



February 27, 2007

**Joint Assembly and Senate Committees on Agriculture
Informational Hearing**

Farming and the Environment: An Overview of the 2006 *E. coli* Outbreak

Comments of Community Alliance with Family Farmers

Thank you for the opportunity to address Committee members today and thank you also to the many people whose work has made this informational hearing possible.

I am Judith Redmond, co-owner of Full Belly Farm in Yolo County and President of the Community Alliance with Family Farmers. My 250-acre certified organic farm established in 1985, produces mixed vegetables (including leafy greens), nuts, flowers and fruit. While a majority of our products are marketed directly to the consumer, we also sell to restaurant, store and wholesale accounts.

These comments were developed in collaboration with California growers who have been increasing their use of sustainable farming practices, plus representatives of direct marketing associations and organic agriculture. All of us have in common, an urgent interest in the elimination of food-borne pathogens from the food chain, especially such serious ones as *E. coli* 0157.

The effort of Western Growers Association and others to respond to the problem of food-borne pathogens is extremely valuable. We are going to focus our comments on the draft metrics for leafy greens developed by Western Growers, but our comments are also directed at Committee members because there are several issues which we think may be difficult for the salad mix industry to address alone.

LIMIT THE SCOPE TO BAGGED MIXES AND BAGGED SPINACH

The sense of urgency around this issue has resulted in an approach that is not targeted on the most significant risks and mistakenly encompasses issues that are not risks at all.

Early versions of the metrics included kale, chard and arugula. More recent versions have narrowed the focus to lettuces, spinach and salad. But the real distinction isn't which crops are included as much as the processing and bagging of those crops. Since bagged salads and spinach were the most common vehicle for produce-linked outbreaks of *E. coli* 0157 during 1990 to 2004¹, our effort should focus on them as known risks.

If Committee members had wanted to take a more comprehensive approach to produce-linked illnesses, they would have included, for example, melons, berries and potatoes. But because they pose special problems and are much more commonly implicated in *E. coli* 0157 outbreaks, it is logical to limit the definition and scope of this effort to processed and bagged salads and spinach.

Foods that are grown to be bagged and sold in their raw form as "ready to eat" need special metrics. Centralization of washing and packaging is a major risk factor, particularly from mixed farm loads. The product is enclosed in a packaged environment that can reach high humidity and provide favorable conditions for microbial growth. Then it is distributed nation-wide which vastly increases the risk of contamination.

Because bagged mixes and salads are highly perishable, there is consensus that they must be distributed, stored and displayed under refrigeration. Even a temperature gap of a few hours can cause a problem. These products travel extensive distances, with many possible ways that there could be gaps in temperature control – for example, at the supermarket chain's regional distribution center; in transit to stores; once the product arrives at the stores; and of course, after it is purchased by the final customer.

Industry standard for most fresh cut salads is a shelf life of 15 to 17 days once the product leaves the processing plant, up from 5 to 10 days just a few years ago. This is too long because even an inconsequential presence of the pathogen can multiply in this time frame into a serious dose. Committee members should *consider reducing the allowable shelf life of bagged spinach and salads.*

Committee members should also *consider a requirement that bagged salads be labeled with the statement that the consumer keep the product refrigerated and wash it before eating.* The "Ready To Eat" label is misleading.

WORK ON THE PROBLEM AT ITS SOURCE

The second way in which our effort needs to focus on the highest risk factors is by including the interface between the salad mix and livestock industries. This may be something that the salad mix industry is unable to do alone. Domestic

¹ Center for Science in the Public Interest, Outbreak Alert Data, Information on Produce Outbreaks, Figure 5, Produce-Linked Outbreak Vehicles 1990-2004.

cattle are the primary source of microbial pathogens like *E. coli* 0157. Tainted irrigation water is the most plausible cause of the contamination of the crop in the field.

There are a number of feed-related and animal husbandry risk factors that contribute to the presence of 0157 in the guts of livestock. For example, changes in livestock diets have been shown in many research efforts to reduce the presence of microbial pathogens in cattle operations. We need to clearly understand the origins and control of these pathogens – they are different than generic *E. coli*. The produce and livestock industries should work on this collaboratively. *We must develop methods to reduce 0157 infections and to contain any 0157 in manure. Crops for bagged salads should not be grown in fields that are at risk of contamination from nearby livestock grazing or feeding operations.*

DON'T DISMANTLE THE PUBLIC'S INVESTMENT IN ENVIRONMENTAL STEWARDSHIP

With a re-focus on these two important risk factors – the livestock connection and the bagged salad connection, this effort stands a good chance of long-term success. However, there are two ways in which the current proposals have cast a net that is pulling in practices not implicated in the problem: First, the proposals view wildlife as a risk factor and second, they call into question certain uses of fully composted animal manures.

Conservation Plantings

A primary effort of the Community Alliance with Family Farmers has been the introduction of conservation plantings and installation of many miles of buffer strips, grassed waterways, filter strips and hedgerows on farms up and down the state. Much of this work is funded with public dollars in a national effort to improve our nation's water quality and reduce the use of toxic chemical fertilizers and pesticides. Huge strides have been made by agriculture on these fronts in the last few decades.

Conservation practices are used to convey water runoff, to reduce overall erosion and to improve water quality. Filter strips are recommended along field edges, near waterways and around livestock to reduce pollution. In many cases conservation plantings have been shown to reduce the presence and transport of water-borne bacteria and pathogens and can be specifically designed to address food safety issues.²

² Reconciling Food Safety and Environmental Protection: A Literature Review, First Edition, October 2006, Diana Stuart, M.S.

In the draft metrics, deer, geese and feral pigs are identified as animals of significant risk. In the Sanitary Surveys that supplement the draft metrics,³ farmers are advised to inspect the banks surrounding surface water and remove surrounding vegetation such as trees, bushes and tall weeds that may attract wild animals, rodents or fowl. In another section of the draft metrics, setback distances of 20 feet from the crop are prescribed for undisturbed, open, non-farmed lands including wildlife buffer strips⁴.

However, dozens of studies across the U.S. have surveyed *E. coli* 0157 infection rates in various wildlife populations. In all cases, infection rates are very low – less than one animal in 1000. In contrast, while the prevalence of 0157 in domestic cattle is highly variable, tests in many different environments show from 3% to 40% of cattle test positive⁵.

This misguided focus on wildlife diverts attention from much more important things. If conservation plantings are included as a food safety risk at all, we can assure you that many farmers will abandon their efforts and millions of dollars of public investment will be put at risk. Even if the rule only applied to bagged salad and spinach, it would cast a pall far beyond those crops. *The limitations on the use of conservation plantings need to be completely removed from the draft metrics.* It is critical that food safety guidelines do not conflict with efforts to improve and protect water quality and wildlife habitat.

Compost

Another good practice that may be mistakenly snared in these rules is the use of fully composted animal manures to improve soil health. It is important that the record is set straight here: The National Organic Standards forbid the use of un-composted animal manures less than 120 days prior to harvest. We endorse the provisions in the proposed regulations to limit the use of raw manure. This brings non-organic agriculture up to the standards that the organic industry must meet.

We urge that only compost of the highest quality be used on salad and spinach fields. The National Organic Standards Board regulates both temperature and time period⁶ required in composting operations.

³ Sanitary Surveys and Remediation Guidelines for Water Resources, Draft, Prepared for Western Growers, January 18, 2007, Table 3, Guidelines for Assessment of Surface Water, page 6.

⁴ Commodity Specific Food Safety Guidelines for the Lettuce and Leafy Greens Supply Chain, 2nd Edition, February 7, 2006, DRAFT, Table 5, Animal Activity in the Field

⁵ Reconciling Food Safety and Environmental Protection: A Literature Review, First Edition, October 2006, Diana Stuart, M.S.

⁶ Department of Agriculture, Agricultural Marketing Service, National Organic Program Final Rule

Inexplicably, the metrics state that composted soil amendments should not be applied after crop emergence (Table 2) even though there is no public health justification for this. Fully finished compost is pathogen free and we agree that it should be tested and certified as such by the manufacturer.

The Committee should remember that growing food in a sustainable manner is a biological process. A review of several studies indicates that diverse microbial organisms in soil may reduce the potential for pathogen contamination⁷. Health comes from diversity. Sterility is by definition not sustainable or even possible in the field. In a biologically based farming system, the farmer attempts to maximize food safety benefits from natural competitive processes and interactions among soil, plants, bacteria, viruses and other organisms.

AVOID ADVERSE IMPACTS ON LIMITED RESOURCE AND NEW IMMIGRANT FARMERS

The final point that we wish to make is that while all farmers need to have strong food safety plans, the blanket application of these rules to small-scale, limited resource, and new immigrant farmers could be devastating to that sector of the farm population.

According to the most recent Agricultural Census, the largest 100 farms growing lettuce in California were responsible for 83% of the lettuce harvest. But there are almost 600 other growers of lettuce with less than 100 acres.⁸ Many salad mix and spinach growers are quite small-scale.

The cost of monthly water testing for pathogens will fall most heavily on smaller scale growers because those costs will be a larger percent of their total budget. In addition, moving bagged salad and spinach fields away from hedgerows, open space or conservation plantings, would fall most heavily on smaller-scale growers because the setbacks will be spread over fewer acres of production. Finally, it will be very difficult for these growers to come into compliance with the testing requirements. The advantage provided by these rules would go to large companies able to take on the additional overhead costs of a very expensive and stressful program.

Economically disadvantaging small and local producers could reverse the many statewide and national efforts to emphasize healthy diets in schools and provide fresh produce at local farmers markets. It is these producers that have increasingly served the local, immigrant and low-income communities. A wiser path forward would be to assist these growers as they strive to come into compliance. We strongly urge that Committee members *consider avenues that*

⁷ Reconciling Food Safety and Environmental Protection: A Literature Review, First Edition, October 2006, Diana Stuart, M.S. page 14

⁸ 2002 Census of Agriculture – State Data, California, Table 35, Vegetables and Melons Harvested for Sale.

provide training and financial assistance to smaller-scale and local growers coming into compliance.

Our final recommendation in this regard has to do with a shift in the testing burden of surface waters. The surface waters of the state are used for boating, swimming and fishing as well as irrigation. If there is indeed an endemic problem with 0157 in surface waters (as implied in both the metrics and the legislation), the testing burden should not be felt by farmers alone. It is a public health responsibility. *Testing of surface water for 0157 (not just generic *E. coli*) should be conducted and coordinated by public health officials with the results available in a public database.* These are not tests that should be the responsibility of individual farmers.

Thank you again for your attention.