CA Secretary of Agriculture, AG Kawamura
Listening Session
July 7, 2008 12:00-3:00pm
Oxnard, CA
Comments submitted by Marty Fujita, Ph.D.

Secretary Kawamura, thank you for this opportunity to provide comments on a vision for California agriculture into the future. The natural and agricultural landscape has changed so much in just a generation. I recall my father's photos of an LA basin covered in orange groves when he was a kid. In my own lifetime growing up in Orange County, I have watched countless strawberry and bean farms paved over for yet another housing development. Since moving to here five years ago after more than a decade of doing international environmental work, I have witnessed the same development pressures threaten the rich agricultural heritage of Ventura County, which provides the economic backbone of this area.

Today, I would like to advocate on behalf of keeping agriculture alive in California, as a resident of this verdant county, as an eater, a gardener, and as an evolutionary ecologist and environmentalist. I generally agree with the comments presented by the Roots of Change Campaign for a *New Mainstream in Food, Farms and Fisheries* document, developed to provide a new vision for agriculture in 2020. As a member of the Ventura County Ag Futures Alliance Stewardship Committee, I am also supportive of the comments and recommendations that you will hear from our group. However, as an evolutionary ecologist and a mother very concerned about my children's future and the future of humanity in general, I would like to challenge the notion of what 'sustainable agriculture' means in light of the escalating threats and exigencies posed by climate change-induced factors. I don't think we know what the term 'sustainable' means anymore. As a friend has said to me…"ask me in a hundred years" and maybe I'll be able to tell you.

Numerous studies are coming out that point to climate change feedback loops that are inducing erratic weather patterns that include drought and deluge, freezes and record heat spells, and acidification of the Pacific Ocean at rates much faster than predicted by the IPCC just last year. Secondary effects that are just as damaging to agriculture include such things as increases in the number of types and vigorous growth of alien weed species, insect and parasite pests, and shifts in growing zones.

Global warming is already beginning to have a profound impact on our food and agriculture system at the local, regional and international levels, as growing patterns, trade and markets shift to accommodate changes in available water, length of the growing season, weather and temperature as evidenced by changes in production in several crops such as grapes in the Napa Valley, and here in Ventura County with losses of avocados and citrus with aberrant freezes, as well as fruit and flower drops with aberrant heat spells. Wouldn't it be better if we can be proactive in thinking about possible adaptive scenarios to plan for a future with climate change? According to most climate change scientists, the window of opportunity to minimize the impacts of climate change has narrowed to less than a decade, and this can only happen if we act NOW to bring CO2, a major greenhouse gas, to levels of 350 ppm (we are already at 380 ppm; pre-

industrial revolution levels were 285 ppm) by minimizing fossil fuel use in addition to actively taking CO2 out of the atmosphere.

We need to start asking ourselves questions about mitigation and adaptation in the face of what is coming, and doing the necessary research to help inform us of our choices. Will there be shifts in the geographical location of important growing zones? How will drought and flooding impact water availability and costs for irrigation? How do abrupt and volatile weather patterns affect our food plants and their productivity? What are the economic repercussions of crop production and failures? How will rising ocean temperatures and sea levels impact our fisheries and our deltas, our coastal aquifers? How will loss of genetic diversity of our food plants affect agriculture's ability to respond to increasingly volatile weather patterns?

We also need to start asking ourselves how we can change our behemoth food and agriculture system for the better. How do we mitigate production of greenhouse gases (especially nitrogen, methane and carbon dioxide) associated with agriculture, aquaculture, fishing and ranching? Can we change our eating habits and purchasing preferences (for example, by buying local produce or eating lower on the food chain) to have positive impact? How can we change our centralized food distribution system to minimize "food miles" and fossil fuel use?

Farming is the single most important and widespread of human endeavors and has been central to human history. It is responsible for success of humans, in evolutionary terms, as the most dominant species in the world. Changing agriculture by planting cover crops, diversifying crops, implementing no-till farming methods and developing regional food production and delivery systems (to make farming carbon neutral or even act as a carbon sink) could have global ramifications.

Asking the right questions and strategizing solutions about agriculture and our current food system is not a trivial intellectual exercise. It is important for all of us—consumers, producers and policy-makers—to understand the role each might play in changing our current unsustainable industrial food system to one that is environmentally and economically viable.

I would like to offer the following points for consideration by the CA Department of Agriculture to be proactive in generating adaptive scenarios using the best information and research possible to allow agriculture to survive in CA in the face of climate change:

- Plan and conduct **modeling research to determine optimal growing areas in CA**, using predicted changes in factors such as water availability, weather patterns, soil types, migration of pests, etc. **Develop adaptive scenarios to secure high priority areas for the future** (e.g. encourage cooperatives of farmers, retail, distribution, land trusts in these areas; identify land for ag easements) and protect from development pressures.

- Promote **regionalization of food and distribution systems** wherever possible by encouraging diversification of crops, increasing support of small family farms, smaller distributors and retailers; promote value-chain idea. This will not only **minimize use of fossil fuels** used in transporting foods, but will also provide **greater food security and healthier foods for local communities**, and **minimize widespread outbreaks of E.coli, Salmonella and threat of contamination of food sources**.
- Increase **diversification of crops to minimize impacts of pests, and to meet food needs of region**.
- Promote **research and selection studies for food crops and varieties that are drought tolerant, resistant to disease and pests, and erratic weather conditions, highly adaptable, and genetically diverse.** This is especially important in light of the monopolization of seeds around the world by Monsanto, which is buying up seed companies around the world including Seminis, the world's third largest seed company headquartered here in Ventura County. Promote use of heirlooms and other genetically diverse food crop varieties and species.
- **Discourage use of artificial inputs, especially those that generate greenhouse gases** (including the very potent gas, Nitrogen in artificial fertilizers)
- Encourage **farms to become clean energy producers** (wind, solar, certain biofuels) so that they can have a net negative carbon footprint as CO2 sinks rather than net CO2 producers.
- Examine inter-relationships with other sectors (energy, water, business, health) of CA government to promote ways to work together to generate adaptive strategies that mitigate climate change factors while maximizing agricultural productivity and economic returns for agriculture.
- Promote individual home gardens that provide all the right lessons for fighting global warming, promote healthy eating and reconnecting to the Earth through the food that sustains us.

Thank you for the opportunity to provide these thoughts to you today.

Oxnard Listening Session
Monday, July 7 from 12 p.m. – 3 p.m.
Oxnard Performing Arts & Convention Center