

GMOs and Campbell's Ethical Assessment Framework

What this lecture will do

- Apply Campbell's Ethics Assessment
 Process to understand the challenges
 and implications of sustainability issues in aquaculture
- Use Campbell's Assessment to discuss GMOs and highlight intrinsic and extrinsic ethical arguments concerning Aquabounty's "sustainable salmon"

Facilitating moral reasoning: Ethical accounting and GMO fish: Should the sale of Aquabounty salmon be banned in Alaska?

Campbell's Ethics Assessment Process

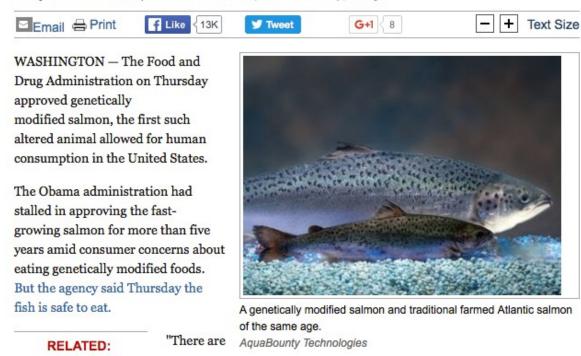
- Problem-seeing: What are the ethical issues? Who/what is impacted?
- Ethical detective work/fact-finding: are we using complete, current science (facts)?
- Moral imagination: what means/alternatives can achieve our goals?
- Ethics Jam: what values are embedded? Which have priority?
- Moral Justification: which options are ethically acceptable?
- Moral Testing: which moral tests are passed?

Applying the ethics assessment process to a policy case

Should GMO salmon be sold in Alaska?

FDA approves genetically modified salmon for human consumption

Mary Clare Jalonick | Associated Press | November 19, 2015

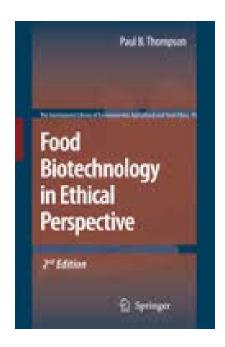


Problem seeing

- What are the ethical issues? What must be decided?
 - Is it wrong to sell GMOs fish in Alaska?
 - Do we have special obligations to naturally occurring local species?
 - How will this product impact the market, animals, fisheries industry, fish stocks, the environment, folkways?
 - Will it promote sustainability (people, planet, profit)
- Who are the stakeholders? What are their interests?
 - Experimental fish, other fish
 - Alaska Native folkways and Alaska cultural icons
 - Threat to diversity and natural resources on the coast of Alaska
 - Environmental impacts
 - Fish farmers and farm staff; Biotech companies and agribusinesses..

Central Concerns

- Unintended consequences and risks for agriculture and the environment
- Food safety and food policy
- Ethics of consent and unwanted social consequences
- Animal welfare and health
- Concerns about novel biotechnology in food (e.g., cloning)
- (Intellectual) property issues
- Religious concerns
- Trust, education and risk communication



Evaluating Ethical Concerns

- Intrinsic ethical arguments: these are arguments about the morality of genetic engineering itself
- Extrinsic ethical arguments: these are arguments about the morality of <u>applications</u> of genetic engineering or its <u>consequences</u>

The Philosophy of Food

David M. Kaplan (Editor) (2012)

Chapter 7. Ethics and Genetically Modified Food Gary Comstock: pp. 125-127

http://www.ucpress.edu/book.php?isbn=9780520269347

Chapter 7 is Comstock's chapter (Philosophy of Food by David Kaplan)

Comstock's 4 main categories (2012, p. 127-130)

- To engage in agricultural biotechnology is to:
- a. Play God
- b. Engage in world-altering interventions/technologies
- c. Illegitimately cross species boundaries
 - a. Appropriateness of inserting plant genes into fish
- d. Commodify life

Intrinsic arguments:

 Unnatural argument, violates species integrity, playing God, tampering with evolution

Extrinsic arguments:

- a. Certain applications of GE are permissible or impermissible according to duty-based constraints or considerations (e.g., legal or moral rights)
- Issues of rights (we may have obligations to increase the food supply)
- Property rights are violated
- Does a particular application relegate people to the status of mere means?

Extrinsic Arguments

- b.Genetic engineering is good or bad because of its likely consequences. Ways to evaluate consequences:
 - Avoid bad consequences
 - Maximize good consequences
 - Is there fair distribution of good and bad consequences (benefits and burdens) among all affected parties?

Ethical detective work/fact-finding

- What do we need to know?
 - How are the fish created, bred?
 - What are the welfare impacts on fish?
 - What is the evidence?
 - What is the impact on the environment?
 - What is the difference between GMO fish and non-GMO ones??
 - What are good sources of information?

What is genetic engineering?

- The manipulation of the DNA content of an organism to alter that characteristics of that organism (Ruse and Castle, Genetically Modified Foods, 2002)
- Animal Biotechnology and GMOs
 - Use of modern molecular biological techniques to produce animals to provide vital benefits for human beings
- These technologies raises important ethical and public policy question.

Moral imagination: What are the options?

- What are the objectives of decision-makers?
 - If ban market access (e.g., limit consumer choice healthy alternative)
 - If allow market access (e.g., competition with wild fisheries)
- What means/alternatives can achieve their goals?
 - Conduct referendum (include consumers and representatives from fishing industry)

Ethics jam

- What values are embedded? Which have moral priority?
 - Fairness (F)
 - Compassion (C)
 - Protecting others from harm (PH)
 - Promoting others' welfare (PW)
 - Respect for others' choices (RC)



Moral justification

Alternatives

- Which options are ethically acceptable?
 - a. Ban market access
 - b. Allow market access

Values

- Fairness (F)
- Compassion (C)
- Protecting others from harm (PH)
- Promoting others' welfare (PW)
- Respect for others' choices (RC)

 Which options are ethically acceptable?

- Which is ethically preferable?
 - Does one respect a broader range of values?
 - Are benefits and harms equally distributed?

Moral testing

- Harm
 - Does this alternative do the least harm?
- Practicality
 - Can the decision be implemented?
- Publicity
 - Would I want the decision published?
- Collegiality
 - Can I defend the decision to peers?
- *Reversibility
 - Would I accept the decision if I were the recipient?
- Theoretical
 - Is there an ethical theory that supports the decision?

Moral testing

Choices

- Allow
- Ban

Moral tests

- Harm, Practicality, Publicity, Collegiality,
 *Reversibility, Theoretical

Instructor notes

- On the ethics jam slide, challenge students to think about other values that may apply.
- Ask students to respond to moral justification the by teasing out both intrinsic and extrinsic concerns.
- Also discuss Importance of labeling (if concern is couched in terms of choice)



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