

# Improving Farm Animal Welfare: Opportunities in China

提升农场动物福利：  
中国的机遇

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THE UNIVERSITY OF BRITISH COLUMBIA

Animal Welfare Program

Faculty of Land and Food Systems



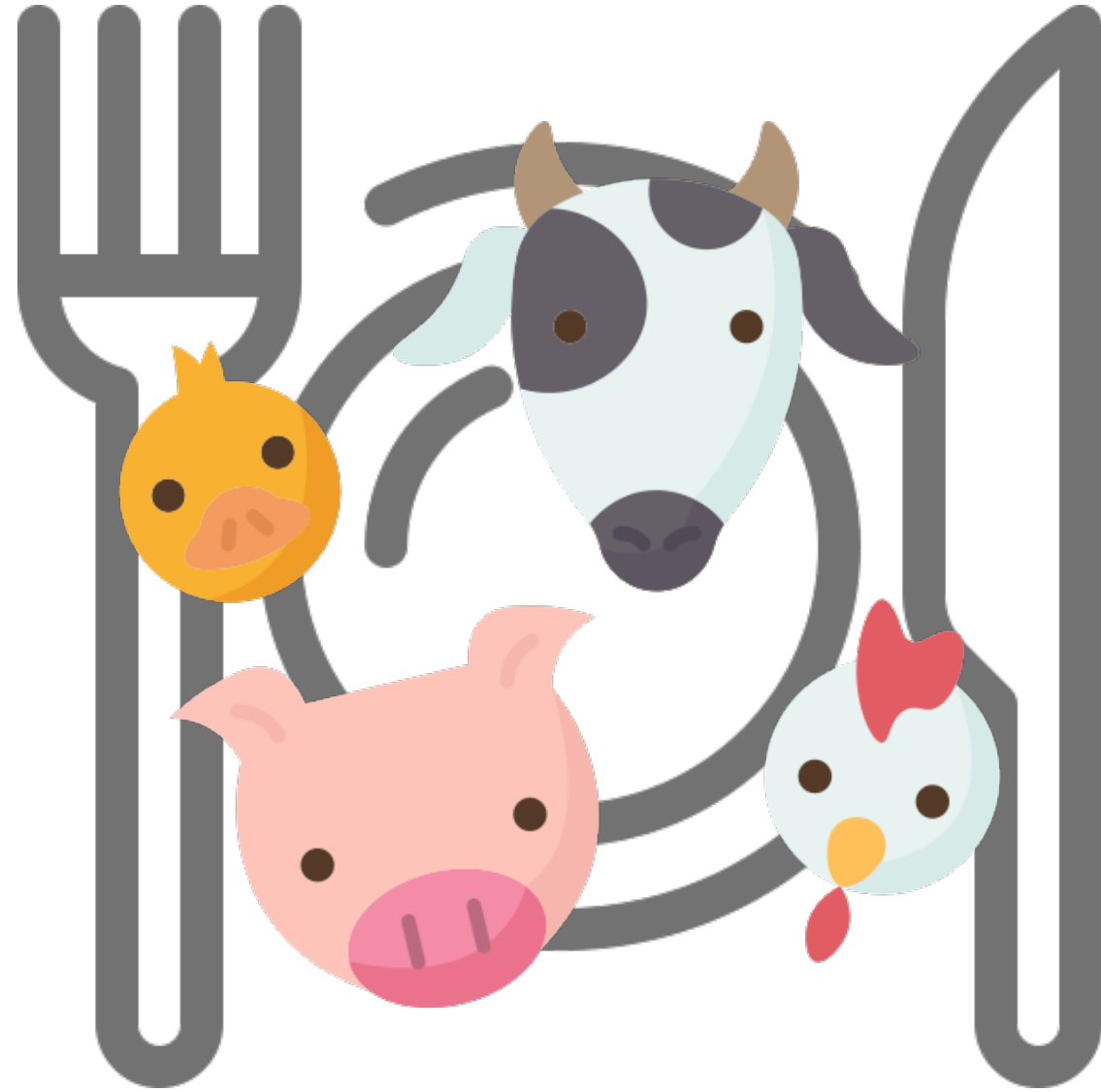
# Outline

- Introduction 个人简介
- Industrial agriculture through an animal welfare framework  
用动物福利框架分析工业农业
- “Opportunities in China” study “中国的机遇”研究分享
- Case-study: cage-free eggs 案例：非笼养鸡蛋

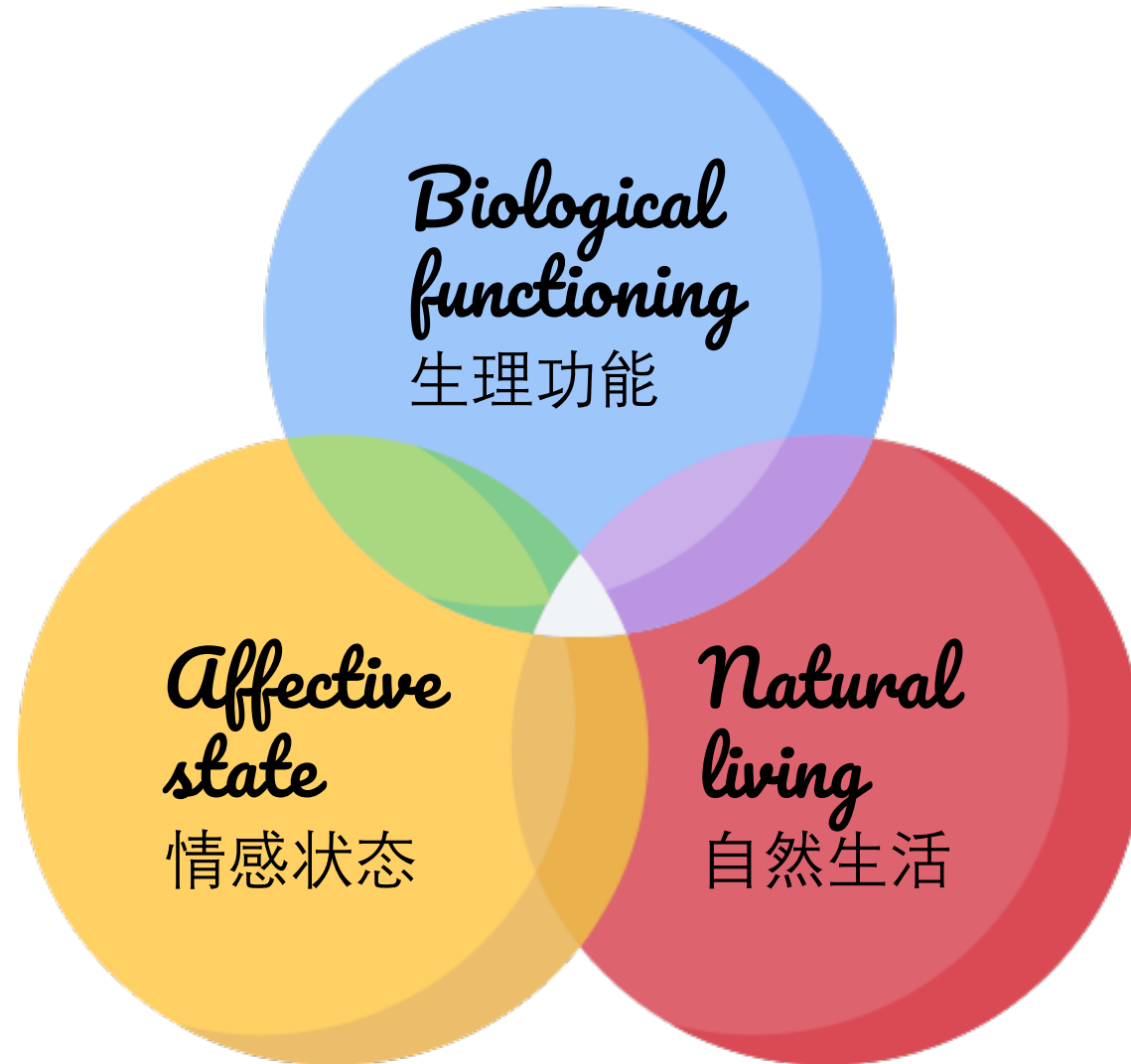
# Introduction 个人简介



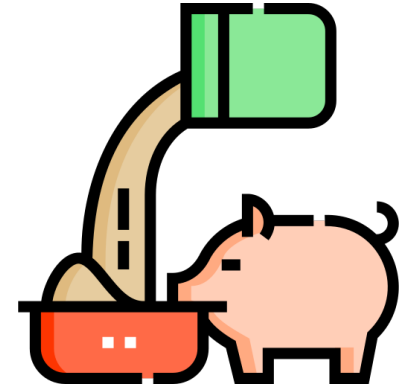
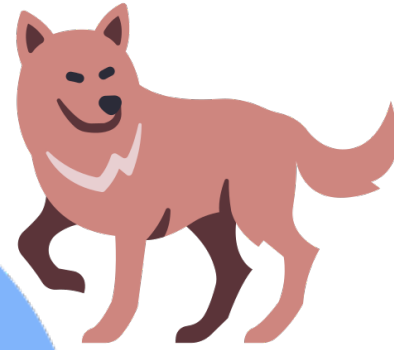
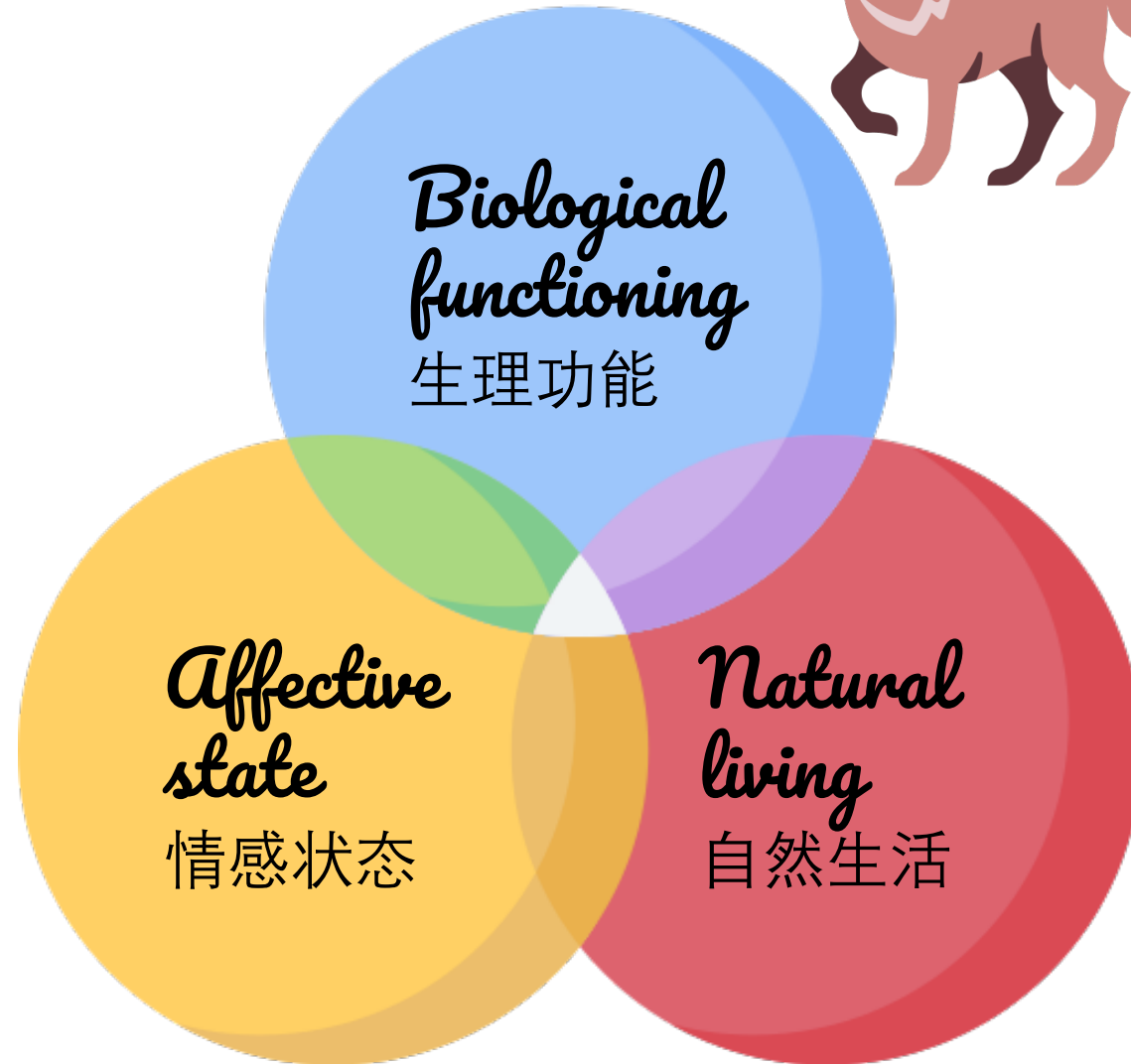
- Veterinary degree (London, UK)  
兽医学本科（伦敦，英国）
- Masters in Animal Welfare  
(Vancouver, Canada)  
动物福利硕士（温哥华，加拿大）



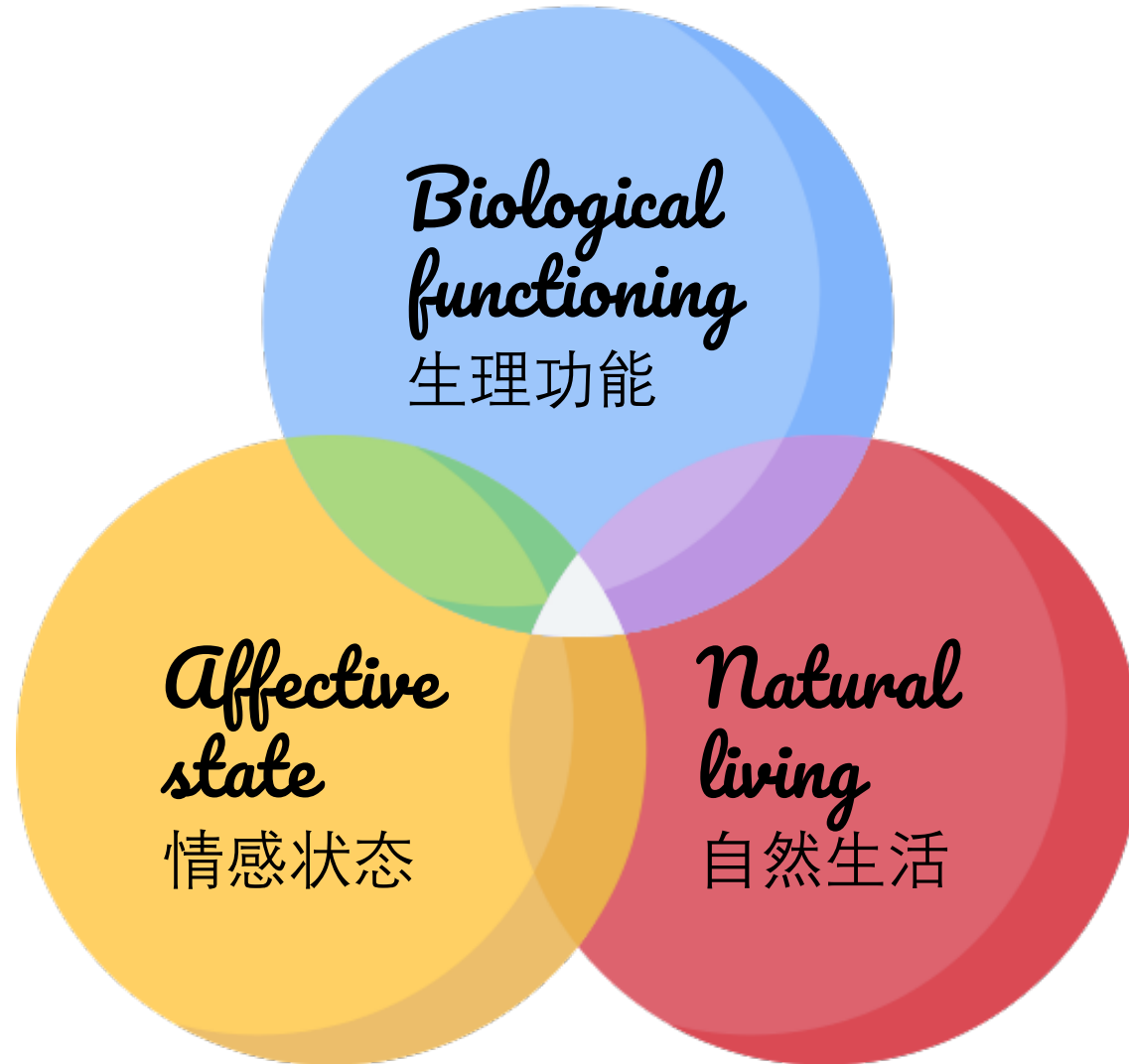
# Animal Welfare 动物福利



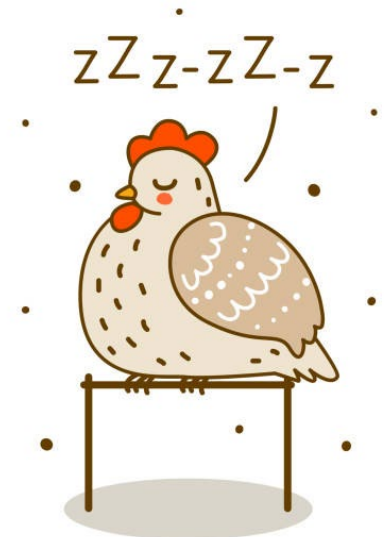
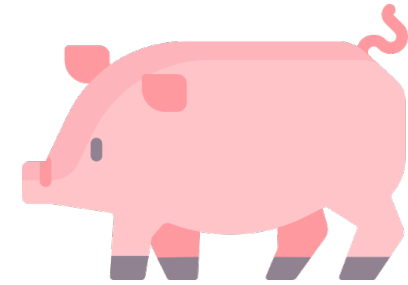
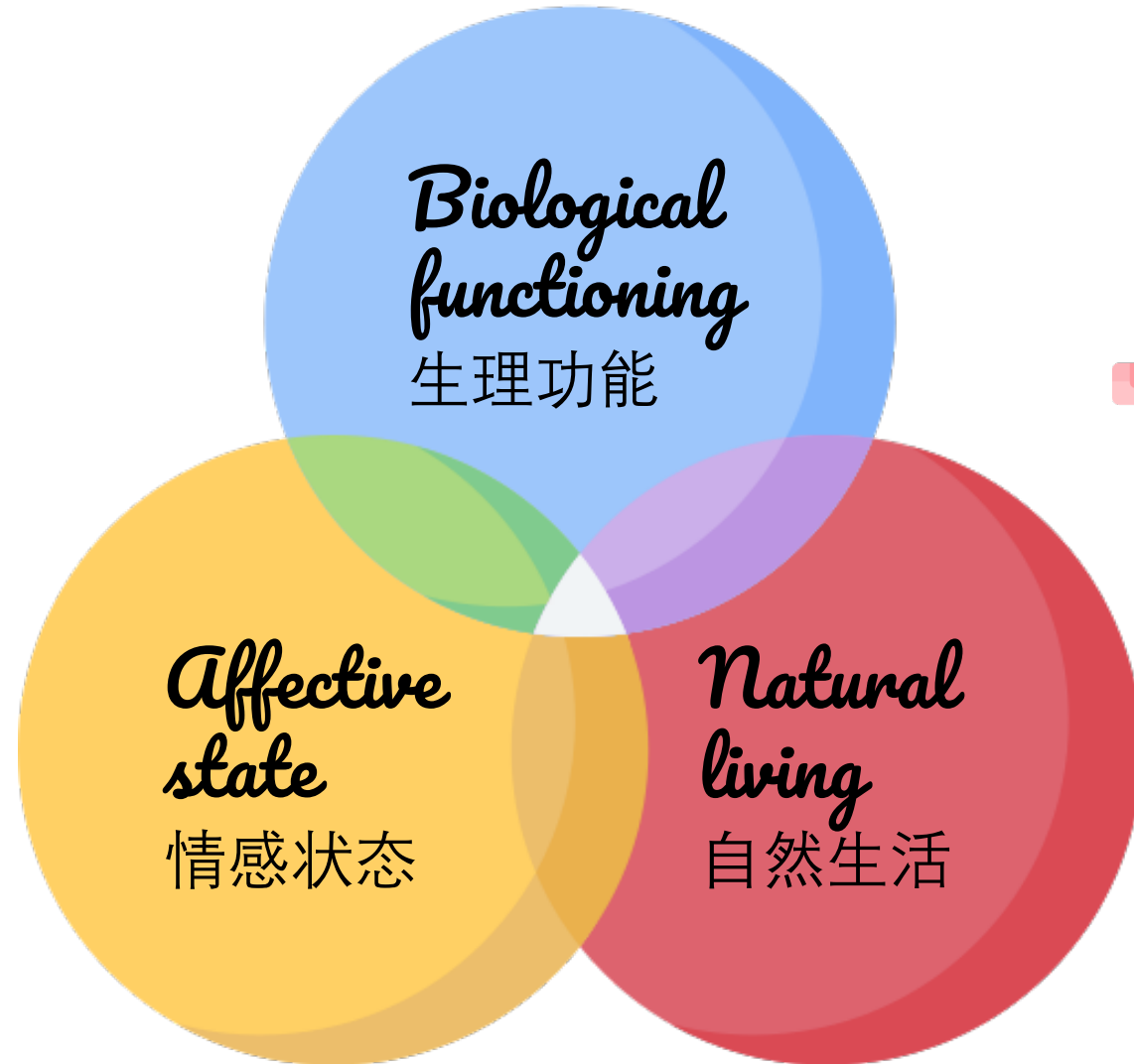
# Animal Welfare 动物福利



# Animal Welfare 动物福利



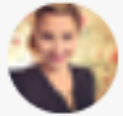
# Animal Welfare 动物福利





# Opportunities for the Progression of Farm Animal Welfare in China

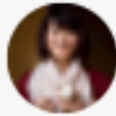
## 中国农场动物福利进展的机遇



Michelle Sinclair<sup>1,2\*</sup>,



Hui Pin Lee<sup>3</sup>,



Maria Chen<sup>3</sup>,



Xiaofei Li<sup>4</sup>,



Jiandui Mi<sup>5</sup>,



Siyu Chen<sup>6</sup> and



Jeremy N. Marchant<sup>7</sup>

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<sup>2</sup> School of Veterinary Sciences, University of Queensland, Brisbane, QLD, Australia

<sup>3</sup> Animal Welfare Program, University of British Columbia, Vancouver, BC, Canada

<sup>4</sup> Department of Animal Science, Henan Agricultural University, Zhengzhou, China

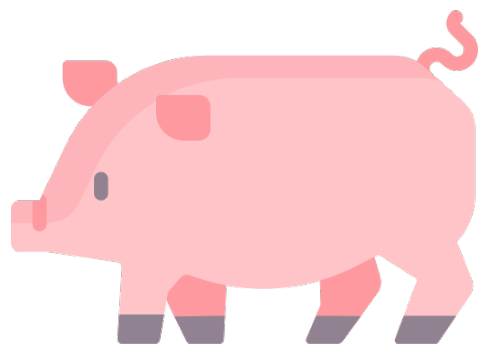
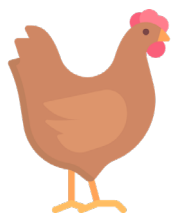
<sup>5</sup> College of Animal Science, South China Agricultural University, Guangzhou, China

<sup>6</sup> Department of Animal Sciences, Foshan University, Foshan, China

<sup>7</sup> Livestock Behavior Research Unit, United States Department of Agriculture–Agricultural Research Service, West Lafayette, IN, United States

# Opportunities in China 中国的机遇

- 100 senior stakeholders 100位利益相关者
- 15 - 20 minute questionnaire 15-20分钟的问卷调查



**Species sector\***

**No specific sector**

Aquaculture  
水产养殖

Layer hens  
蛋鸡

Broilers  
肉鸡

Pigs  
猪

Sheep  
羊

Dairy cattle  
奶牛

Beef cattle  
肉牛

Other  
其他

**6**

**27**

**33**

**38**

**20**

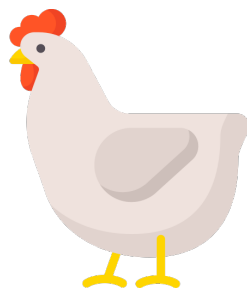
**25**

**20**

**9**

**19**

\*47% of leaders in sectors worked across more than one sector.



Role within the Chinese agricultural sector	Experience working in agricultural sector			Total
	<5years 5年以下	5-10 years 5-10年	Over 10 years 10年以上	
Livestock business leaders and managers 畜牧企业领导和管理者	4	8	8	20
Farm animal licensed veterinarian 农场动物职业兽医	6	1	2	9
Government/policymakers/lawyers 政府机构相关人员、政策制定者、律师	0	4	2	6
Agricultural strategists and intellectuals 畜牧业专业人员	23	15	14	52
Chinese animal welfare advocates 中国动物福利倡导者	5	4	4	13
<b>Total</b>	<b>38</b>	<b>32</b>	<b>30</b>	<b>100</b>

# Opportunities in China: Research questions

## 中国的机遇：研究问题

1. Where does “animal welfare” fit amongst the “most important” agricultural considerations for key Chinese stakeholders?

“动物福利”在“最重要的”农业考虑因素中的地位是什么？

2. What would encourage Chinese animal industries to pay attention to animal welfare?

什么会鼓励中国的动物产业关注动物福利？

3. What do key Chinese stakeholders see as the opportunities to progress animal welfare in China?

关键的中国利益相关者认为提升中国动物福利的机遇有哪一些？

4. What support is required to progress animal welfare, according to key Chinese stakeholders?

推进动物福利需要哪些支持？

# Research question 1 研究问题1

“Where does animal welfare fit amongst the most important agricultural considerations for key Chinese stakeholders?”

“动物福利”在“最重要的”农业考虑因素中的地位是什么？

# “Where does animal welfare fit amongst the most important agricultural considerations?”

“动物福利”在“最重要的”农业考虑因素中的地位是什么？

- Animal welfare 动物福利
- Environmental impact 环境影响
- Food safety 食品安全
- Food security 粮食保障
- Taste 味道
- Product quality 产品质量
- Profit margin 利润率

# “Where does animal welfare fit amongst the most important agricultural considerations?”

Rank	Considerations	Participants ( $n = 97$ ) ascribing rank of “importance” to corresponding “consideration” (attributed points toward sum)							Point sum
		1 <sup>st</sup> position (7 points)	2 <sup>nd</sup> position (6 points)	3 <sup>rd</sup> position (5 points)	4 <sup>th</sup> position (4 points)	5 <sup>th</sup> position (3 points)	6 <sup>th</sup> position (2 points)	7 <sup>th</sup> position (1 point)	
1	Food safety 食品安全	43 (301)	24 (144)	17 (85)	9 (36)	3 (9)	0 (0)	1 (1)	576
2	Food security 粮食保障	22 (154)	17 (102)	17 (85)	20 (80)	11 (33)	10 (20)	0 (0)	474
3	Profit margin 利润率	25 (175)	18 (108)	7 (35)	14 (56)	12 (36)	13 (26)	8 (8)	444
4	Product quality 产品质量	0 (0)	22 (132)	30 (150)	22 (88)	17 (51)	5 (10)	1 (1)	432
5	Environmental impact 环境影响	6 (42)	8 (48)	13 (65)	13 (52)	29 (87)	21 (42)	7 (7)	343
6	Animal welfare 动物福利	1 (7)	7 (42)	8 (40)	9 (36)	9 (27)	23 (46)	40 (40)	238
	Taste 味道	0 (0)	2 (12)	4 (20)	9 (36)	16 (48)	26 (52)	40 (40)	208



7 participants completed the activity in full. Hence, 97 datasets were included for analysis of ranking.



## Research question 2 研究问题2

“What would encourage Chinese animal industries to pay attention to animal welfare?”

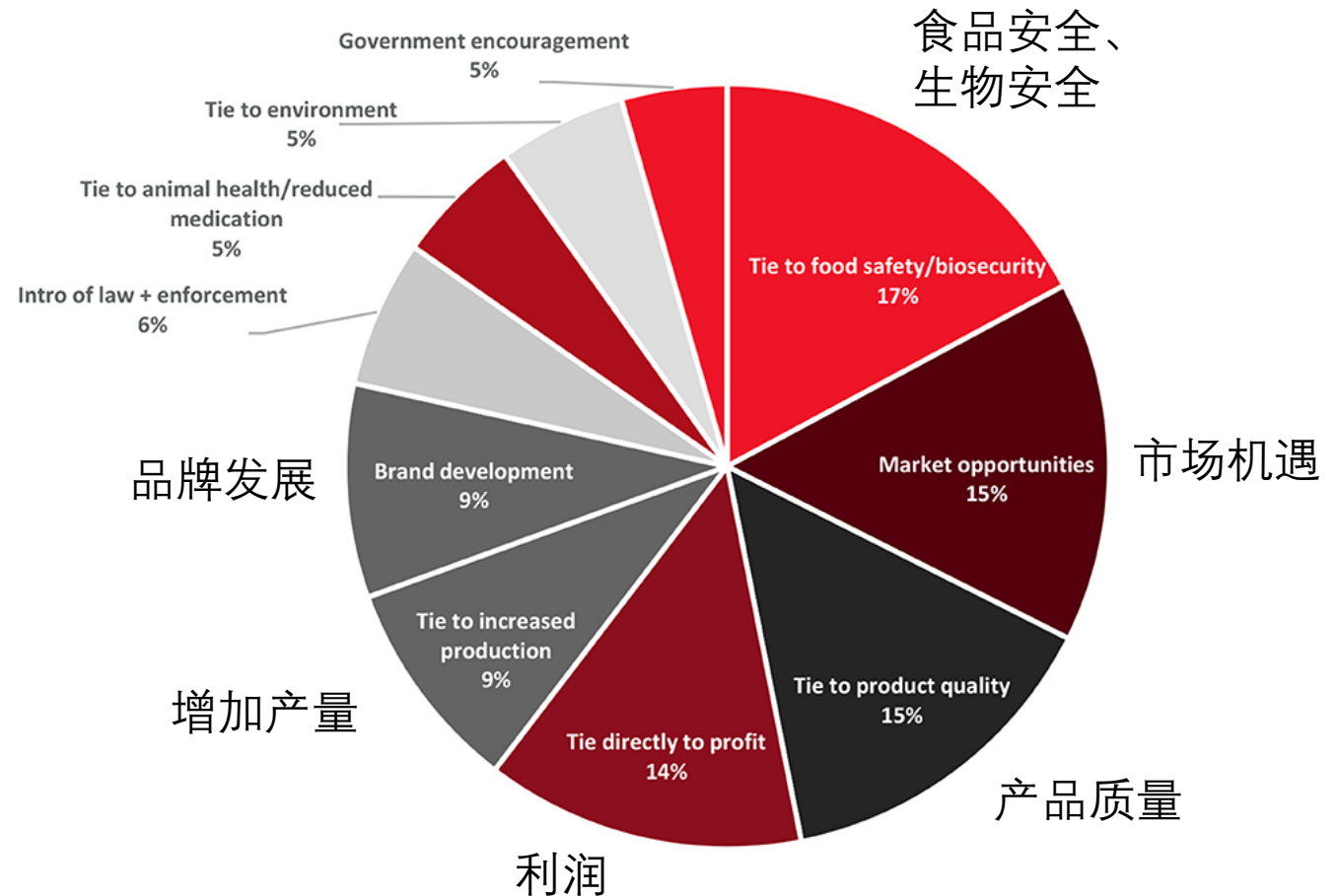
什么会鼓励中国的动物产业关注动物福利？

# “What would encourage animal industries to pay attention to animal welfare?”

什么会鼓励中国的动物产业关注动物福利？

59.2% of the participants suggested that animal welfare should be tied to other “**more compelling causes and benefits**” (10 strategies)

59.2%的参与者建议将动物福利与其他“更有吸引力的原因和好处”联系起来（10个策略）。



## Research question 3 研究问题3

“What do key Chinese stakeholders see as the opportunities to progress animal welfare in China?”  
关键的中国利益相关者认为提升中国动物福利的机遇  
有哪一些？

“What do key Chinese stakeholders see as the opportunities to progress animal welfare in China?”

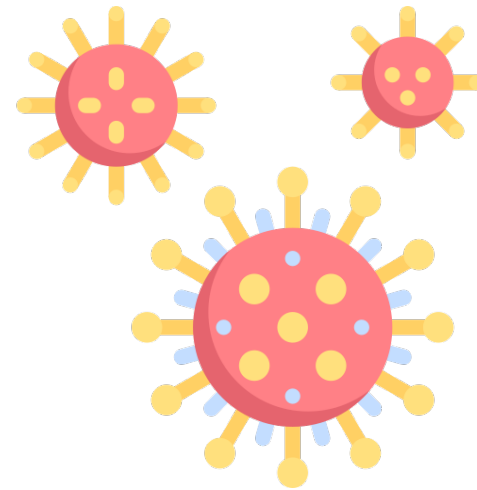
关键的中国利益相关者认为提升中国动物福利的机遇有哪一些？

- Food safety 食品安全
- Product quality 产品质量
- Profit 利润

# Food safety 食品安全

*“As the source of food, animal health and safety have a great impact on the physical health of people.*

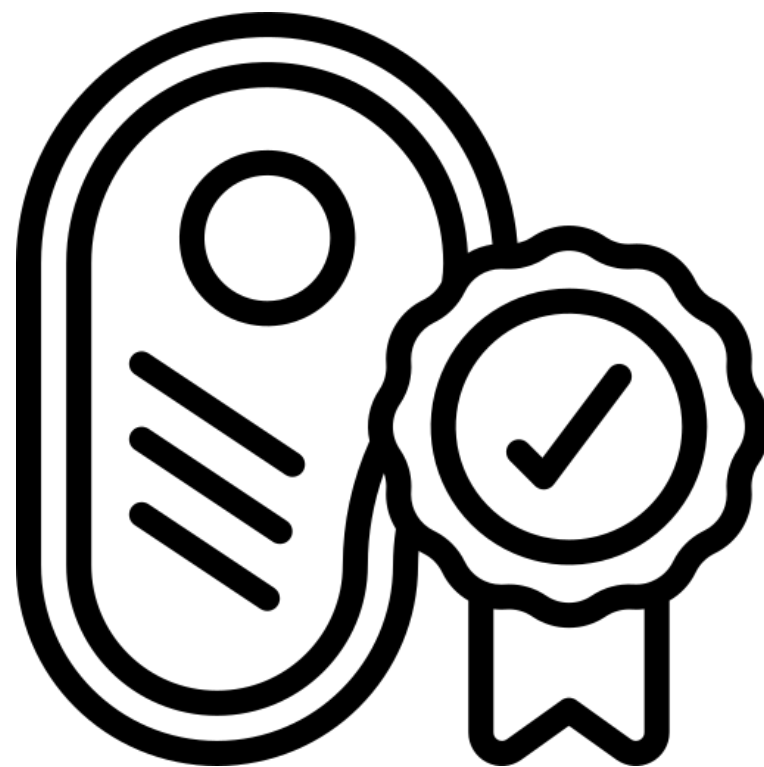
*作为食品的源头，动物健康安全对国民身体素质的影响巨大。”*



# Product quality 产品质量

*“Consumers have higher requirements for product quality, and animal welfare products can stand out in the industry.”*

消费者对产品品质的要求更高，动物福利产品可以在行业中脱颖而出。”



# Profit 利润



*“After animal welfare improvement, we'd like to see growth performance and profit margin increase, or remain unchanged*

*提高动物福利后，生长性能和利润率得到增加，或维持不变。”*

## Research question 4 研究问题4

“What support is required to progress animal welfare, according to key Chinese stakeholders?”

推进动物福利需要哪些支持？

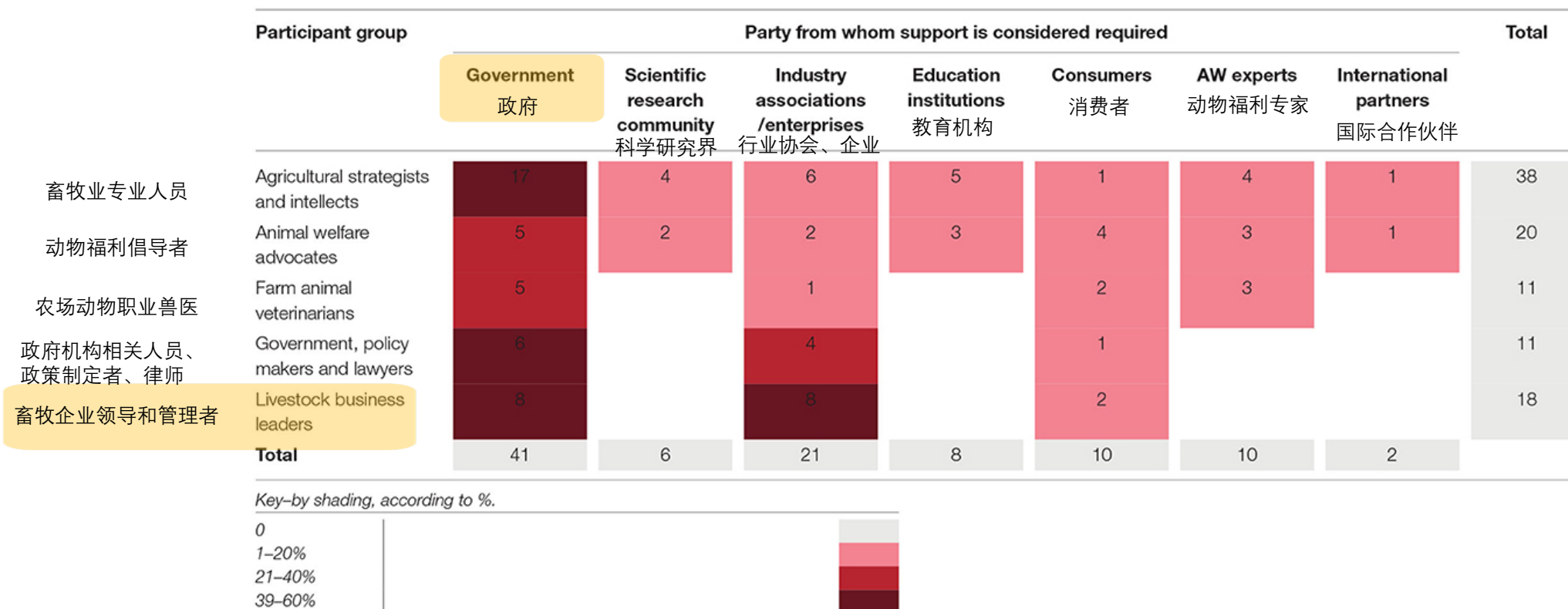


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# “What support is required to progress animal welfare?”

88% participants agreed the livestock industry in China needed more support to improve animal welfare

88%的参与者同意中国畜牧业需要更多支持来改善动物福利



Some leaders gave multiple answers while others declined to answer. In total, 98 responses were received from 51 leaders.

“What support is required to progress animal welfare?”

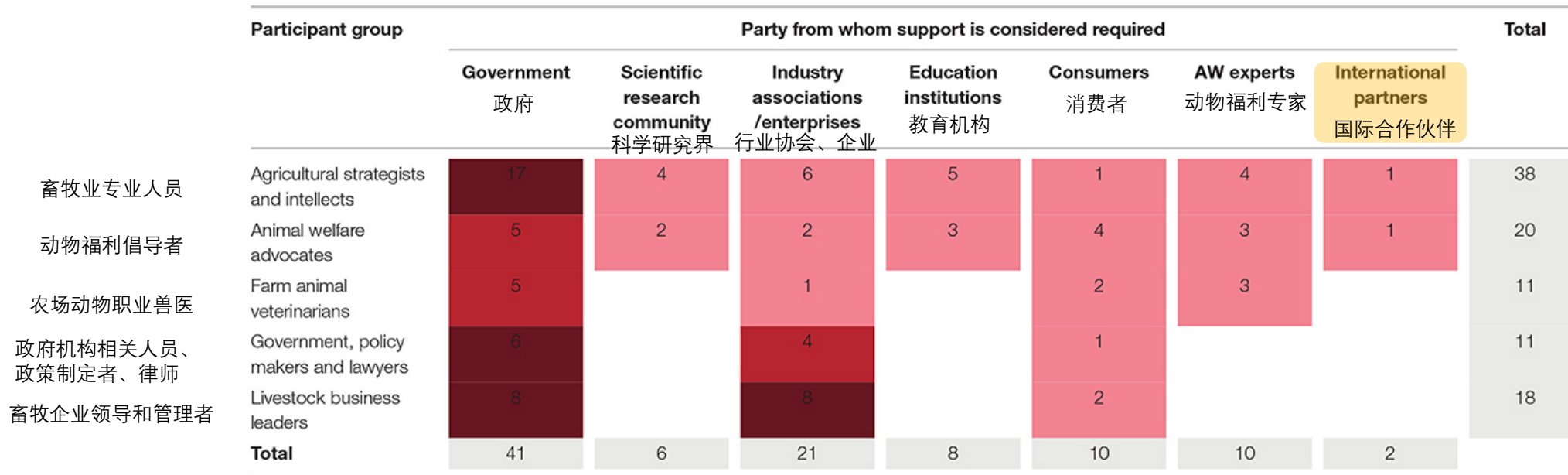
*“Large enterprises take the lead, and small and medium-sized enterprises... actively participate in the recognition and purchase of welfare products [will help] establish a sound and reliable reputation evaluation system.*

*大企业带头... 中小企业积极参与福利产品的认可与采购. 并建立完善可靠的评估信誉体。”*

# “What support is required to progress animal welfare?”

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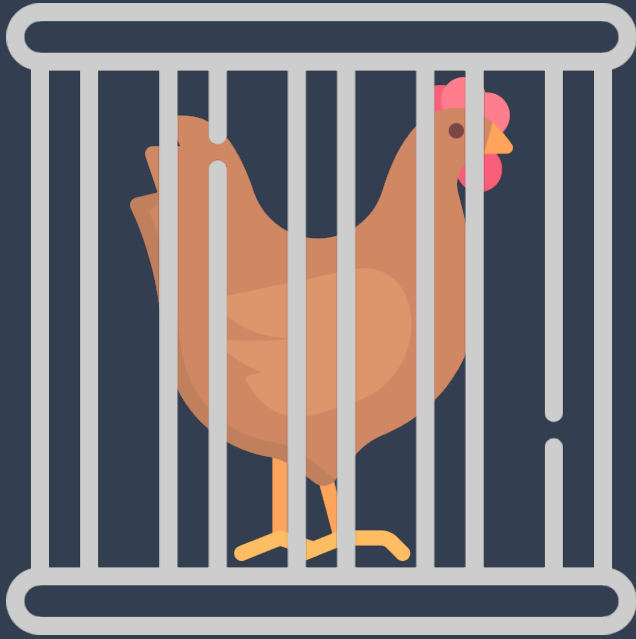


Key-by shading, according to %.



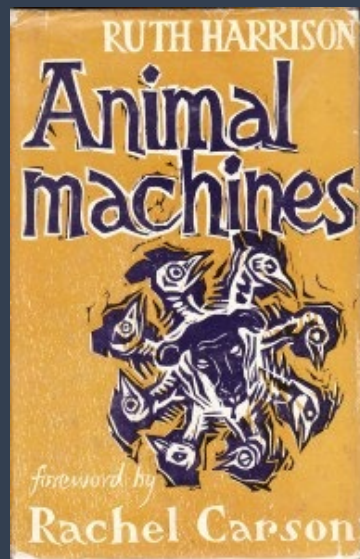
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# Case study: cage-free eggs 案例：非笼养鸡蛋



# Case study: cage-free eggs 案例：非笼养鸡蛋

- History of cages 笼养系统历史
  - U.S. 1920s 美国1920
  - Maximise space utilization & egg production efficiency 最大化空间利用和蛋产量效率
- Animal machines (1964)  
《动物机器》 (1964)



# Case study: cage-free eggs 案例：非笼养鸡蛋

- Animal advocacy groups pushing for legislative changes 动物倡导团体推动立法
- California: Proposition 2 and 12 加利福尼亚州提案2和12
  - Prop 2: ban the production of battery-cage eggs (2008)  
提案2：禁止生产电池笼鸡蛋
  - Prop 12: ban the sale of cage eggs (2018)  
提案2：禁止销售笼养鸡蛋
- Social cost of these policies 这些政策的社会成本
  - Annual reduction in California consumer surplus: \$400 million and \$850 million (Malone & Lusk, 2016) 加利福尼亚州消费者剩余每年减少4至8.5亿美元
  - Annual welfare loss to households: \$72 million (Oh & Vukina, 2021) 家庭每年的福利损失：7200万美元

# Case study: cage-free eggs 案例：非笼养鸡蛋



- 90% laying hens in China are kept in battery cages 中国有90%的蛋鸡被养在电池笼中
- 9% outdoor systems, 1% indoor systems 9%的蛋鸡在户外系统, 1%的蛋鸡在室内 (非笼) 系统

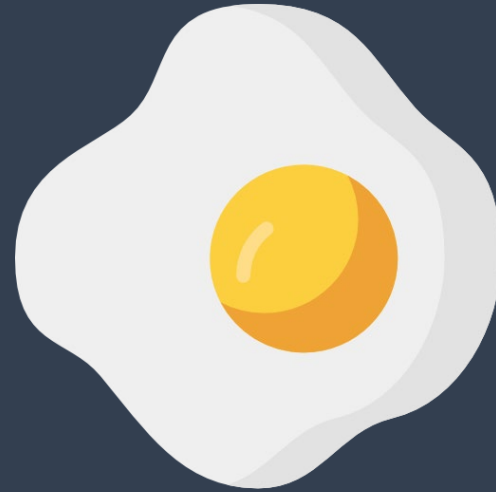


# Case study: cage-free eggs 案例：非笼养鸡蛋

- Food safety 食品安全
- Product quality 产品质量
- Profitability 利润

# Case study: cage-free eggs 案例：非笼养鸡蛋

- Food safety 食品安全
  - “Edible raw 可生食” eggs – disease control 疾病管控
  - “Antibiotic-free 无抗” – responsible use of antibiotics 合理使用抗生素
- Product quality
- Profitability



# Case study: cage-free eggs 案例：非笼养鸡蛋

- Food safety
- Product quality 产品质量
  - Quantity to quality 数量向质量转变
  - Vulnerable populations:  
pregnant women & young children  
特殊人群：孕妇和幼儿
  - Functional/specialty eggs  
功能/特殊蛋类
- Profitability



# Case study: cage-free eggs 案例：非笼养鸡蛋

- Food safety
- Product quality
- Profitability 利润
  - Productivity 生产力
  - Higher standards of food safety and quality 更高的食品安全和质量标准



# Conclusion 总结

- Animal welfare frameworks could be used to assess and improve animal welfare on industrial farms 动物福利框架可用于评估和改善工业农场的动物福利
- In China, farm animal welfare should be tied to more compelling causes and benefits, including food safety, product quality, and profit 在中国，农场动物福利应与更具吸引力的原因和利益相结合，包括食品安全、产品质量和利润
- The cage-free egg industry is a growing sector that offers insights on bridging animal welfare with other agricultural priorities 非笼养鸡蛋产业是一个不断发展的领域，并体现了如何将动物福利与其他农业目标相结合

Thank you! 谢谢你

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