

Alcohol and gasohol: are they practical?

"Alcohol can be manufactured from corn stalks and from almost any vegetable matter capable of fermentation: growing crops, weeds—even the garbage from our cities. We need never fear the exhaustion of our present fuel supplies so long as we can produce an annual crop of alcohol."

That's what Alexander Graham Bell said before a high school graduating class in Washington, D.C. in 1917. The idea is old and nearly universal. It appeared with the depression when farmers could not sell their products, and reappeared with each succeeding recession and fall in grain prices.

The logic made sense: the technology was there; alcohol was easily made by fermenting grain or other plant material, and it could be used for fuel either alone or in combination with ordinary gasoline. The mixture (in a 90 percent gasoline, 10 percent alcohol combination) is gasohol. But gasoline was cheaper than alcohol, and readily available. And, Americans adopted gasoline.

Now, Americans don't have enough fuel. In 1977, they drove 113.7 million cars and 12 trillion miles and burned 80.2 billion gallons of gas—and the number of cars, miles, and gallons is rising every year. And once again, gasohol is a potential solution. The key word is potential.

Alcohol costs more to make than gasoline.

Ethanol (alcohol which can be made from grains and other biomass) costs significantly more than gasoline, depending on the price of the grain. It takes energy to make the change from plant matter to alcohol, and then to mix the alcohol with the gasoline.

In addition, the production of alcohol to make gasohol for the U.S. would require systems similar to those required to make gasoline—transportation of raw materials and of alcohol, for example; and indirect costs:

taxes, profit, interest on debt, and the costs associated with creating, transporting, and marketing a substance that is both flammable and federally controlled. And the costs of the physical plants would be considerable.

To produce enough alcohol to make gasohol for the entire country, it would take 10 billion gallons of alcohol—the combined production capacity of 500 facilities, each producing 20 million gallons per year.

But with all of these costs, there are benefits.

Distillers dried grain, a by-product of the ethanol-producing process, is a fine, high protein animal feed. Ethanol enhances the octane rating of gasoline, and thus alleviates the problem of engine knock. Gasohol reduces some carbon monoxide emissions and, according to some scientists, can produce better mileage than straight gasoline. And, with increased technology, some scientists are confident that methods can be developed to produce alcohol using no more energy than is contained in the alcohol.

There are other unresolved areas: large quantities of grain, if diverted from the export market to produce alcohol, could affect the welfare of countries which depend on American agriculture for their food.

A well-meaning but ineffective tax incentive system to promote gasohol

might benefit shrewd investors more than America's farmers.

Finally, if more energy from oil or natural gas were used in producing gasohol than is contained in the gasoline, farmers could end up spending more, not less, in increased costs for fertilizer, feed or fuel. These are not problems yet.

Still, gasohol is a multifaceted issue with each part inextricably related to the others.

In addition, difficult decisions relating to the directions of future research are needed if technology is to advance.

For example: How feasible is the idea of creating alcohol with the aid of solar energy?

Could gasohol profitably be made from alcohol which has been made from coal?

What about biomass—could energy from this source economically change plant matter into alcohol?

Research into gasohol historically has taken many directions. But the prospect of readily usable technology, not past investment in gasohol research, must determine the direction this research will take in the future.

Gasohol could potentially contribute to the solution of America's energy dependence on foreign nations.

The challenge of gasohol is to help to create usable fuel where less existed before. In meeting this challenge,

American agriculture faces a critical choice; it can proceed in one of two directions.

The first direction is to pay the price entailed in seeking a way to make gasohol work for the American people. This money is like risk capital.

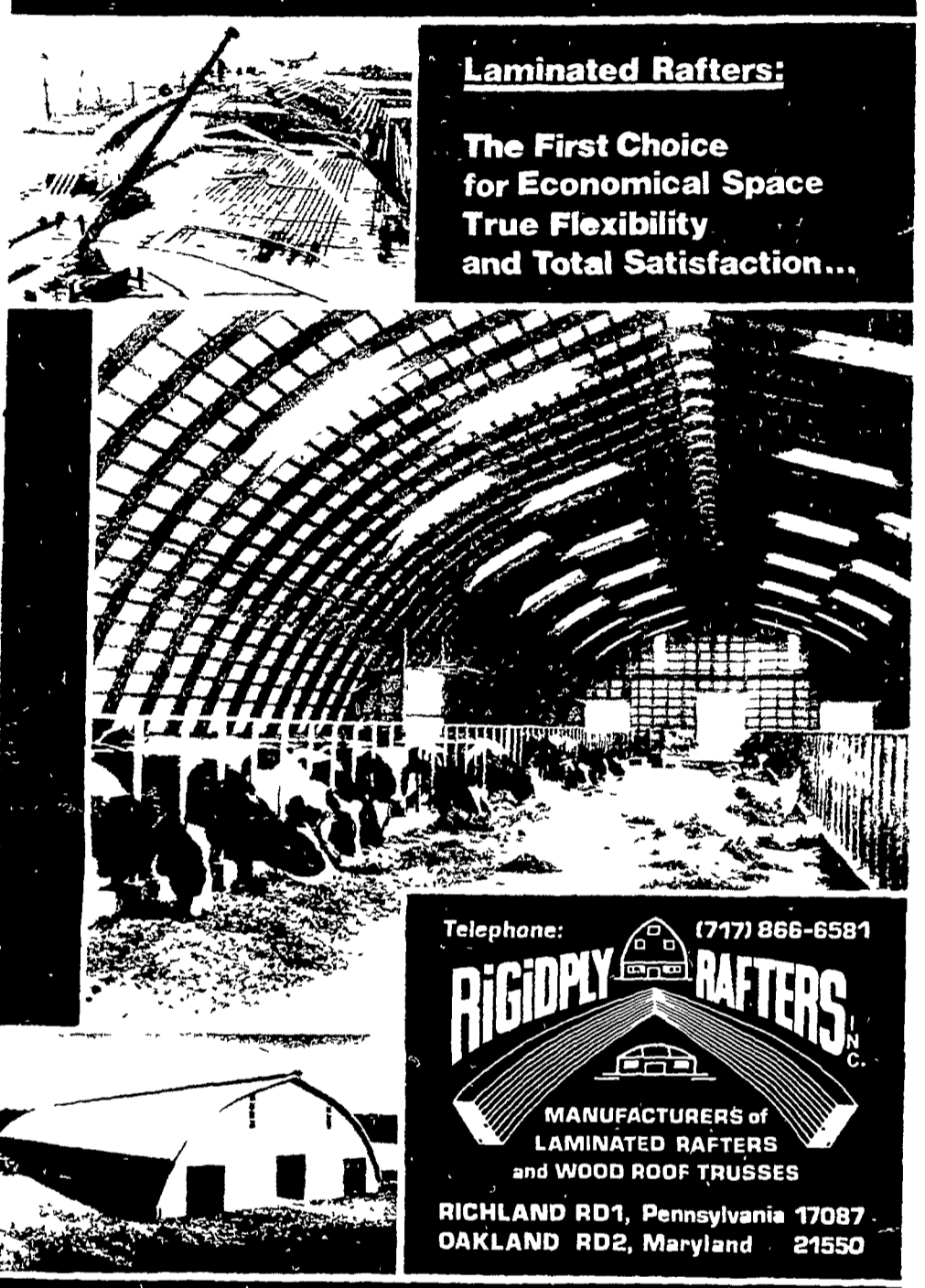
The research needed to develop the scientific, technological, and economic expertise which might bring gasohol to fruition requires a

serious, expensive commitment on the part of American agriculture and the American people. And there is no guarantee of success.

The second direction American agriculture could take is to do less than the research that would be required to learn just how valuable gasohol could be to America. This second choice involves the risk of missing the opportunity which

gasohol could represent. America could save the costs of research, of exploring ways that the system might be made to work. But if the potential does exist, and Americans fail to find it, then not only American agriculture but the entire country will be far more dependent on foreign nations than it would be otherwise.

America can well afford the first risk. It absolutely cannot afford the second.



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Protein testing rule delayed on wheat

A proposed rule that would provide protein testing on a request basis for all classes of wheat except for mixed and unclassified wheats has been delayed.


Leland E. Bartelt, administrator of the U.S. Department of Agriculture's Federal Grain Inspection Service, said the rule was originally planned to take effect in August, but a decision is now expected by May 1.

He said the delay will provide the agency time to fully consider all the public comments that were received on the proposal.

FGIS has been providing protein testing service for hard red spring wheats at export elevators since May 1978.

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