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**Food Ethics: A new and necessary Academic Approach to Improve Food and Nutrition
Security**

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University of Hohenheim students, Faculty and staff are collecting inputs and analytic expertise from different sources -including non-university and partly also from non-scientific institutions- for the formulation of a teaching concept to create a new academic course module on the “Ethics of Food and Nutrition Security”. The present paper communicates the motivation, procedures and methods for the design and development of this module, its contents as well as the projected outputs and outlook of its implementation.

Why Ethics matter?

Although the number and proportion of hungry people in the world declines, the total number of 925 million people still estimated to be undernourished remains unacceptably high (FAO 2010). Malnutrition and hunger-related diseases cause 60 percent of the 10.9 million children under five dying in developing countries each year (UNICEF 2007). The commonly held view to achieving food security through boosting agricultural productivity, also by means of GMOs, has failed in the past and is now challenged as being simplified (IAASTD, 2008). This indicates a deeper structural problem that threatens the success of combating world hunger and malnutrition and working toward global food justice.

This reflects on the general policy and academic discourse on the world’s food systems, which has hitherto largely focused only on security and safety. It now emerges that another concept - food sovereignty with its ethical claims for responsibility, generational justice and precautionary action- should be a core principle in achieving food security (GOTTWALD et al 2010). This underlines the importance of a

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moral course of action in the context of contradictions or conflict in the choices we must make at all levels.

This is particularly relevant for agricultural scientists and researchers, which now work in a highly inter-disciplinary and trans-disciplinary environment. This implies a complex social, environmental and economic interface that surrounds the world's food systems. It also involves interaction between different cultures of scientific thinking and frequently requires interaction between researchers and rural communities. Such communication and participation processes can pose limitations and difficulties if the roles of agricultural scientists, practitioners, policy makers and the subjects and objects under research are not clearly defined and do not enjoy a common understanding by the involved stakeholders.

Ethics is a critical and growing component of participatory and human subject research, which is becoming more popular within the realms of agricultural sciences. Given the complexity of the global food system, it is not only necessary to create protocols and train students on how to ask questions and how to handle data. There is also a need for a basic ethical screening of field researchers doing this type of work. Moreover, there are nowadays increasing institutional requirements that suggest that education and review procedures must protect human subjects in research. Students want and need logical and rational tools to develop moral, ethical and value-based analytical skills to help shape and complement the choices they make when faced with contradictions, conflict and debate. The rationale of applied ethics can offer a tool in the consideration of participation rights and negotiating competing perspectives through and beyond conflict.

As a response, a student initiative -the *Food Revitalization & Eco-Gastronomic Society of Hohenheim* (FRESH)- in collaboration with supporting members of the university faculty conceived and put into practical view the idea for a new course module on the *Ethics of Food & Nutrition Security*. This module will not only provide knowledge on philosophical and ethical basics and concepts. It is hoped that it will also help students to develop skills of perceiving ethical questions and problems and will also entice independent, self-reflective and critical thinking. More importantly, it aims to enable and deepen an active discussion on the necessary values and the social responsibility of young agricultural scientists, as persons involved in the future design and management of the world's food systems.

Procedures and Methods in Module Design

This a rare example where university students in close collaboration with professors and external experts develop an academic module through an ongoing participatory process. This involved a conference, two symposia, a start-up workshop -involving university faculty, practitioners and students- and an online survey. The original idea for a new module came during a student conference in Hohenheim in November 2008 on "The IAASTD and the Transformation of Agricultural Research & Education". University professors, external experts from academia, NGOs and practice, and more than 100 students from Hohenheim and other universities of Germany, Italy, Austria and Switzerland participated in four thematic workshops. Following that, FRESH entered and won the second prize in a contest for ideas on how the University should invest part of the revenue coming from student fees.

With funds allocated to the crystallisation of scope, philosophy and content of the module in place, the implementation of what started as a visionary idea entered its early stage of development. Students invited experts from inside and outside the university to contribute in an open dialogue about food, agricultural knowledge and knowledge construction. The initiative met a vivid enthusiasm and the full support of everyone involved and it soon became evident what the course could offer and why, who it will involve as the experts framing the knowledge interacting with the students' intellect and the pedagogy of how this knowledge will be conveyed.

Module Structure and Contents

Starting in the winter semester 2010-2011, *Ethics of Food & Nutrition Security (4303-490)* is offered by the Faculty of Agricultural Sciences as an unblocked elective course module at the MSc level that is taught in English. It is also available to BSc students and PhD candidates, providing 6 ECTS credit points and also offering the option for dissertation research projects. High participation of international students is expected, perhaps mostly -but not necessarily exclusively- from agricultural sciences. The course is co-led and organized by FRESH and dedicates itself to outside- as well as inside-university pedagogical strategies. It is understood that it takes time and intensive class-work to formulate a holistic understanding and approach on topics relevant to the course title. Therefore emphasis is given to the experiential dimensions of learning, which suggests that the module will maintain a small class size, of 15 to 20 students.

PART I: Overview of Ethics: Introduction and presentation of key ethical concepts

- Major moral principles in Food Sovereignty, Food Security & Food Justice
- Roles of the main stakeholders in decision making and agrarian R&D
 - inputs from civil society, industry, academy, donors, consumers
- Focus on the responsibilities of scientists
 - Human Subject Research
 - Corporate Ethics & Social Responsibility
 - Sustainable Development & Foreign Aid
 - Consumer Ethics
 - Impacts of Ethics on Research
- Anthropocentric & Biocentric Ethics

PART II: Developing frameworks for understanding ethically problematic issues

- Land Use & Land Transformations
- Water Resource Rights
- Animal Ethics
- Bioethics, Gene Technology & Access to Genetic Resources

Table 1: Major components of the module “*Ethics of Food & Nutrition Security*” (4303-490) in the study plan of the University of Hohenheim. These issues address the students’ needs, derived through analysis of the results from a participatory start-up workshop and an online survey ($n=30$: 4 professors, 25 students, 1 NGO representative).

Two main parts can be identified in the structure of the course (Table 1). The first one features introductory sessions to the concepts and basic knowledge on ethics and moral philosophy, as well as their applications in food and nutrition security. The aim of this first series of classes is to help students to make use of analytical tools for discussing, asking and arguing ethically and try to connect their acquired knowledge on this field with the presentation of individual topics later in the course. In order to complete this basic theoretical background, the roles and responsibilities of scientists will be defined through concrete examples from research experience, case studies and open discussions. The second part will build on the first one and will focus on raising awareness and understanding of ethically problematic issues within agrarian and food science. This will integrate contributions from Hohenheim professors and external experts, which will showcase a more global, non-academic and practical perspective.

The module will be assessed through a combination of individual and group presentations, possibly essay papers *vis a vis* the topics addressed and group projects. This, for example, can happen through the study, deconstruction and discussion of articles that imply certain ethical

norms and values. Students will subsequently participate in the evaluation of whether they are able to identify underlying issues, reflect on them and lead discussions connecting their findings with common scientific understanding.

Projected Outputs and Outlook

This module is a new, necessary and rather comprehensive approach to improving interdisciplinary information exchange and knowledge transfer concerning philosophical and ethical concepts within the agrarian science and corresponding disciplines. It seeks to integrate the perspectives of non-scientific institutions, businesses and agricultural practitioners with these of academics. It is hoped that this will take the form of a long-term collaborative network involving academic and non-academic institutions of agrarian and food ethics. Such collaboration can have reciprocal benefits to all involved parts, especially when the option for joint planning and research is also considered. This module aims more at generating the right questions, rather than directly providing the answers. More scientific research on food ethics will be encouraged with a view to results that will induce a shift towards a responsible, just and proactive way of business and economic activity.

Almost two years of reflections, debating, negotiations but also successful facilitation of integrative dialogue platforms between university and non-university actors shed light on a next level of participation. Students do not only express the need for an additional module, they also highly contribute to determine its scope, methods and contents. This is an experiment that stems from both grounded experience and experimental vision. It merges established academic and practical pragmatism with the fresh ideas of a new generation of budding scientists, all driven by an enthusiasm for inducing positive change. This is a daring, challenging, but also risky venture, requires more resources in terms of money, time, and -maybe more significantly- commitment.

Much depends on how other students will respond to the call for more ethics in disciplines related to food and nutrition security and how the participation in this new class will develop. It remains to see whether this endeavour will inspire more engagement and initiative for deepening our understanding of the world's food systems that must feed an increasing human population, while maintaining its ecological functionality, cultural sensitivities and fundamental human values.

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