<b>Number of animals on farm:</b>	62
<b>Type of pigs reared:</b>	Sows and fattening pigs
<b>Stocking density:</b>	142m <sup>2</sup> /pig
<b>Breed:</b>	Zungo Pelado (native hairless)
<b>Weaning age:</b>	60 days
<b>Pregnancies per year:</b>	2.05
<b>Piglets per litter:</b>	5.26
<b>Slaughter age:</b>	Fattening piglets or breeding sows are sold at approximately 7-12kg.
<b>Slaughter weight:</b>	N/A
<b>Antibiotics:</b>	Not used

The farmer favours this slow-growing local breed not only for its resistance to a number of local diseases, parasites and sunburn, but also because of its popularity among local consumers. Pigs are kept in groups of 7 – 10 animals in large outdoor enclosures with shrubs, grass and wallowing pools. No indoor enclosure is provided apart from at farrowing time, when sows are moved to special birthing areas where sows build their own nests. This agricultural institution has access to a range of veterinary and zoo-technicians to help deal with disease rapidly and effectively.



<b>Farmer's name:</b>	Gonzalo Mejia Echeverry, Educational Institution
<b>Type of farm:</b>	Dual purpose chicken farm
<b>Certification:</b>	None
<b>Number of animals on farm:</b>	150
<b>Stocking density:</b>	4.5 hens/m <sup>2</sup> (indoors) and 1 hen/m <sup>2</sup> (outdoors)
<b>Breed:</b>	Hy-line*
<b>Slaughter age:</b>	78 weeks
<b>Slaughter weight:</b>	2.5 kilos
<b>Antibiotics:</b>	Not used

The birds on this teaching farm are used for both egg and meat production. The institution is currently using a fast-growing Hy-line breed which requires a greater level of care and sanitary controls. As a result, the institution is now investigating implementing a breeding programme for native hens which require less maintenance and are better suited to the local environment and climate. In addition to commercial dry feed, which is provided in feeders, the birds' diet is supplemented with forage from on-farm protein banks\*\* and earthworms. The birds are housed in a closed system with outdoor access seven hours per day, where they make full use of the perches, bushes, shrubs and star grass (*Cynodon nlemfuensis*). Indoors, the birds are provided with wooden nest boxes and perches. The farm has little or no problem with mortality, lameness, heart problems or hock burns. The birds are not given antibiotics, but are given onion and garlic to improve gut health. In addition to the students, the farm employs one farmhand, and veterinary assistance is provided by the Colombian Agricultural Institute (ICA).

\*The WSPA does not support the use of fast-growing broiler breeds and actively promotes the use of slower-growing breeds.

\*\*Protein banks are plots partially planted with protein-rich foraging plants (such as *Arachis pintoi*, *Leucaena leucocephala* and mulberry trees) intended to supplement the animals' diet.



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Written by Amy Firth, Programmes Manager

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The WSPA is recognised by the United Nations and works to raise the standards of animal welfare throughout the world.

As the world's leading international federation of animal welfare organisations, the WSPA develops campaigns and projects in partnership with more than 800 member societies in over 140 countries.

Through its campaigns, education, training, and animal rescue initiatives, the WSPA seeks to ensure that the principles of animal welfare are universally understood and respected, and protected by effectively enforced legislation.

#### **WSPA HEADQUARTERS**

89 Albert Embankment  
London SE1 7TP  
UK  
Tel: +44 20 7587 5000  
Fax: +44 20 7793 0208  
Email: [wspa@wspa.org.uk](mailto:wspa@wspa.org.uk)  
Website: [www.wspa-international.org](http://www.wspa-international.org)

#### **WSPA NETHERLANDS**

PO Box 96906  
2509 JH Den Haag  
Netherlands  
Tel: +31 70 - 3142800  
Fax: +31 70 - 3142809  
Email: [info@wspa.nl](mailto:info@wspa.nl)  
Website: [www.wspa.nl](http://www.wspa.nl)

#### **WSPA CANADA**

90 Eglinton Avenue E.  
Suite 960  
Toronto  
Ontario M4P 2Y3  
Tel: +1 416 369 0044  
Fax: +1 416 369 0147  
Email: [wspa@wspa.ca](mailto:wspa@wspa.ca)  
Website: [www.wspa.ca](http://www.wspa.ca)

#### **WSPA CENTRAL & LATIN AMERICA**

Apartado 516  
Heredia  
Costa Rica  
Tel: +506 262 6129  
Email: [wspacr@racsa.co.cr](mailto:wspacr@racsa.co.cr)  
Website: <http://wspa.or.cr>

#### **WSPA EUROPE & MIDDLE EAST**

89 Albert Embankment  
London SE1 7TP  
UK  
Tel: +44 20 7587 5000  
Fax: +44 20 7793 0208  
Email: [wspa@wspa.org.uk](mailto:wspa@wspa.org.uk)  
Website: [www.wspa.org.uk](http://www.wspa.org.uk)

#### **WSPA AFRICA**

PO Box 105476  
Dar es Salaam  
Tanzania  
Tel: +255 22 270 1032  
Email: [enquiries@wspaafrica.org](mailto:enquiries@wspaafrica.org)

#### **WSPA USA**

34 Deloss Street  
Framingham  
Massachusetts 01702  
Tel: +1 508 879 8350  
Fax: +1 508 620 0786  
Email: [wspa@wspausa.com](mailto:wspa@wspausa.com)  
Website: [www.wspa-usa.org](http://www.wspa-usa.org)

#### **WSPA BRAZIL**

Av. Princesa Isabel, 323/801  
Copacabana  
22.011-901 Rio de Janeiro, RJ  
Brazil  
Tel/Fax: +55 21 3820-8200  
Email: [wspabrasil@wspabr.org](mailto:wspabrasil@wspabr.org)  
Website: [www.wspabrasil.org](http://www.wspabrasil.org)

#### **WSPA DENMARK**

Vesterbrogade 34, 1  
1620 Copenhagen V  
Denmark  
Tel: +45 33 93 7212  
Fax: +45 33 93 7210  
Email: [info@wspa.dk](mailto:info@wspa.dk)  
Website: [www.wspa.dk](http://www.wspa.dk)

#### **WSPA AUSTRALIA**

Suite 1, 2 Northcote Street  
St Leonards, NSW 2065  
Australia  
Tel: +61 2 9902 8000  
Fax: 02 9906 1166  
E-mail [wspa@wspa.org.au](mailto:wspa@wspa.org.au)  
Website: [www.wspa.org.au](http://www.wspa.org.au)

#### **WSPA ASIA**

19th Floor, Olympia Thai Tower  
444 Ratchadaphisek Road  
Huay Kwang  
Bangkok 10310  
Thailand  
Tel: +66 2 513 0475  
Fax: +66 2 513 0477  
Email: [inquiry@wspa-asia.org](mailto:inquiry@wspa-asia.org)

#### **WSPA COLOMBIA**

PO Box 75824  
Bogota  
Colombia  
Tel: +571 288 8829  
Fax: +571 232 1361  
Email: [wspa@wspa.org.co](mailto:wspa@wspa.org.co)

#### **WSPA GERMANY**

Kaiserstraße 22  
53113 Bonn, Germany  
Tel: +49 228 956 3455  
Fax: +49 228 956 3454  
Email: [info@wspa.de](mailto:info@wspa.de)  
Website: [www.wspa.de](http://www.wspa.de)

#### **WSPA NEW ZEALAND**

Private Bag 93220  
Parnell  
Auckland  
Tel: +64 9 309 3901  
Fax: +64 9 336 1947  
Email: [wspa@wspa.org.nz](mailto:wspa@wspa.org.nz)  
Website: [www.wspa.org.nz](http://www.wspa.org.nz)