ETHICAL ISSUES IN AGRICULTURE

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Summary

The way we regulate food and agricultural systems is inherently of ethical concern. Thus, we are dealing with issues relevant to moral philosophy. Agricultural ethics is an emerging discipline which is principally concerned with topics involving public policy. Agriculture – ethical approaches contrasts the traditional concept of moral philosophy and applied ethics. When we try to face specific ethical challenges in complex societies and comprised systems for example agriculture, the traditional concept of moral theory fails to bring forward adequate solutions to the identified problem. Therefore, ethical designs are necessary which take the problem's specific characteristics and its given normative implications into consideration (applied ethics). Basic features of agriculture are compared to other types of industrial activity. Furthermore, the normative concept of sustainable agriculture is examined. Under the topic animal well-fare and livestock husbandry special attention is paid to aspects of ethics which are associated with livestock husbandry. The ongoing debate about bio-patenting in the context of agriculture and concentrates on possible consequences, such as social ethics, infringed rights of disadvantaged, as well as moral concepts such as autonomy, social justice and equality is outlined. Agricultural research is often initiated to resolve practical problems but it can raise ethical questions as well. Especially the productionist paradigm is critically investigated in Section 6 of this chapter. A closer look at transgenic maize shows that contextual thinking can change the perspective on ethical problems in this field.

1. Introduction

The production, transformation and distribution of food and other agricultural products are generally accepted as routine aspects of daily life around the world. Therefore, these

activities have rarely been addressed within the realm of ethics. However, food and agriculture, and the economic benefits that derive from participation in the food and agriculture system, are means to ends that are inherently ethical in nature. The mismatch between global food supplies and human nutritional needs, the impact of agribusiness on rural employment, the consequences of modern agricultural biotechnologies for human and animal welfare, and the effects of intensive production systems on the sustainability of the global environment are reasons why agriculture has become an issue of moral concern in the current debate.

Predominantly, pertinent publications and surveys find their initial point in agriculture's worldwide ground breaking changes, including rapid technological advances, the creation of new and expanded international markets, serious consequences and intimately connected ethical issues. What was accepted for ages appears in need of moral justification at present. Undoubtedly, agriculture plays a big role in the world context and will do so in the foreseeable future. The question is *how* we are going to direct the production, transformation and distribution of food and other agricultural goods. The way we organize the food and agriculture system, its means and consequences touch spheres that are inherently of ethical concern. Thus, we are dealing with an issue significantly relevant to moral philosophy.

This chapter aims to outline ethical problems in agriculture in current debate. It focuses on agriculture's specific features which highlight the necessity of contextual thinking in ethical deliberation. Therefore, ethical approaches and related methodological questions shall be raised first. Secondly, these considerations have to prove their adequacy and their potential to structure and frame the (presumably) most controversial discussed issues in the realm of agriculture: Sustainable Agriculture, Animal Well-fare and Livestock Husbandry, Intellectual Property – Patenting and Ethics and Ethical Issues in Agricultural Research.

2. Agriculture – Ethical Approaches

Basically, two different ethical approaches towards agriculture can be found in the relevant literature. Whereas one has the tendency to follow traditional moral theory and apply well reasoned norms to the field of agriculture, the other tries to focus on the subject first in order to frame the debate starting from the object of investigation. The first shall be called Ethics in Agriculture, the second Agricultural Ethics in the following.

Authors, who work on Ethics in Agriculture, tend to follow the traditional concept of moral theory. They justify and formulate moral principles on rational grounds and apply them to aspects of agriculture. Roughly spoken, abstract moral theory prevails and the object of investigation appears subordinated. The basic assumption seems to be that well founded norms need application only without adjusting the method of justification to the object of investigation. Although this approach succeeds in identifying morally relevant issues by applying abstract concepts like justice, sustainability, responsibility and so forth, it fails to bring forward adequate solutions to the identified problems. Its deficiencies are its abstract nature and the lack of feasibility which leads to counterintuitive solutions when we try to face specific ethical challenges in complex societies and comprised systems like agriculture.

The second approach takes society's increasing complexity and radical societal changes into account. It stresses that we are in need of theoretical designs which take the problem's specific characteristics and its given normative implications into consideration. Thus, this approach focuses on the object of investigation. It is the investigation's center and it frames and conceptualizes the philosophical work. It seems plausible that an ethical theory has to bring forth specific concepts, terms and tools for specific fields in order to work out adequate solutions. Beauchamp and Childress made this idea famous, which is usually named applied ethics. In their work on Principles of Biomedical Ethics they followed this idea with great success. Following this approach, agricultural ethics shall be understood as an emerging discipline which is principally concerned with ethical issues in agriculture relevant to public policy and it aims to devise a coherent and unified ethical framework, which is relevant to the formulation of public policy within the context of a social contract.

Since moral philosophy intends to solve practical questions which have their origin in everyday life, it is essential to refer to intuitive believes and well-established norms. They appear to be the linchpin of ethical debate and philosophical analysis. The detailed articulation, the assessment of the spectrum of problems, and consideration of the relevant principles and norms are indispensable, if one does not want to fall behind living practice and give trivial advice. Such a methodological proceeding advantageously influences the debate and the resolution itself in several respects: Firstly, this method promises feasible solutions for the lived practice. Secondly, there is a distinct chance that the answer's specificity meets what the context requires. Practical resolutions as the main aim will be opposed to abstractness and vagueness of philosophical concepts. In this regard, the Ethical Matrix, developed by Mepham (1996), gives a good example of this approach. "[...] the principal aim of the Matrix is to facilitate rational public policy decision-making by articulating the ethical dimensions of any issue in a way which is widely comprehensible." (Mepham 1996) The first step is to define affected parties of the problematic decision and the way the parties are affected (treated organism, producers, consumer, biota and so forth). The next integral part is to structure the field according to relevant and well-established norms and values (e.g. well-being, autonomy, equality, justice). This method helps to ground philosophical and frame ethical issues in a specific context.

3. Agriculture and Sustainable Agriculture

Following what just has been said, some basic features of agriculture, which distinguish it from other types of industrial activity, shall be stated:

- Universal requirement of food, agriculture's major product (food is vital to human survival);
- Agriculture's biological basis is assimilation. Accordingly, the use of extensive fertile land areas, fresh-water and essential nutrients is inevitable in agricultural production;
- The use of plants' and animals' biological growth and reproduction capacities;

- Its dependency on stable environment and ecosystem (food production is an organic process, which depends on the exploitation of living resources);
- Its foundational importance for national economies;
- Farming is a way of life that contributes to cultural norms to an extent disproportionate to the numbers actively engaged in agriculture: It safeguards skills which might prove of inestimable value in the event of military or environmental crises.

Unlike most other industrial activities, agriculture's impact permeates our physical, social and cultural environment and is likely to do so in the foreseeable future. Hence, a social contract with respect to agriculture is essential to every society. Ideally, this contract regulates the sufficient supply of safe, nutritious food at prices affordable to all. Additionally, the contract has to take into account the public's awareness with regard to the treatment of animals and the environment, the working conditions of farm workers and others who are involved in agricultural production and the national economy. Since agriculture is globally conceptualized and public policies are intervolving, policies and their consequences have to be thoroughly thought through not only at the national but also the international level. Agricultural ethics' role in this debate is not to determine such national and international policies but to serve as a means of assessing whether specific proposed policies are ethically acceptable. Therefore, several concepts and theories have been developed. Presumably, the most famous is sustainable agriculture which often gives direction to the public debates at present.

Sustainability and sustainable agriculture as a normative concept provides a reasonable starting point of ethical consideration (*see Sustainability of Agriculture*). It encompasses vague moral intuitions such as intergenerational justice, sensible use of resources and so forth. Its importance stems from the exploitative use of resources on which agriculture depends, combined with the belief that the life and well-being of most human beings depends on agricultural production. This has led to efforts to develop concepts of sustainable agriculture. Although the principle of sustainable agriculture is widely accepted on an abstract level, there is a wide range of mutually incompatible definitions of sustainable agriculture when considering the details.

Principally, a definition of sustainable agriculture can specify the purpose or goal of sustainability in the realm of agriculture. Furthermore, such a definition can specify the means to achieve sustainability in agriculture. The most unarguable goal of sustainable agriculture is to sustain the capacity to produce food, fiber, and other essential agricultural products which are required to satisfy essential needs and well-being of human populations for an indefinitely long time. The ethical challenge is to argue for an obligation to achieve sustainable agriculture and to identify problems if this obligation conflicts with other moral obligations and resolve them accordingly. The widely held moral principle do-not-harm can serve as a fundamental aspect in this discussion. In a moral sense this principle implies that the time at which a person exists is morally irrelevant, also the place at which a person exists does not matter. If we have a moral obligation we ought to follow it irrespective of person, time or place. On this account we have prima facie duty not only not to harm existing people but also not to threaten

people yet unborn. Such an obligation might imply devising technologies which conserve essential resources, such as topsoil, fresh water, soil nutrients; devising modes of social organization which facilitate deployment of those technologies; even regulating the size of human population, due to the fact that no form of agriculture will be able to produce enough food if the human population keeps multiplying at the rate it is.

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Bibliography

Baumgartner C. (2004). Bio-patenting in the Field of Agriculture as a Challenging Problem for Ethics. *The Phenomenon of Ethical Considerations Being Turned Against Themselves*, in: J. de Tavernier / S. Aerts (eds.), Science Ethics & Society, 5th Congress of the European Society for Agricultural and Food Ethics, Leuven 2004. [The paper's thesis is that the ordre public is not a sufficient protection against an ethically wrong use of the patent system in the area of life.]

Beauchamp T. L., Childress J. F. (1979). Principles of Biomedical Ethics, Oxford University Press 1979, 5th ed. 2001. [This book provides a prominent concept of Applied Ethics.]

Blatz Ch. V. (ed.) (1991). Ethics and Agriculture. An Anthology on Current Issues in World Context, University of Idaho Press, Moscow, Idaho, 1991. [This anthology collects a wide range of ethical issues relevant to agriculture.]

Busch R. J., Kunzmann P. (2004). Leben mit und von Tieren. *Ethisches Bewertungsmodell zur Tierhaltung in der Landwirtschaft*, München 2004. [An ethical framework for livestock husbandry.]

Convention on Biological Diversity, 5. June 1992.Convention on Biological Diversity, concluded at Rio de Janeiro on 5. June 1992. http://www.cbd.int/doc/legal/cbd-un-en.pdf (last consultation 4. December 2007)

Chrispeels M. J., Mandoli D. F. (2003). Agricultural Ethics, in: *Plant Physiology*, May 2003, Vol. 132, 4 – 9, American Society of Plant Biologists. [Helpful introduction to a series of essays on agricultural ethics]

Davidson D. (1988). Rational Animals, in: E. McLaughlin / B. P. McLaughlin (eds.), Actions and Events. *Perspectives on the Philosophy of Donald Davidson*, Oxford 1988, 473 – 480. [Basically, this contribution concludes that man has the capacity to reason only.]

Directive 98/44/EC of the European Parliament and of the Council of 6 July 1998 on the Legal Protection of Biotechnological Inventions, Official Journal of the European Communities L 213/13, July 1998. http://eur-lex.europa.eu/LexUriServ/site/en/oj/1998/l_213/l_21319980730en00130021.pdf (last consultation 4. December 2007)

FAO (2001). Ethical Issues in Food and Agriculture, Rome 2001. [This article summarizes the ethical aspects (values) of agriculture.]

FAO (2004). The State of Food and Agriculture 2003 – 04, Rome 2004. [Statistics on world's agriculture]

ISAAA (2004). Global Status of Commercialized Biotech/GM Crops, ISAAA 2004. [Statistics on GM Crops grown worldwide]

Lehman H. (1995). Rationality and Ethics in Agriculture, Moscow, Idaho 1995. [This book pinpoints problems of ethical theory in the realm of agriculture.]

Mepham B. (1995). Agricultural Ethics, in: R. Chadwick (ed.), Encyclopedia of Applied Ethics, 1998, Volume 1, 95 – 110. [This article characterizes the aim of agricultural ethics.]

Mepham B. (1996). Ethical Analysis of Food Biotechnologies: *An Evaluative Framework*, in: Mepham B. (ed.), Food Ethics, 1996, 101 - 129. [This chapter establishes an ethical framework in order to structure moral questions.]

Nagel T. (1974). What is it like to be a Bat?, in: The Philosophical Review, 1974, Volume 83, 435 – 450. [This article examines methodological problems concerning other minds.]

Pedigo L. P. (1996). Entomology & Pest Management, Pearson, US, New Jersey 2nd ed. 1996.[Introduction to applied entomology, insect pest management, and economic entomology]

Thacker J. R. M. (2002). An Introduction to Arthropod Pest Control, Cambridge University Press 2002.[Overview of current approaches to pest control]

Thompson P. B. (1998). Agricultural Ethics – Research, Teaching, and Public Policy, Iowa State University Press, Ames, 1998.[This book deals with the ethics of food production and related topics such agricultural research, teaching agricultural ethics and public policy.]

Thompson P. B. (1995). The Spirit of the Soil. *Agriculture and Environmental Ethics*, London 1995. [This book identifies an alternative to the productionist paradigm in agriculture.]

Biographical Sketch

Herwig Grimm, born in 1978, is scientific assistant at *TTN-Institute* (Interdisciplinary Institute of Technology, Theology and Natural Science in Munich). He completed an agricultural training (food technology) in Austria and has gained experience on farms in Great Britain, New Zealand and Austria for several years. Afterwards, he studied philosophy in Salzburg and Zurich (with a focus on moral philosophy and applied ethics in particular). He achieved his bachelor in philosophy in 2002 and his master's degree in 2004 (thesis: The Moral Standing of Animals – Approaching the Problem on the basis of Discourse Ethics). He is currently working on his doctoral thesis (Coherentism and its Potentials for Applied Ethics) and a project on Agricultural Ethics at *TTN-Institute* (A Framework to Tackle Ethical Questions in Livestock Husbandry).