

State must take advantage of biofuel revolution

By ALLEN DUSAULT

Recent biofuels news has been dramatic. Oil giant BP (aka, British Petroleum or “Beyond Petroleum”) has pledged to spend half a billion dollars over 10 years on alternative energy and biofuels research and has partnered with the University of California at Berkeley to manage this ambitious endeavor.

Chevron, in partnership with the University of California at Davis, is funding biofuels and alternative energy research with \$25 million over five years. Venture capital is pouring into “clean tech” companies, with biofuels receiving a significant portion.

A primary focus is to turn plant material such as wheat straw or corn stalks into biofuels by converting cellulose into sugar that can be fermented to make ethanol.

Producing biofuels in California could yield significant benefits for the state, including tens of millions of dollars for rural economies. Environmental benefits include large reductions in greenhouse gas emissions, which contribute to climate change.

California consumes more than 900 million gallons of ethanol annually, about one fifth of U.S. production. Almost all of this is made from corn grown in the Midwest then transported across the

country to the fuel plants. Only a tiny fraction comes from California feedstocks, even though we are the No. 1 agricultural state in the nation.

Unfortunately, few of these private-sector research dollars will be focused on growing biofuel crops in California. Most funding is directed at longer-term solutions, such as turning cellulose into biofuel. That is an important goal, but it likely will take 10 years or longer to overcome barriers to commercialization.

And there are environmental consequences from much of what is being promoted. For example, switchgrass is touted as the “holy grail” of biofuel plants because of its high biomass yields that can be increased further with genetic engineering. However, it is an invasive species in California and would have to be grown using a great deal of pesticides and irrigation water.

Alternatively, using wheat straw, corn stalks or other plant biomass

as biofuel feedstocks will remove valuable organic matter from our farm fields, which could deplete the soil over time and accelerate wind and water erosion. These are just a few of the issues that deserve careful scrutiny as we move forward.

Most disconcerting, however, is the fact that almost all of the

research and development in California is being funded by private-sector dollars. These investors have interests to protect that might, or might not, overlap with the public interest.

California has provided no state funding for biofuel crop research. At a meeting of the state’s leading agronomists, the comments I heard

most often were, “Why do we have to rely on oil companies to fund biofuel crop research?”

We are missing an opportunity to begin growing biofuel crops that have immediate environmental and economic benefits. We need to

fund the research to establish biofuel crops as a viable alternative in this fruit, nut and vegetable state where we reside. Rather than using Midwestern corn as a feedstock, which has significant soil erosion and water pollution associated with it, we could be growing drought-tolerant sorghum that uses less fertilizer and doesn’t cause soil erosion when grown in the flat expanse of the San Joaquin Valley.

Instead of importing soybean oil from the Midwest to make biodiesel, we could grow a winter, rain-fed cover crop such as canola — a plant that also helps reclaim selenium-damaged soil. Those are but two examples of the many important near-term options that show promise but are not being studied and tested because of a lack of funding.

Research dollars contributed by forward-thinking petroleum producers are welcome, but why are we letting oil companies direct our biofuel future? As President Bush has said, we are addicted to oil. Let’s not let the “dealer” run our rehab program.

Let’s fund efficient, sustainable biofuel crop production that has public benefit as the goal.

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