Comments on "Sustainable Agriculture Committee Report"
Submitted by
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The proposed initiative to increase the visibility and focus on the sustainability of agriculture in both the teaching and research programs of UC Davis is laudable. As has been the case at UC Santa Cruz, where the Agro-ecology Program is well established, the proposal will be warmly received on the Davis campus.

At the same time, it should be recognized that the proposed new undergraduate major "Agricultural Ecology and Sustainability" is but the latest spin in an effort to retain student interest in majoring in the agricultural sciences at UC Davis. The decline in the numbers of students majoring in traditional Agricultural Science disciplines reflects deeper societal trends, notably the steep fall-off in interest in farming as a career path among young people.

Less well recognized is that agricultural *labor demand* in Arizona, California, Oregon and Washington has sharply increased in the past twenty-five years owing to an enormous increase in the production of fruit, vegetable and ornamental commodities (+70%, by tonnage) as well as a an even larger growth in dairy output (+200%). Thus, while student interest in agricultural careers has declined, both agricultural production and the use of hired labor use have increased to meet the increased demand for these commodities.

There are several specific issues that the committee's report and proposal do not address, or fails to address adequately.

1. The natural sciences aspects of agricultural sustainability should be a principal concern of existing agricultural science departments, and should be explicitly highlighted in departmental mission statements. While not directly addressed in the SAC report, it is self-evident that fundamental natural science aspects of agricultural production are essentially the same for both conventional and organic producers. Only the cultural practices differ. Thus, it is extremely important that the disciplinary approach represented by the existing agricultural science departmental structures be maintained, but that investigation of the natural sciences aspects of agricultural sustainability should be explicitly incorporated into the mission statements of all departments.

2. Existing UC Davis sustainable agriculture programs are ill prepared to objectively assess the economic and community impacts of sustainable agricultural practices. Those university programs that were created in response to critiques of the performance of the University of California raised during the 1970s and early 1980s (Student Farm, Small Farm Center, Sustainable Agriculture Research and Education Program) found themselves housed in an agricultural sciences community that was at least initially highly suspicious of unconventional agricultural practices. Perforce, these programs essentially became advocates for organic and sustainable approaches, often quite effectively so. In my opinion, relatively little objective assessment of sustainable agricultural practices can be expected to emerge from these programs precisely because

of their role as advocates. There are a number of important issues associated with sustainability in agriculture that will require careful, objective assessment. Some examples of such issues are: (a) non-compliance with sustainability guidelines - the use of restricted agricultural chemicals, such as methyl bromide, by some producers who establish a new vineyard or orchard planting, but who then follow organic practices for the minimum three-year period needed for organic certification, and subsequently market their commodities as "organic;" (b) violation of pesticide regulations - evidence is available from citations issued by county agricultural commissioners to certified organic producers, including a former president of a major organic farm association, who have been found to be in violation of California pesticide regulations; (c) occupational poisonings of hired farm workers by materials allowed under organic certification - in a typical year, the largest number of occupational chemical poisonings of hired farm workers in California are the direct result of exposure to sulfur (crystalline sulfur dust), a registered pesticide that is permitted under organic certification guidelines; (d) inferior performance of a significant number of farms that follow sustainable guidelines - an empirical evaluation of a sustainable farming initiative (BIOS) among a cohort of Central California almond and walnut producers found that while they had sharply curtailed their use of agricultural chemicals, their production yields and economic returns lagged those of a carefully matched cohort of conventional producers (cf. *Information and Pesticide Management*, C.V. Moore and D. Villarejo, California Institute for Rural Studies, Davis, CA, 1998); (e) economic class bias in sustainable and organic food marketing - farmers markets, community supported agriculture programs and foodservice marketing (restaurants) appear to primarily serve affluent sectors of society, as indicated, for example, by the remarkable absence of farmers markets in less affluent rural communities or inner cities. These examples are but a few of the issues that will require significant investigation in the coming years.

3. Woefully inadequate representation of the concerns of hired farm workers in the committee report, and in all existing university programs, including sustainable agriculture programs. The committee report, like existing university agriculture programs, puts forth rhetoric such as "promote healthy communities" and "The economic and social well-being of rural communities – including farmers and farm laborers – are areas of concern." But there is a woeful absence of substance in either the existing programs or the committee report that matches the rhetoric. Today, California's hired farm workers perform at least 85% of all of the work on the state's farms, up from about 60% a half-century ago: California farms are now more dependent on hired workers than at any time in the past one hundred years. It is well established that small-scale agricultural producers pay less well, and offer fewer employee benefits, such as health insurance, than do large-scale producers. Recently, in an unusually frank admission, an organization representing sustainable farmers in California advocated opposition to proposed legislation that would mandate health insurance for farm workers employed by those farm operators who choose to claim California tax credits for equipment and diesel fuel purchases. This organization stated that the proposed requirement would only affect small-scale producers since most large-scale farmers already offer health insurance! Again, organic and sustainable producers oppose proposed regulations that would extend the existing ban on the use of the short-handle hoe in California to most instances of hand

weeding, a current practice among some conventional and sustainable farm operations that is associated with a high prevalence of serious back injury among hired farm workers. California's hired farm workers are the poorest people in the state: at least 60% live in poverty, over 70% lack any form of health insurance (whether private or government sponsored, such as MediCal), most live in over-crowded or sub-standard housing conditions, and their hourly wage has deteriorated substantially since the 1970s (the decline, in constant dollars, is by 13%, comparing the three-year published averages for 1999-2001 with 1974-1976; *Farm Labor*, U.S. Department of Agriculture). As mentioned previously, in a typical year, a plurality of occupational poisonings of hired farm workers are caused by exposure to crystalline sulfur. Recently, a colleague attended a support-group meeting of blind, former hired farm workers in Mecca, CA, all of whom believed that their blindness was caused by working in Coachella Valley vineyards treated with sulfur dust (Rick Mines, private communication, 2002). While sustainable agriculture advocates posture a great deal about the benefits to farm laborers of their vision of farming practices, the balance of the available evidence, at present, weighs heavily in the opposite direction. Ironically, while California is the most abundant producer of healthful agricultural products, its labor force has recently been shown to be suffering an unusually high prevalence of adverse chronic health indicators, many of which are associated with inadequate or unhealthful diet (cf., *Suffering In Silence*, D. Villarejo, et al, CIRS/TCE, 2000). The committee report suggests establishing a public seminar series on sustainability. *But the recent sustainable agriculture seminar series (Spring 2003) failed to include any mention of the concerns of hired farm workers at all even though there were ten lectures in the series.* It is my view that existing university departments and programs are demonstrably inadequate to the task of reliably and objectively assessing associations between hired farm worker well-being and sustainable agricultural practices.

4. The university's outreach and research programs inadequately represent innovations by farmers, and do not adequately provide for farmers to share their findings among peers. One of the original goals of the efforts in the 1970s and 1980s to force the university to address the concerns of sustainable agriculture was to address the inadequacy of the research and Coop Extension model of information dissemination. Quite a few pioneers of sustainable agricultural practices in California developed their methods without any assistance from university personnel. For example, the late Dick Harter developed the basic method of organic rice production in the Sacramento Valley without any help from UC. Thus, it was argued that the university should provide a mechanism for these kinds of innovations to become more widely known. In addition, it was argued that Coop Extension should promote peer exchange of information and innovation among farm operators. The present model, based on dissemination of UC research findings through Coop Extension is conceptually incompatible with the goal of incorporating the desired goal of information sharing by farmers. There is yet another example of the inadequacy of UC's self-promotion model. Initially, SAREP included public (non-UC) members in the full review process of its sustainable agriculture grants program. However, beginning in the late 1990s, at the insistence of university administrators, public members were forcefully excluded from the full review process and forbidden to comment on the scientific merits of proposals. It was argued that only

UC researcher had the technical expertise to review the scientific merits of proposals. Shame on the university!!