

See discussions, stats, and author profiles for this publication at: <https://www.researchgate.net/publication/286131193>

Food ethics for an active citizenry: AgroFood Democracy – An active learning tool

Chapter · May 2012

DOI: 10.3920/978-90-8686-753-0_79

CITATION

1

READS

49

16 authors, including:



Isabel L Calderón
University of Seville

26 PUBLICATIONS 610 CITATIONS

SEE PROFILE



Leire Escajedo San-Epifanio
University of the Basque Country

85 PUBLICATIONS 140 CITATIONS

SEE PROFILE



Mertxe de Renobales
University of the Basque Country

126 PUBLICATIONS 3,710 CITATIONS

SEE PROFILE



Alberto Lopez-Basaguren
University of the Basque Country

10 PUBLICATIONS 23 CITATIONS

SEE PROFILE

Food ethics for an active Citizenry.

Agrofood Democracy: an Active Learning Tool

L Escajedo¹, M de Renobales², A Lopez-Basaguren¹, M Gorrotxategi¹, M Martinez de Pancorbo³, A Rocandio⁴, K. Millar⁵, I Lopez-Calderon⁶, R Anthony⁷, R González-García⁸, S Tarodo⁹, PC Prieto⁹, A Jelencovic¹⁰, I Salces¹¹, A Bernardo¹², M Novo¹³.

¹Dept. of Constitutional Law², Dept. of Biochemistry and Molecular Biology, ³ Dept. of Zoology and Cell Biology, ⁴Nutrition and Bromatology, U. of the Basque Country (EHU), Spain; ⁵Center for Applied Bioethics, U. of Nottingham, UK; ⁶Dept. of Genetics, U. of Sevilla, Spain; ⁷Dept. of Philosophy, U. of Alaska Anchorage, USA; ⁸Institute of Vine and Wine Sciences (CSIC – La Rioja), Spain; ⁹Dept. of Public Law, U. of Leon, Spain; ¹⁰Dept. of Genetics, Physical Anthropology and Animal Physiology, EHU, Spain, and Dept. of Social Research, U. of Helsinki, Finland; ¹¹Department of Quality and Environment, Petronor, Spain; ¹²Dpet. Public Law, Univ. of Leon, Leon, Spain; ¹³Dep. Didactics of Science, U. Rovira I Virgili, Tarragona, Spain.

leire.escajedo@ehu.es

Abstract

Science and technology students understand well the scientific approaches behind GM crops and the arguments for using them in cultivation and food applications. Even the basics of the authorization processes are quite understandable for them. But, how can we introduce them to the controversial issues regarding the AgroFood Biotechnologies? Why and how far are the principles of organic farming not compatible with those of agro-biotechnology? Why and how far are the principles of the organic farming not compatible with those of agro-biotechnology? Why are some products perceived negatively by consumers? Why do some regions declare themselves as "GM-free" zones? Why do producers have to advertise in the label that a product contains something that, in turn, could be ethically or religiously objectionable for some people? Is GM food a new kind of pressure against developing countries? Who and how makes all the decisions regarding the Agro-biotech products in Europe? The aim of this presentation is to explain the background and approach of the *AgroFood Democracy Project*, the multidisciplinary team of which is made of 20 people from 10 Faculties in Spain, the United Kingdom and the USA.

The methodology and the tools developed will be described, as well as the reflections on the results obtained from their actual use in a class setting in several Faculties. The basis of the AgroFood Democracy Project is an Active Learning tool. Using a Problem Based Approach, students are given the opportunity to develop critical thinking skills regarding the ethical, political, social and legal aspects involved in the agro-food biotechnologies.

Keywords

Agrofood democracy, Role-Playing Games to Teach Food Ethics, Teaching Innovation, EHEA Adaptation

1.A Problem Based Learning approach to teach Food Ethics

The process of adapting Undergraduate and Post-Graduate Degree Programs to the European Higher Education Area (EHEA) has changed the concept of student, so that they are now active participants in the teaching-learning process. That implies changing the design of course programs, as well as teaching methodologies. In the case of food ethics applied to agro-biotechnological developments we have considered that a Problem Based Approach will be useful, because it will make students immerse themselves into the debate. In addition to the

factual information about various aspects of agro-biotechnology, we want them to understand the different opinions, the root (not only the leaves or secondary branches) of the conflict that opposes organic farming and defendants of genetically modified (GM) crops and the difficulty to find solutions that are equitable for all.

Science and technology students understand well the scientific approaches behind GM crops, the arguments for using them in cultivation and food applications, and even the basics of the authorization processes. But, how can we introduce them to the controversial issues regarding the AgroFood Biotechnologies? Why and how far are the principles of organic farming not compatible with those of agro-biotechnology? Why are some products perceived negatively by consumers? Why do some regions declare themselves as "GM-free" zones? Why do producers have to advertise in the label that a product contains something that, in turn, could be ethically or religiously objectionable for some people? Is GM food a new kind of pressure against developing countries? Who makes all the decisions regarding the Agro-biotech products in Europe? How are these decisions made? The aim of this presentation is to explain the background and approach of the *AgroFood Democracy Project*, the multidisciplinary team of which is made of 20 people from 10 Faculties in Spain, The United Kingdom and the USA.

The AgroFood Democracy Project has developed a Role-Playing game to be played in courses having 10 or more students. Each role will be developed by one or several students. Initially, it will be implemented in the following courses (8 playing groups in total), in the second semester of 2012: 1) Law and Ethics in the Biosciences (Undergraduate Degrees in Biology, Biotechnology, and Biochemistry); 2) Transgenic Foods (Master in Food Quality and Safety); 3) Transgenic Foods (Master in Nutrition and Health); 4) Social and Legal Aspects of Biotechnology (Undergraduate degree in Biotechnology).

The principles followed during the design and use of the tool are: coherence (all the participating elements help the learning process); construction (students are constructing their own learning process); motivation (keeping the interest and answering questions is the duty of the tutors). Students will be presented with the following situation: the European Commission has gathered a diverse group of stakeholders to express their opinion about the future of GM maize in Europe: consumers and farmers of widely different opinions, scientists, NGOs, biotechnology companies, etc. To answer the question, each role will have to examine the past and present of these crops, advantages and disadvantages, and present its reasoned proposal. After presenting all proposals, the group will analyse and debate them. Finally, each role will present a second proposal attempting to take into consideration the interests of the largest number possible of stakeholders, so that the "committee" may reach a consensus.

Once the role-playing game is finished, students will be given a thorough explanation of how this type of decisions are made in the EU, so that they may compare it with what they have just gone through. Afterwards, tutors will provide students with several questions to help them reflect on the complex relationship among agro-food biotechnologies, politics and society. Each individual student will submit a written personal appreciation.

Students will receive basic scientific, legal and ethical information prepared by the project team as objectively as possible, as well as the profile of each role. Students are free to seek other information pertaining to their role that they consider important. They are encouraged to examine it critically, making sure that the information they present is based on reliable data and not on unfounded opinions and to contact their tutors for any help they may need. In

addition, students may contact actual stakeholders if they wish to obtain more information. The autonomy of students to build their own rational opinion about all the issues implied in the debate is guaranteed.

The game will allow students to develop abilities and attitudes difficult to gain by other methodologies, such as critical thinking, listening to different opinions, taking into consideration various different interests particularly those of the least powerful and most vulnerable groups, and decision making strategies in plural contexts.

The following are some of the references used by the project team to design it. They are not intended to be for student use.

References

- Brummel, B.J./ Gunsalus, C. K./ Anderson, K.L. / Loui, M. C. (2010), *Development of Role-Play Scenarios for Teaching Responsible Conduct of Research*, University of Illinois, USA.
- Edmonston, J. E. / Dawson, V./ Schibeci, R. (2010), *Undergraduate Biotechnology Student's Views of Science Communication*, International Journal of Science Education, 32: 18.
- Gonzalez Geraldo, J. L/ Ferrandiz Vindel, I. M/ Bordallo Jaen, A. M. (2010), *New Times, New Ways of Teaching and Learning: Perception of the EHEA and Pedagogical Discussion*, American Journal of Business Education, vol. 3, nº13, 27.
- Herrero-Martin, R./ Perez García, J/ Solano, J. P. (2010), *EHEA: any obstacles to Converge?*, New Achievements in Technology, Education and Development, nº24, 390.
- Hornyak, M. J/ Page, D. (2003), *Experiential learning: Introducing Faculty and Staff to a University Leadership Development Program*, Journal on Developments in Business Simulation and Experiential Learning, vol. 30, 83.
- Jarmon, L/ Keating, E. (2008) *Nano Scenario: Role-Playing to appreciate the societal effects of nanotechnology*. Simulation & Gaming, vol, 39. Nº2, 282-310.
- McKeachie, W. J. / Svinicki, M. (2006), *McKeachie's Teaching Tips*, 12th Edition, Boston College Teaching Series.
- Nehring, W. M/ Lashley, F. (2009) *Nursing Simulation: a review of the Past 40 years*, Simulation & Gaming, vol. 40, nº 4, 528-552.
- Ponsa, P./ Amante, B./ Roman, J. A/ Oliver, S. (2009), *Higher Education Challenges: introduction of Active Methodologies in Engineering Curricula*, Int J. Engineering Education, vol 3, nº 4, 799-813.
- Schrier, K/ Gibson, D. *Ethics and Game Design. Teaching Values through Play*, Information Science Reference, Hershey-New York, 2010.

Acknowledgements

Agrofood Democracy Project, Funded by the Vice-rectorate for Quality and Teaching Innovation of the University of the Basque Country, in the category of "Projects with the aim of developing new learning methodologies", 2010-2012.

A. Jelenkovic Moreno is supported by a Post-doctoral grant from the the Basque Government (BFI-2011-83)-