

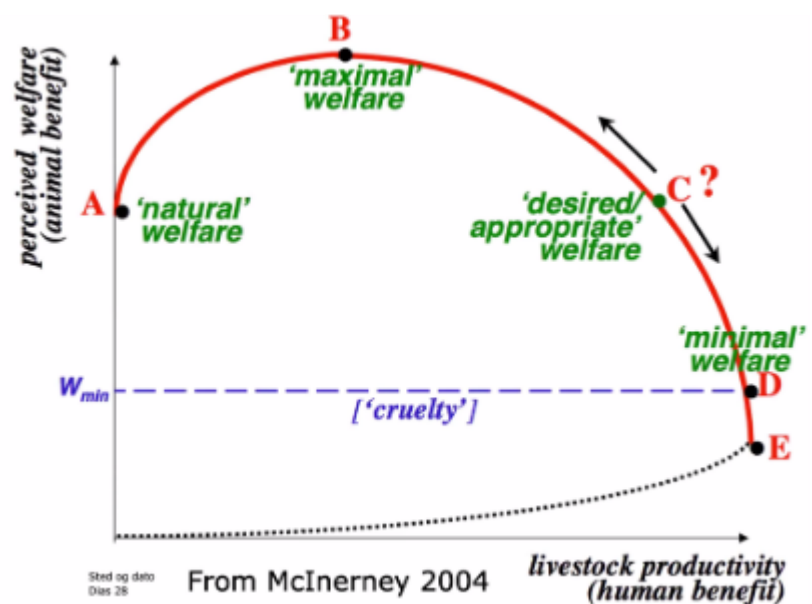
Session 1: Ethical considerations in breeding

In the first session, **Dr. Gesa Busch** led through interesting presentations and a lively subsequent discussion entitled Ethical Considerations in Breeding.

Guest speaker: Staying good while playing God - Ethics of farm animal breeding - Prof. Peter Sandøe

The first talk was given by **Prof. Sandøe**, Head of the Section for Bioethics in the Department of Food and Resource Economics at the University of Copenhagen. With his background in philosophy as well as animal and plant breeding, he was able to present the broad perspective of animal welfare concerns with his talk on "Staying good while playing God". Using examples from dairy cattle breeding, pig meat production, and broiler growth, he answered and discussed the questions "Where are we heading?", "What are the concerns in terms of animal welfare?", "What about integrity and other ethical concerns?", "What can be done?", and "Can we play God and stay good at the same time?".

He pointed to several examples of animal welfare concerns, such as the increasing mortality rate of piglets and the death of newborn piglets, or the enormous weight gains of broiler chickens and the resulting difficulty in walking. He discussed the concept of animal integrity using an example study of blind-born hens and showed that not only is their welfare not improved by blindness, but blind chickens exhibit abnormal behaviors due to the lack of social life and loneliness. Finally, he reported on the success story of dairy farming and mentioned possible market mechanisms to improve animal welfare such as an indirect market pressure from supermarket chains.



[Talk summarized by CiBreed Communications Team]

Guest speaker: Precaution and innovation as ethical principles in genome editing debates - Dr. Jan Grossarth

In the second talk, **Dr. Grossarth** from the LMU Munich gave insights about the BMBF funded research project "[Precaution and Innovation as Ethical Principles in Genome Editing \(GE\) Debates](#)" (2020-2023). Located at faculties for Theology and the LMU Institute TTN, the project aims to elaborate an incremental model for accompanying the public ethical Agri-GE debates. As Grossarth said, semantics beyond the "clash of interests" (e. g. between environmentalists and businesses) would be needed. The rising problem pressure of the "triple" global climate, biodiversity and nutrition crises should be considered as a changed contextual framework for ethical discussions.

Even a strict GE avoidance policy (as EU's) – in the name of "precaution principle" – would be linked with risks like trade isolation, global food price increases, changed global food production patterns and rising CO2 emissions consequently, Grossarth said. He considered an increasing agnosticism towards GE, also visible in the discourse: 2020ies media debates differed from the "first generation GE" discourses of the 2000s significantly. They were less political, more technical, led by scientists or science reporters.

Theologians were predestined to discuss the GE issue between the "biblical heuristics" of innovation and creativity and of fear (sceptical anthropology), Grossarth quoted LMU project head Prof. Markus Vogt. Munich TTN institute would be aiming interdisciplinary debates from the "heart of science" itself in tradition of Ernst Winacker, Tutz Rendtorff or Stephan Schleissing. Grossarth underlined, that the question of "innovativeness of GE" should of necessity stay a matter of contexts, linked to general interest purposes like climate adaption or responses to the extinction of species.

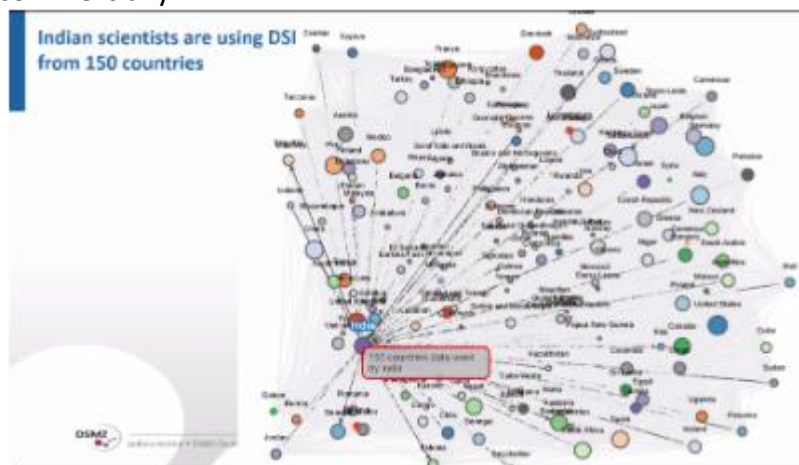
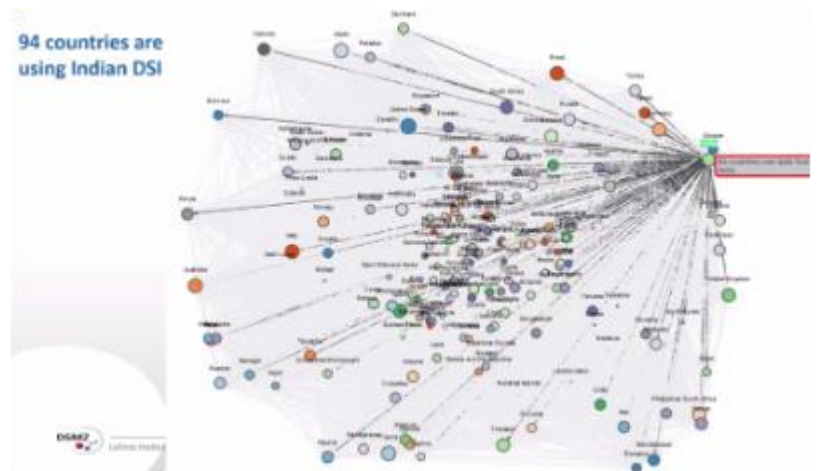
[Text based on the abstract provided by the speaker]

Guest speaker: Why is digital sequence information a political issue and what can scientists do about it? - Dr. Amber Hartman Scholz

Rounding up the first session, **Dr. Scholz**, the Scientific Deputy to the Director at Leibniz Institute DSMZ (German Collection of Microorganisms and Cell Cultures) in Braunschweig, provided insights into accessing and sharing digital sequence information (DSI).

She began by providing important background information on the 1992 Convention on Biological Diversity, as well as the 2010 Nagoya Protocol and Aichi Targets, which had the fundamental goal of conserving biological diversity and enabling the sustainable and equitable use of its components.

Due to the growing amount of sequence information and the increasing reuse of sequences, the Global South demanded compensation for sequences collected in their countries, which are used by highly developed countries both commercially and non-commercially.



Therefore, a new framework, the Global biodiversity Framework & Digital Sequence Information, will be adopted in 2022.

Amber Hartman Scholz presented one of her [studies](#) in which she and colleagues provided answers to the questions of who uses DSI and who

provides it, and which countries use more DSI than they provide. Finally, she talked about her idea on how to maintain open access and benefit sharing. Presenting their project called [WILDSI 1.0](#), she explained the [scientific perspectives on DSI](#), open source and how scientists could contribute to the policy discourse.

Related literature:

- Current [policy options](#) under consideration (compiled by the CBD Secretariat)
- The Oct. 2020 OA policy [options from the WILDSI project](#)
- An [open letter](#) signed by 400+ EU scientists on open DSI (sent to the EU Com and CBD Sec)
- Alliance of Science organizations [press release](#)
- [Leopoldina](#) position paper

- [Scholz et al.](#) Myth-busting the provider-user relationship for digital sequence information. [BioRxiv pre-print](#). This will be published in November in GigaScience.
- [#openDSI](#) on Twitter

[Talk summarized by CiBreed Communications Team]