

Ethical aspects of fat: exploring the effects of selective breeding

Kiri Degon on the dilemmas presented by selective breeding

Selective breeding is when animals are bred to possess a particular phenotype that results in a desired outcome, such as high-quality meat, a high yield of milk or eggs, or disease resistance.

Modern agriculture uses selective breeding to increase the short-term food productivity of animals. There are both benefits and disadvantages to this approach. Look at the lists below. Can you think of two other pros and two other cons of selective breeding?

Reasons for selective breeding

1. It is estimated that in the past 20 years, the advances made through selective breeding have generated £1.4 billion in profit for the UK dairy industry. These advances have also meant a reduction in the resources used and greenhouse gases emitted.
2. Breeding animals to grow larger and faster has made farming more efficient, enabling more people worldwide to have meat and meat products.
3. Breeding animals to be healthier – for example, more resistant to certain infections – can reduce the spread of disease.

Reasons against selective breeding

1. It reduces genetic diversity and puts animals at risk of reduced biological fitness.
2. There is little control over what mutations can occur through selective breeding. Intensive selection for particular traits can lead to other undesirable traits for the animals:
 - chickens that are intensively selected for rapid growth can develop problems with their hearts and lungs, and extreme growth can make their legs unable to support their weight

(continued)

ABOUT THIS RESOURCE

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- hens that have been selected to produce unnaturally large quantities of eggs each year can suffer from osteoporosis, bone fractures and reproductive disorders
- rapid growth in pigs to produce lean meat puts strain on their legs, causing circulation problems
- the high levels of milk production by dairy cows – up 23 per cent in 25 years – can cause problems with their udders and feet.

REFERENCES

- [Parliamentary Office of Science and Technology: Improving livestock](#)
- [National Latino Council on Alcohol and Tobacco Prevention: Pros and cons of selective breeding](#)
- [Health Research Funding: Pros and cons of selective breeding](#)
- [Humane Society of the US: Welfare of selectively bred hens](#)
- [RSPCA: Selective breeding](#)

QUESTIONS FOR DISCUSSION

- Should there be a limit on how far animals should be selectively bred?
- If so, who should decide what the limits should be?

FURTHER READING

- [Big Picture: Chick, chick, chick, chick, chicken](#)
- [Big Picture: Ethical aspects of fat - can people be shamed into losing weight?](#)
- [Big Picture: Ethical aspects of fat - who's to blame if a child is overweight?](#)

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