PolicyPennings by Daryll E. Ray & Harwood D. Schaffer Climate change issue: better to respond needlessly than mistakenly do nothing

A number of the publications we have recently examined have been based on the premise that human-caused climate change is already in process and that we can expect higher average global temperatures over the next century (http://www.agpolicy.org/articles14. httml, columns 722-727). They have also argued that climate change would have a significant impact on agriculture both in the US and around the world.

One of the publications, "Risky Business: The Economic Risks of Climate Change in the United States" (discussed in column 727), argues that one does not have to believe in climate change to see the benefits of taking out an insurance policy, that is by acting now to begin "changing...business and public policy practices today."

We know that there is significant resistance in segments of the US farming community that think that human activity has nothing to do with the average global temperature changes that we have seen. They argue that the increase in the average global temperature is a part of the normal oscillation in temperatures that have occurred over the history of the earth.

As part of our policy analysis, we often engage in looking at various "what if" scenarios to identify the worst and best case outcomes. Doing so often brings clarity to an issue.

In the case of the issue of human-induced global warming, let's begin by assuming that the critics are correct and the issue is the hoax that they believe it to be. Under this assumption, what happens if we do nothing? It would turn out that we are no better or worse off than we are now and the critics can say, "I told you so."

Let's stick with the idea that global warming is a hoax and this time we enact policies to reduce carbon emissions, reduce methane releases by eliminating the expansion of agriculture into new pasture and forest areas, and increase public and private investment in agricultural research that enable farmers to use resources more efficiently, get more crop per drop of water, reduce the animal protein component in Western diets, and reduce market-level and consumer waste.

The worst case in this situation is that we spend a lot of money unnecessarily, increase the cost of fuel and other inputs, fail to increase farm size by opening up new areas, use fewer inputs, and have only marginal increases in output to show for all of our effort, though it is difficult to believe that we could make major investments in agricultural production and see no benefits. Traditionally, each dollar of research has

yielded multiple dollars in benefits for all farmers.

The best case scenario is we increase the fuel efficiencies of our farm equipment decreasing fuel consumption, increase yields, improve the drought tolerance of our crops, and reduce the total inputs required to produce a crop.

Now let's look at the situation where the predictions of global climate change are accurate and this change is human induced. Now, what are the possibilities if we have done nothing, either by choice or the paralysis of the political process in the US and elsewhere?

In this situation, the worst scenario case reminds us of the gag line in the old muscle car commercials where the sheriff would pull the speeding Dodge over, saunter up to the car and bend over to speak to the driver saying, "You in a heap o' trouble, boy!" As global temperatures increase, we will see greater weather variability, coastal fields are flooded or made unusable by salt water intrusion, crop yields decrease, food production decreases, the number of hungry people in the world climb as the death rate for children under five jumps significantly. By the time ag research caught up to this new reality, large areas currently under cultivation would be abandoned as farmers would be forced to buy land elsewhere or take a job in town, assuming a job were available. Food prices would skyrocket, leaving all consumers worse off.

By doing nothing when the predictions of global climate change are accurate, the best case scenario is one in which the "heap o' trouble" is not quite as high. Farms will still be abandoned, hunger will still increase and children under five will still die, albeit at a lower rate—not a situation any of us want to see.

Now suppose that climate change is real and we enact changes to mitigate the impact of increased temperatures. The worst case scenario is that we did not act quickly enough and global temperatures continue to increase albeit at a slower rate. Some locations will become un-farmable (this is true under almost all levels of response to climate change) while production will increase in others. We will still see an increase in hunger and death due to malnutrition, especially for those under five—the most vulnerable segment of the population.

The best case scenario is that we act quickly enough and with enough vigor to significantly slow the rate of climate change (see "Risky Business"). Most farmers will be able to continue where they are as they require fewer inputs, produce increased yields,

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and experience greater resilience to climate variability. If research into changes in production practices are pursued as vigorously for farmers in developing nations as developed nations, the level of malnutrition and death could actually decrease.

At this point we come out at the same place as the authors of "Risky Business." It does not matter if one thinks that climate change is real or a hoax. And, it only matters marginally whether climate change is the result of human action or part of the normal climate oscillation. We have everything to gain and little to lose if we begin to: 1) implement practices that would reduce the emission of carbon dioxide and other gases, 2) reduce our dependence on fossil fuels, and 3) increase the level of public and private investment in agricultural research.

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