

*pd

93
sunday business - agri-biz col. - june 26, 1977 - page 1 <<

Agri-Business Column <<

*BC By Ferdie J. Deering

The realization that we are running short on fossil fuels came about the same time that population experts figured that the world will need twice as much food by 1999.

That means twice as much energy will be required to produce enough food, feed and fiber to supply our needs.

Pr
The sun will provide most of this, as photosynthesis is utilized by plants and animals. According to estimates by scientists, mankind uses between 5 and 10 per cent of the "net primary production of terrestrial plants."

This provides about 95 per cent of our energy needs, but limitations of depletable sources for the rest is critical.

Most discussions of energy ~~progr~~ problems focus upon depleted supplies, energy costs, fuel conservation and government control of industry and resources. They often miss the point.

The real issue is whether we will utilize energy resources we have available to eat well or hardly at all.

Nations which have abundant food are powerful. ~~"People~~
"People who have cheap energy can ~~can~~ command more of the earth's

MORE <<

*pd

sunday business - agri-biz col. - june 26, 1977 - page 2 <<

resources than those who do not," said Dr. G.M.Woodwell of Brookhaven National Laboratory. "Indeed, one of the advantages of having an abundance of energy is precisely this ~~con~~ control over other resources."

The apparent assumption that the United States can conserve our energy resources well enough to provide for needs is not generally accepted. Agriculture and other industries may be expected to conserve because it is good business to do so.

Efficient use of energy means that one man can feed as many as 5,000 cattle, milk 50 dairy cows, or raise 50,000 chicks. Farms in primitive societies, which use no fuels, require six times as much human labor per unit of output.

"Agriculture already has taken a step in fuel conservation, and that is a shift to diesel engines," says Dr. Jay Porterfield, head of ~~the~~ Oklahoma State University's Department of Agricultural Engineering. "Diesel engines have 50 per cent better efficiency than spark ignition engines."

Experts have recommended combination of trips over fields, reduced tillage, weed control by chemicals, and careful equipment maintenance and adjustment for fuel economy.

USDA Deputy Secretary John C. White has said that

MORE <<

*pd

sunday business - agri-biz col. - june 26, 1977 - page 3 <<

{ farm production takes less than three per cent of total U.S. energy used, but he called that "a critical three per cent."

The idea of compelling conservation by taxation on big cars and by making gasoline more expensive would not help the food situation. It would increase production costs without increasing fuel supplies. It could reduce food supplies.

Nevertheless, the economics of food and fuel cannot be ignored. This is the key to conversion of plant materials to make "gasahol", a blend of alcohol and gasoline, or to obtain methane gas from feedlot waste to be used as fuel.

Dr. J.G.Kendrick, professor of marketing, University of Nebraska, says if the price of oil should double, ~~it still~~
~~would cost about one-third~~ <<
gasoline made from it still would cost about one-third less than ethynol made from grain and "refiners can't see the sense in that."

"Our energy problem is, to a large extent, a capital ~~enol~~ problem," says Dr. William L. Hughes, director of ~~OSU~~ OSU's engineering energy research laboratory. "You can do a lot of things to produce energy, but you can't pay for some of them."

~~For example, Hughes says that although there is a~~

MORE <<

*pd

sundaybusiness - agri-biz col. - june 26, 1977 - page 4 <<

~~safety problem, hydrogen is "a great fuel". The trouble is that hydrogen is locked to oxygen and it takes as much energy to separate them as you get from hydrogen.~~

Another ~~consd~~consideration is the battle between government and business for the right to run the oil industry. Divestiture, if enacted, would prohibit an oil company from operating in more than one function of the petroleum industry.

This could affect farmers, says Frank N. Ikard, president of American Petroleum Institute. "The legislation could wreck the oil companies at a time when the companies need all the strength and efficiency they can muster for the ~~vital~~vital job of supplying farmers with enough gasoline, diesel fuel, propane, fertilizer and other petroleum products."

Oil industry spokesmen have warned that failure to balance U.S. energy supply and demand could result not only in shortages of energy, but also it could create shortages of food.

END OF SERIES

*ET