

Testimony from Steven H. Strauss / March 26, 2013

Professor, OSU / steve.strauss@oregonstate.edu / 541 760 7357

Good morning Mr. Chairman, House Committee Members, and other attendees at this meeting. My name is Steve Strauss, I am a University Distinguished Professor of Forest Biotechnology at Oregon State University, a member of the university Program in Molecular and Cellular Biology, and Director of the OSU Outreach in Biotechnology Program. With my toxicologist colleague Dave Stone, I have taught about GMO and toxicology issues at OSU for about 10 years. As part of my job as Director of the Outreach Program, I have hosted 40 scholars at OSU over the last 8 years, who have given public lectures on GMOs and related issues. All can be viewed at our web and YouTube sites. Our speakers have ranged from historians to political scientists to economists to ecologists, and yes also a few geneticists. I believe I know these issues, both the science and the broader context, rather well.

I am opposed to House Bills 2319, 2715, and 2736 for three reasons. First, because I believe they are based on poor science, which I will come back to in a moment. Second, I believe they are fundamentally undemocratic in trying to limit choices in farming, seeking to impose one farming system and attendant sets of beliefs upon others. And third, because by imposing local regulations, many of which appear to me to contradict federal regulations, they will unnecessarily increase costs and may create havoc in farming communities, the marketplace, and the courtroom.

HB 2319 seeks to prevent the spread of any GMO materials—either viable pollen and seed, or inviable gene-less products—in the environment when it is “interfering with or may interfere” with non-GMO farming practices. It does not specify what “interfering” might mean; I guess this is to be figured out by lawyers. It also does not specify what level of spread is problematic; in other words, any spread, even a few pollen grains among trillions, could be a violation. This is unrealistic for agriculture, which I will return to a bit later. It also sets up a system where the State of Oregon would, in effect, support the view that GMOs are bad and to be avoided. Yet there is abundant scientific data, from all over the world, that use of GMOs can have large benefits in many crop systems. This has been shown repeatedly when considered in terms of yields, economic benefits for the public and farmers, and environmental impacts. A recent economist who spoke in my lecture series suggested that the economic benefits of GMO crops have been about 70 billion dollars through 2010, and most of it flows to the public, not corporations. The National Research Council issued a report in 2010 about sustainability impacts of GMO crops in the USA. One of the committee members, an ecologist, presented the report in our lecture series last spring. The report found large environmental benefits due to pesticide reductions and increases of no and low-till farming. However, he and the NRC report also noted that management of herbicide tolerant GMO crops was exacerbating the development of weed resistance to herbicides—something that we’d all like to avoid. However, this is not at all unique to GMOs as it has happened hundreds of times prior to their use. And,

in contrast, with a different management system, we have been doing a good job of management with GMO insect resistant crops. But the bottom line is that the report suggested large benefits and prudence in management, not any kind of a ban or prohibition.

The bills, in their treatment of GMOs, suggest they are something novel and radical. This is not true. Since 1996, they have been grown on billions of acres in about two-dozen countries. It is fully main stream in many places. And contrary to some of the buzz on the internet, to date there have been no scientifically accepted, credible support for claims of toxicity from the commercial GMO crops.

As I said earlier, the bill ignores the fact that all types of farming result in spreading of materials between different types of farms and lands; this is not unique to GMOs. Farmers and local governments have created systems for coexistence where seed and produce purity is maintained at levels that are workable by all parties. I spoke at a USDA supported workshop in Washington DC in 2011 that summarized these systems and their successful functioning in the USA—its available on the web here:

http://sbc.ucdavis.edu/events/Meetings_&_Symposiums/Coexistence_Workshop.htm . The demand for zero spread of GMO materials is not workable, nor does it make sense given the record to date and the growing benefits that are expected as science progresses.

HB 2175 seeks to allow counties to establish control areas for GMO crops, but would not allow control areas for a biopharma crops. HB 2736 seeks to prohibit any growing of a biopharma crop outside of a greenhouse or laboratory, nor to be produced in any crop plant used for food or feed. I served on a statewide committee on biopharm crops in 2005-2006 that was convened by the Oregon Department of Agriculture and the Oregon Department of Human Services. The committee recommended “endorsement, moderate scope to indicate that it supports wisely chosen and carefully studied applications of biopharm technology in Oregon.” However, it also recommended caution with biopharm food and feed crops grown out of doors, and its recommendations led to a new rule, 561.740, that permits ODA to enter into a MOA with USDA to ensure a full review is conducted with Oregon’s best, local interests in mind. A complete ban was not recommended, which I think is wise in that biopharm crops could have large benefits by enabling safer and lower cost production of antibodies, enzymes, and vaccines to treat devastating diseases. And many of these would be harmless even if there was some inadvertent mixture with food or feed crops. But the bottom line is that Oregon has already considered this issue in depth and come up with a prudent policy; it does not need a ban that would foreclose all business and scientific development in this potentially important area.

In sum, whether considered from science or policy perspectives, these bills seem ill advised and regressive.

Thanks very much for considering my views.