Glenn Davis Stone History Interview

Video Summary

The interviewee discusses how they became interested in studying genetic engineering and its impact on agriculture, and how they went about doing their research in India. They found that the farmers lacked knowledge about the technology and the crops, and that there was a lot of misinformation and FUD (fear, uncertainty, and doubt) surrounding the technology.

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00:11:29 - Feedback From Smallholders

Smallholder farmers in India largely adopted genetically engineered cotton, but did so for different reasons than large farmers. There is a lack of research on how smallholders view genetically engineered crops, and this lack of research leads to a lack of voices in debates about genetically engineered crops.

Cultural anthropology; Ethnography; Science, technology, engineering, and mathematics; Interdisciplinarity; Anthropology; National Science Foundation

00:14:17 - Biotechnologist: Looking at the Future

I applied for a grant to do an intensive internship in a biotech lab so that I could learn about crops that might benefit small holders, and I worked with mentors who encouraged me to think about the ways that I could interact with other scholars and with Monsanto.

Genetically modified crops; Genetically modified food; Canola oil

00:16:22 - GMO Crops

The researcher visited India, Nigeria, and South Africa to learn about GM crops, but ended up focusing on India because of the large number of farmers and the potential demand for Bt cotton.

Farmers' suicides in India; Agriculture in India; Genetically modified crops; Cotton; Fair trade

00:19:34 - Embedded Anthropologist

The anthropologist spent a lot of time in Warangal district, learning Telugu, and working with translators. He found that language was a barrier for him, but that it was important to learn as much vocabulary as possible in order to work with translators effectively.

Cultural anthropology; Multilingualism; Second-language acquisition; Cultural relativism; Ethnography

00:23:21 - Using Translators

The translator's role is important in order to get an accurate understanding of what the farmer wants and does not want.

Cotton; Farmers' suicides in India; Agriculture in India; Sustainable agriculture; Genetically modified crops; Andhra Pradesh

2. New Technologies: Industry Challenges

00:27:08 - Research Scientists: Knowledge

The Political Ecology of Information Among Cotton Farmers was a proposal to the National Science Foundation that sought to fund research on how farmers in India figure out what works and what doesn't, and how new technologies can impact that process.

Cotton; Genetically modified crops; Farmers' suicides in India; Sustainable agriculture; Organic farming

00:30:35 - Changing Viewpoints

Farmers in Andhra Pradesh, India, did not initially understand what Bt cotton was or what it did, but they soon began to adopt it due to the increased yields and profits it provided.

Farmers' suicides in India; Genetically modified crops; Canola oil; Cotton; Genetically modified food; Monsanto; Karnataka

00:35:00 - Andhra Pradesh Cotton Industry

Industry has a long history of contributing to agricultural technology, often through government funding. This includes research on fertilizer in the 1840s, which led to the development of industrial agriculture.

Subsidy; Agriculture; Fertilizer; Farmers' suicides in India; Science and technology in the Philippines

00:38:50 - The Future of Biotech

Industry funding of academic research has been a long-term trend that has greatly enhanced in the era of biotech. This industry funding has often resulted in the privatization of academic research. Farmers generally do not care about this trend, and the research endeavors funded by industry are not speaking for them.

Startup company; Recombinant DNA; Biotechnology; Genetic engineering; Climate change denial

00:41:57 - Do They Care About GMO Crops

The patent system creates a disincentive for companies to develop crops that could be useful in the developing world, because those crops would have to be licensed from the companies that hold the relevant patents.

Golden rice; Genetically modified crops; Plant breeding; Genetically modified food; Genetic engineering

00:44:56 - Golden Rice: Proof of Concept

1. GMOs are not designed to help smallholder farmers in the developing world, but instead to make money for the companies that develop them.2. Patent issues and the need for multiple technologies to create a functioning GMO crop make it difficult for these crops to reach smallholder farmers.3.

Genetically modified crops; Genetically modified food; Golden rice; Plant breeding; Genetically modified organism

00:49:23 - Genetically Modified Crops

There is no one-size-fits-all solution to the problem of world hunger, and GM crops are not a quick fix. Some GM crops do have promise, but they are still years away from being ready for release. The behavior of scientists in the Golden Rice case has been disappointing.

Golden rice; Genetically modified crops; Genetically modified food; Plant breeding; Genetic engineering; Greenpeace; Philippines

00:54:26 - The Future of Pro Poor Crops

GMO crops are not a silver bullet for solving world hunger, and there are still many unknowns about their long-term effects.

Pesticide; Organophosphate poisoning; DDT; Roundup (herbicide); Organic food

00:57:22 - Poisoning Issues

The discussion focused on the various pros and cons of GMOs, with a particular focus on the health implications. The panelists generally agreed that there is a lack of long-term data on the health effects of GMOs, and that there is a danger of GMOs being used as a Trojan horse to bring in other GMOs.

Genetically modified food; Genetically modified crops; Herbicide

01:00:07 - Optimism And Career Divide

GS: I think one of the things that's gone well in the debate about GMO's is that it's been very open. I mean I've been involved in it for a long time and I've never seen anything like the openness of the debate. Scientists are willing to talk to each other. They're willing to share data.

Academic tenure; Graduate school; Plant breeding; Biotechnology; Agriculture

01:05:32 - Genetically Modified Crops

The scientist argues that GM crops are safe, and that the debate around this issue is more complicated than it is often portrayed.

Biotechnology; Genetically modified food; Genetic engineering

01:08:06 - Is All GMO Safe

It is unknown that there is any convincing data that GMO's are unsafe. However that doesn't mean that all GMO's are safe.

DDT; Climate change denial; Biotechnology; Tamoxifen; Long Island

01:14:50 - The Most Significant Moment in the History of Genetic Engineering

Genetic engineering has had a significant impact on agriculture, most notably in the form of GMOs. However, the impact of GMOs has been polarizing, with many people arguing for or against them.

Genetically modified food; Canola oil; Genetically modified organism; Genetic engineering; Genetically modified crops; Monsanto

01:19:40 - What to Make of CRISPR

The public's lack of trust in the government and university scientists is largely a result of the polarization of the discussion of GMOs and CRISPR in the 1990s. There is no easy solution to this problem.

CRISPR gene editing; Genetically modified organism; Genetic engineering; Biotechnology

01:22:17 - Dr. Nigel Taylor

GMOs are safe, and they can help us feed the world's growing population.
GMOs have a lot of potential to help developing countries.

Genetically modified crops; Genetically modified food; Plant breeding; Biotechnology; Genetic engineering; Monsanto