

Submitter: Steven Goldman

On Behalf Of:

Committee: Senate Committee On Natural Resources

Measure: SB85

Below is my additional testimony in support of the Factory Farm Moratorium Bill (SB 85 and HB 2667). My sources of information are provided at the end of my testimony.

Animal agriculture, and factory farming in particular, is bad for the planet, bad for animals, and bad for people. It is an evil that must be stopped if our civilization is to survive. Here are some reasons why:

1. Animal agriculture is the leading cause of climate change.

Most climate activists focus on reducing fossil fuel emissions. Yet, even if we stop all fossil fuel burning today, the amount of CO₂ already in the atmosphere will cause earth surface temperatures to continue to rise during the next few decades, creating uninhabitable conditions over much of the world. The reason: roughly half the world's trees (an estimated 3 trillion) have been removed over the last 10,000 years. Half of this deforestation has occurred over the last hundred years. Most of this deforested land, which comprises 75% of all agricultural land today, is used for grazing livestock and to grow feed for the 80 billion animals that humans eat each year.

But if we reforest much of this grazing land, or let forests return naturally by leaving the land alone, the restored forests could absorb most of the CO₂ we currently emit by burning fossil fuels. It would take only a fraction of current agricultural land to grow enough food for everyone to adopt a mainly plant-based diet. And if we simultaneously reduce fossil fuel emissions, we can lower atmospheric CO₂ to a level that can sustain life on Earth as we know it.

Contrary to popular belief, methane is responsible for about 50% of global warming, and fossil fuels are responsible for about 20%. Large quantities of methane are emitted into the atmosphere by the digestive processes of the 1.5 billion cows on our planet and other ruminant animals. When methane is emitted into the atmosphere, it traps 120 times as much heat as CO₂ traps. Over roughly 100 years, the methane will gradually transform into CO₂, and thus have reduced potential to trap heat compared to when it is first emitted. The Intergovernmental Panel on Climate Change (IPCC) initially assumed in its calculations that methane traps about 24 times as much heat as CO₂, based on its transformation over time. But more recently, the IPCC and other researchers have concluded that the "24 times" factor underestimates the heating contribution of methane, as it severely undercounts the

heating potential of methane at the time of its release into the atmosphere.

The other major reason why animal agriculture is bad for our planet is because roughly half the world's forests have been removed to create grazing land and to grow feed for animals. Those forests historically removed CO₂ from the air and stored it in trees. Not enough forests are left to remove and store CO₂ from fossil fuel burning and thus prevent catastrophic overheating of the Earth.

Forests store about 98% of land-based carbon on Earth, and grazing lands and deserts store only about 2% of the carbon. In order to restore enough trees to absorb our CO₂ emissions, we must replace millions of acres of grazing land and animal feed production land with trees. Because it takes about 10 calories of animal feed to produce 1 calorie of animal-based food (e.g. meat and cheese), it is far more efficient to feed people a plant-based diet. Thus, if we eat plant foods instead of animal foods, we can create the space needed to restore enough forest to sequester enough carbon to prevent climate chaos. (Note: Carbon capture and storage (CCS) technology has proven to be far too expensive and also far too energy and resource intensive to effectively address the scale of the CO₂ problem, including the continuing emissions from fossil fuel burning.)

Note: My testimony continues in my email to committee members. I have been speaking publicly about climate change since 2009.