



A film review by Stephan Behrendt

Year: 2017

Producer: Bertram Verhaag

Production: DENKmal-Film Verhaag GmbH

Length: 95 min

Bertram Verhaag's latest documentary, *Code of Survival - or the End of Genetic Engineering*, is one of a series of significant international documentaries addressing the highly controversial debate about the risks and side effects of green genetic engineering. Verhaag already produced nine films in the past that were critical of genetic engineering. His tenth achievement presents examples of US agricultural systems after long-term use of genetically modified organisms (GMOs) and the associated pesticides on farm fields. He contrasts these GMO systems with three examples of long-time organic agriculture production systems around the world.

As new breeding technologies (NBTs) emerge, including "hidden" genetic engineering (like CRISPR/Cas9, TALEN, ZFN, etc.), our sensitive ecological and food systems worldwide are extremely endangered. In addition, there are doubts regarding the general safety of these crops. Christoph Then from the Institute for Independent Impact Assessment of Biotechnology points out, "We do not have the experience to

declare these products safe. If these new techniques are not regulated, there will be no transparency, no choice for farmers and consumers as well as no possibility of safeguarding human health or protecting the environment [...]" (Testbio-tech, 2014).

In the beginning of the documentary, a contemporary US farmer refers to the transformation from traditional to modern agriculture. His main concerns are the change of generations and the global food supply. He has no reservations concerning new technologies, including GMOs. Even with all kinds of problems caused by extended use of genetically modified crops and associated pesticides, the farmer believes in the industrial approach. A quite similar perspective is shared by another US farmer shown later in this documentary. He has grown soy beans for a long time. Despite close contact with agribusiness and massive usage of the whole range of herbicides, he cannot control pigweed on his fields anymore. Occasionally, he must accept total losses. Nonetheless, there is no rethinking of the whole scheme.



The popular British researcher and pioneer of organic farming, Albert Howard, once said, "The health of soil, plant, animal and man is one and indivisible" (IFOAM, 2017). In a very impressive way, Code of Survival demonstrates the principles of organic farming (which include health, ecology, fairness, and care, according to the International Federation of Organic Agriculture Movements) and how it works around the world. In addition, the documentary shows an exemplary case in which there is successful revegetation of an overly harsh and hostile desert environment.

The documentary is comprised of more than a mere concatenation of generally known facts and accusatory words against GMOs. Successful, long-term alternatives to GMO production across three different countries are impressively visualised. The documentary uncovers the shortcomings of the destructive, one-way strategy of global agribusiness and contrasts it with diverse and sophisticated as well as location-adapted organic ways of farming. The advantages of sustainable organic farming are well-demonstrated and the clear superiority of organic farming in comparison with

In between the interviews, one can see, on the one hand, scientific facts as well as critical statements aplenty. On the other hand, some foolish, GMO-friendly Youtube-clips are also embedded. A downplaying of the irreversible consequences of GMO- and pesticide-driven agricultural practices is displayed. This creates a slightly surreal atmosphere, which seems deeply disturbing and leaves behind a peculiar impression. These additions were perhaps superfluous for a serious documentary.

In contrast to modern US agriculture, the biodynamic SEKEM farm in Egypt is introduced as a first example of an environmentally-friendly agroecosystem.

Composting and humifying organic material enable symbiosis between living organisms and provide the basis for organic agriculture. Moreover, the principles of biodynamic farming are applied. The steadily growing SEKEM-community follows a holistic and sustainable approach.

The second example is the Indian AMBOOTIA tea plantation in the Darjeeling highlands, which is dealing with change to the local environment after converting from conventional to organic or, more precisely, biodynamic farming practices. Furthermore, the extensive organic tea production and the downstream processing are described.

The third example is an organic farm in Bavaria, Germany. Aunkofer's Biolandhof converted in the early 1980's from conventional to organic farming. Thus, the farm became one of the first organic farms in Germany. The farm combines sustainable pig farming with meaningful local waste processing. Usually, there is food-feed competition between livestock and humans. This issue can be avoided through utilization of organic waste and locally available grassland resources as staple feed in pig rearing. Moreover, animal welfare is a focal point on that farm.

"Nature is no playground – Nature is the source of life!"

farming dictated by multinational agribusiness becomes apparent.

Common welfare, including access to fresh water, healthy food, clean air, fertile soil and intact ecosystems,

is essential for surviving on our unique planet. If we fail to recognise our past mistakes and if we do not switch our production behaviours and corresponding lifestyles towards an organic and sustainable approach, we cannot fulfil our obligation to provide care and safety to our descendants. We must undertake this responsibility for future generations.



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culture with a focus on tropical and subtropical ecosystems under arid conditions.

References

Testbiotech. (2014). Plants derived from genome editing technologies have to be considered as genetically engineered. Retrieved Aug 4, 2017 from http://www.testbiotech.org/sites/default/files/Testbiotech_PR_legal%20dossier.pdf

IFOAM. (2017). Sir Albert Howard. Retrieved Aug 4, 2017 from <http://www.ifoam.bio/en/sir-albert-howard>

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