Situation of China farm animal welfare

Institute of Animal Science
Chinese Academy of Agricultural Sciences

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China is a large producer of livestock in the world. The table below shows the major livestock production in 2008:

<table>
<thead>
<tr>
<th>Livestock Type</th>
<th>World Production (tons)</th>
<th>China Production (tons)</th>
<th>Percentage (%)</th>
<th>Global Rankings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pork</td>
<td>10319.0</td>
<td>4720.8</td>
<td>45.75</td>
<td>1</td>
</tr>
<tr>
<td>Poultry</td>
<td>9169.9</td>
<td>1581.4</td>
<td>17.24</td>
<td>2</td>
</tr>
<tr>
<td>Beef and mutton</td>
<td>7889.6</td>
<td>995.8</td>
<td>12.62</td>
<td>2</td>
</tr>
<tr>
<td>Eggs</td>
<td>6558.6</td>
<td>2673.4</td>
<td>40.76</td>
<td>1</td>
</tr>
<tr>
<td>Milk</td>
<td>69370.7</td>
<td>4013.0</td>
<td>5.78</td>
<td>3</td>
</tr>
</tbody>
</table>

1Source: United Nations FAO Database
2Source: China Statistical Yearbook
Livestock production is an important part of the national economy.

Source: China Statistical Yearbook
Livestock production is an important part of the national economy.

Source: China Statistical Yearbook
Livestock production is the main source for increasing farmers’ income

Source: China Animal Husbandry Yearbook
Source: China Animal Husbandry Yearbook
China's livestock industry is facing unprecedented challenges

- Swine high fever, foot-and-mouth disease, avian flu and other major infectious diseases occur
- Global food supplies tighten, feed prices rise and production costs increase
- Animal products prices continue to run high
- Demands of urban and rural residents on the quality and safety of animal products have increasingly become high
Animal welfare (especially farm animal welfare), gets more and more concern by many countries and organizations. It becomes an important international public policy issues.

- Comprehensive understanding of animal welfare
- Accurate analysis of animal welfare
- Active response to animal welfare
- Conscious implementation of animal welfare

Promote healthy and stable development of animal husbandry
The definition and connotation of farm animal welfare

- Reduce production stress and management stress, increase animals’ adaptability to environment, and let them live more healthily.
- Provide external conditions to meet animals’ physical, psychological and behavioral need, reduce animals’ pain.

Let the animal live healthily and easily

- Improve animal production environment
- Humanely treat animals
- Reduce disease

Achieve "unity" between healthy and happy
The definition and connotation of farm animal welfare

A correct view on farm animal welfare is to seek a balance between the human needs and animals needs and establish such a production mode, which not only satisfy the requirements of animal welfare advocates, but also be acceptable to animal producers.

Achieve harmony coexistence between human and animals, obtain the mutual benefit.

To improve animal welfare is to protect the benefit of mankind.
Development trend of China animal husbandry

Feed

Prepare a reasonable diet according to livestock type and nutritional needs at different growth and reproduction stages

Feed what they have

Source: China Feed Industry Yearbook
### Feeding mode

**Traditional farming ways——**

“Chickens fed by old lady, pigs fed by uncle, cattle fed by grandfather”

<table>
<thead>
<tr>
<th>Advantage:</th>
<th>Disadvantage:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Have larger space for livestock to move about</td>
<td>Lack of scientific planning</td>
</tr>
<tr>
<td>Farmers may make use of surplus food, agricultural products and leftover dishes</td>
<td>Low efficiency</td>
</tr>
<tr>
<td></td>
<td>Small scale</td>
</tr>
<tr>
<td></td>
<td>Hard to form products</td>
</tr>
<tr>
<td></td>
<td>Vaccination is extremely difficult</td>
</tr>
</tbody>
</table>
Feeding mode

Small and medium scale farmers——
Establishing suitable barns which relatively conform to growth characteristics and habitats

Advantage:
- Have little or no building costs
- Meet consumer expectations
- More space and environmental diversity permitting better expression of natural behavior with a positive influence on health and welfare
- Low animal density and good air quality positively contributing to health
- Access to natural light and ventilation
Feeding mode

Small and medium scale farmers——
Establishment suitable barns which conform to growth characteristics and habitats

Disadvantage:
- Productivity is lower than large-scale farming
- Animal and manure can not be separated
- Dung is not convenient to clean up

Ecological farming
Feeding mode

Intensive farming——
Specialization, scale, factory

Advantage:
- Efficiently examine the animals
- Greatly improve production efficiency
- Increase production

Disadvantage:
- High building and energy costs
- Does not satisfy consumer expectations
- Restricts the expression of natural behavior
- The higher animal density increases the risk of disease infections
- Higher requirements on hygiene management to prevent environmental pollution
Feeding mode

Freely outdoor housing

Advantage:
● More space and environmental diversity permitting better expression of natural behavior with a positive influence on health and welfare

Disadvantage:
● Moderate land needs
● Easily destroy vegetation
● Reduced biosecurity. Contact with wildlife disease reservoirs and soil may be a risk for health due to infection with a range of parasites
● Social stress in unstable group (such as aggressive behavior increase)
● High demand on the climate
● Not suitable for selective high-yielding varieties
Farm animal welfare and product trade

Animal welfare standard should correspond with situation of different countries

- Economic development level
- Consumption structure
- Traditional culture
- Social conditions
- Values concept
- Production mode

Animal welfare standards
Farm animal welfare and product trade

We appreciate and strongly support the views of OIE

“Animal welfare is prone to differences and conflicts. ... *Animal welfare should not become the means of trade protectionism, and should not be a tool to maintain special interests.* When formulating the international animal welfare standard, the international community should consider the economic development level and other restrictions of developing countries.”
The essence of farm animal welfare

Animal welfare → Animal health → Less medication → low residues → Food safety

Food safety
Less medication
Animal welfare
Animal health

- low residues
- Animal welfare
- Animal health
- Food safety
Consumer concerns for animal welfare increase year by year.
In order to objectively evaluate animal welfare, a quantitative, operational animal welfare evaluation index system should be set up at present, your attitude is
A. Very supportive  B. General support  C. Not supported  D. Strongly opposed   E. Does not matter

Animal welfare questionnaire survey results

Options
A  B  C  D  E

Turnout
0  50  100  150  200  250  300  350
Animal welfare questionnaire survey results

In Europe and the United States, the research and application of animal welfare have been very common, but they are still at initial stage in China. Can animal welfare research conducted in China at present do you think fundamentally resolve the environmental problems, product quality and safety issues which we are facing?
A. Certainly  B. Basically  C. Maybe  D. Unlikely  E. Can not

2
If animal welfare research results are applied to livestock production, production costs may be appropriately increased and ultimately lead to higher prices of animal products.

Would you like to purchase high-quality animal products produced under the welfare conditions?
A. Will buy  B. Will buy if prices increase by less than 1 times  C. Will buy if prices increase by less than 50%  
D. Will buy if prices increase by less than 25%  E. Will buy if prices increase by less than 10%
Animal welfare questionnaire survey results

Requirements of welfare feeding are higher than pollution-free animal production requirements in many ways, compared to pollution-free animal products, what do you think of the marketing prospects of products produced under welfare condition?

A. The prospects are very good  
B. The prospects are good  
C. The prospects are general  
D. No prospect  
E. Unpredictable

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Options

- A
- B
- C
- D
- E

Turnout

0 50 100 150 200 250
Farm animal welfare and healthy feeding

Combining the characteristics of China's livestock production and foreign advanced technology and concept, "Health feeding" idea is putted forward by Chinese scientists

- Safe and healthy during the whole production process
- Safe and healthy animal products
- Food safety and social stability
- Scientific connotation coincides with the farm animal welfare
Healthy feeding in our country has become a consensus and put into action

- Animal welfare are emphasized in the livestock culture, trade, transport and other aspects of the “Animal Law”
- Health culture become one of the sixteen major projects in the “National long-term technology development program”
- National Eleventh Five-year Science and Technology Plan “livestock healthy feeding and new industrialization model R&D” has been fully implemented with 9 projects, including the evaluation of animal welfare, animal welfare culture procedures, etc
- Animal Welfare and Protection Branch of National Animal Husbandry and Veterinary Society was established in October 2010
National research projects involving animal welfare issues

<table>
<thead>
<tr>
<th>Project Type</th>
<th>Project Name</th>
<th>Chair unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>“Eleventh Five-Year” National science and technology Support Project</td>
<td>New industrial farming of livestock, Stress Management and Control Technology Research and Development</td>
<td>Institute of Animal Science, Chinese Academy of Agricultural Sciences</td>
</tr>
<tr>
<td>973 project topics</td>
<td>Environmental stress influence meat quality signaling transduction pathways</td>
<td>Institute of Animal Science, Chinese Academy of Agricultural Sciences</td>
</tr>
<tr>
<td>National High Technology Research and Development Program (863 Program) project</td>
<td>Key technology of growth regulating and environmental control under Intensive livestock farming</td>
<td>Institute of Animal Science, Chinese Academy of Agricultural Sciences</td>
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- **National research projects involving animal welfare issues**

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<td>Nutrition and environmental control technology for high quality pork, chicken production</td>
<td>Institute of Animal Science, Chinese Academy of Agricultural Sciences</td>
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<tr>
<td>Public service sectors (agriculture) research project of special funds</td>
<td>Key technology system research and demonstration of livestock welfare feeding</td>
<td>Nanjing Agricultural University (Participate)</td>
</tr>
<tr>
<td>Public service sectors (agriculture) research project of special funds</td>
<td>Livestock environmental stress response and control technology research during feeding and transportation</td>
<td>Huazhong agricultural university (Participate)</td>
</tr>
<tr>
<td>Serial</td>
<td>University</td>
<td>Institute</td>
</tr>
<tr>
<td>--------</td>
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<td>----------------------------------</td>
</tr>
<tr>
<td>1</td>
<td>China Agricultural University</td>
<td>Animal Science and Technology</td>
</tr>
<tr>
<td>2</td>
<td>Shanghai Jiao Tong University</td>
<td>Agricultural and Biological</td>
</tr>
<tr>
<td>3</td>
<td>Guangxi University</td>
<td>Animal Science and Technology</td>
</tr>
<tr>
<td>4</td>
<td>Northwest University of Politics</td>
<td>Law</td>
</tr>
<tr>
<td>5</td>
<td>Northwest University of Politics</td>
<td>Environmental Resources and</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Environmental Protection Act</td>
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</tbody>
</table>
### Animal protection related courses in university

<table>
<thead>
<tr>
<th>Serial</th>
<th>University</th>
<th>Institute</th>
<th>Course title</th>
<th>Characteristics</th>
</tr>
</thead>
<tbody>
<tr>
<td>6</td>
<td>Nanjing Agricultural University</td>
<td>Veterinary Medicine</td>
<td>Animal protection introduction</td>
<td>Public elective</td>
</tr>
<tr>
<td>7</td>
<td>Nanjing Agricultural University</td>
<td>Animal Science and Technology</td>
<td>Animal welfare</td>
<td>Public elective</td>
</tr>
<tr>
<td>8</td>
<td>Northeast Agricultural University</td>
<td>Animal Science and Technology</td>
<td>Animal welfare</td>
<td>Ph.D. course</td>
</tr>
<tr>
<td>9</td>
<td>Northeast Agricultural University</td>
<td>Animal Science and Technology</td>
<td>Seminar in animal welfare</td>
<td>Master course</td>
</tr>
<tr>
<td>10</td>
<td>Ningxia University</td>
<td>Life Science</td>
<td>Status of Endangered Animals in China</td>
<td>Public elective</td>
</tr>
</tbody>
</table>
● Animal welfare propaganda and promotion
● Set up China Farm Animal Welfare Website
● Current daily visits exceed 400
● A communicating platform for relevant institutes and colleges, providing husbandry companies free technical supports and solutions from animal welfare perspective
Animal welfare propaganda and promotion

- Editor in chief of “Welfare of Livestock & Poultry and Quality & Safety of Animal Products” (500,000 words), published as the first book introducing animal welfare and products quality
Animal welfare propaganda and promotion

Translated “Animal Welfare and Meat Production” (2nd Edition) (466,000 words)
Animal welfare propaganda and promotion

Translated “Long Distance Transport and Welfare of Farm Animals” (670,000 words)
Animal welfare propaganda and promotion

• Translated “Biology of Animal Stress——Basic Principles and Implications for Animal Welfare” and “Nutrition and feeding of organic pigs”
• Animal welfare propaganda and promotion
  
• Participated in revising OIE’s Terrestrial Animal Heath Code
• Attended several relevant meetings held by MoA and provided 14 revising comments on animal welfare provisions
• Actively promoting establishment of animal protection law
• Participated in discussion about “Animal Protection Law of the PRC” (draft suggested by experts)
• Attended “Promotion of China Animal Protection Law Forum” held by animal protection organizations for several times
● Animal welfare propaganda and promotion

● Promote China-style animal welfare concept and relevant latest research results

● Make use of any chances to introduce animal welfare theory and its application in livestock production to MoA technicians and relevant local governmental leaders
Animal welfare propaganda and promotion

Professor Gu attended an international symposium “Farm Animal welfare Sciences and Sustainable Agriculture Development” and gave speech on “Research Process of Pig Welfare-friendly Farming”
● Animal welfare propaganda and promotion

● Drafted farm animal welfare relevant standards

- Technical rules of pig welfare-friendly farming
- Technical rules of broiler chicken welfare-friendly farming
- Technical rules of assessment index system for pig welfare-friendly farming
- Technical rules of assessment index system for broiler chicken welfare-friendly farming
Animal welfare propaganda and promotion

The R & D team in animal production and welfare-friendly farming has published up to 200 papers, including 70 related to pig farming and animal welfare.
ACKNOWLEDGMENTS

FCRN and SAIN
WSPA
Chinese Academy of Agricultural Sciences

Your advice will be highly appreciated,
thanks!

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