

MINUTES OF THE House COMMITTEE ON Transportation

The meeting was called to order by Representative Rex Crowell at  
Chairperson

1:30 ~~am~~/p.m. on February 28, 1984 in room 519-S of the Capitol.

All members were present ~~except~~:

Committee staff present:

Fred Carman, Office of the Revisor of Statutes  
Raney Gilliland, Legislative Research Department  
Donna Mulligan, Committee Secretary

Conferees appearing before the committee:

Mr. Bill Edds, Department of Revenue  
Mr. Paul Gurney, Kansas Department of Transportation  
Mr. Terry Ruse, Kansas Ethanol Association  
Mr. Richard Stowell, High Plains Corporation

Chairman Rex Crowell called the meeting to order and the first order of business was a hearing on HB-3060. Mr. Bill Edds of the Kansas Department of Revenue explained that HB-3060 increases the rates and schedule the Legislature adopted last legislative session allowing individuals to prepay their LP gas liability. HB-3060 brings the tax on prepaid LP gas in line with the other motor fuel tax increases passed in the 1983 session.

It was moved by Representative Erne to pass favorably HB-3060 and place it on the Consent Calendar. The motion was seconded by Representative Harper.

Representative Johnson stated he was against having the bill placed on the Consent Calendar, and Representative Erne withdrew his motion to place HB-3060 on the Consent Calendar with the consent of the second, Representative Harper.

The motion was made by Representative Erne to pass favorably HB-3060. The motion was seconded by Representative Harper. Motion passed.

The next order of business was a hearing on HB-3054, and Mr. Paul Gurney of the Kansas Department of Transportation clarified provisions in K.S.A. 1983 Supp. 75-5803 pertaining to contracts for engineering services. (See Attachment 1) Mr. Gurney related the Kansas Department of Transportation requests the changes in the statute contained in HB-3054 to permit agencies to establish cut off dates for the receipt of qualification statements.

Chairman Crowell asked Mr. Gurney if they have had previous problems with cut off dates. Mr. Ed DeSoignie responded that the only thing they are trying to do is provide for normal business-like procedures in receiving qualification statements. They are not trying to eliminate small firms or denying access to anyone.

The next order of business was HB-3070. Mr. Terry Ruse of the Kansas Ethanol Association testified in favor of HB-3070. (See Attachment 2)

Mr. Ruse reported that the ethanol industry in Kansas has a tremendous growth potential, if given the opportunity to mature. Mr. Ruse stated that the Kansas Ethanol Association supports passage of HB-3070 because it encourages privately financed ethanol production in the State of Kansas, which benefits the agricultural community and the local communities where plants are located, in addition to the added plus of reducing dependence on imported oil. He added it reduces the net outflow of Kansas tax dollars to other non-Kansas economies, creating a long term growth atmosphere for the Kansas Ethanol Industry.

CONTINUATION SHEET

MINUTES OF THE House COMMITTEE ON Transportation,  
room 519-S, Statehouse, at 1:30 ~~xx~~ m./p.m. on February 28, 1984

Mr. Richard Stowell, President, High Plains Corporation gave testimony favorable to HB-3070. (See Attachment 3) Mr. Stowall told the committee that in the late 1970's, ethanol was perceived as a motor fuel extender and a means of combating the expensive importation of foreign crude oil, and today ethanol has proven itself in the market place as a high quality octane enhancer which burns cleaner and has lower noxious emissions than any other motor fuel additive currently in commercial use.

Mr. Stowell advised that his corporation supports passage of HB-3070 because they feel the existing motor fuel tax incentive which currently exists in Kansas is an essential ingredient for this industry for several years ahead and he added, they also recognize that if the state is going to provide an incentive for one of its industries, the resulting economic benefits from the incentive should remain largely in the state.

This ended the hearing on HB-3070.

The next order of business was committee discussion and action on HB-2857. Representative Knopp who was appointed chairman of the sub-committee to study HB-2857, reported that Representatives Adam, Johnson and himself met with the Department of Revenue and an optometrist to attempt to work out a solution to this problem. Representative Knopp stated the Department of Revenue indicated they weren't comfortable with a bill that gives their examiners discretion. They wanted some kind of an objective standard rather than a subjective standard.

A motion to table HB-2857 was made by Representative Wilbert. The motion died for lack of a second.

The next order of business was HCR-5057. It was moved by Representative Johnson to pass HCR-5057 favorably. The motion was seconded by Representative Harper.

Representative Johnson made a substitute motion to amend Line 27, to delete the word "war" and substitute "military" in its place. The motion was seconded by Representative Moomaw. Motion passed.

Representative Johnson made a motion to recommend HCR-5057 favorable for passage as amended. The motion was seconded by Representative Harper. Motion passed.

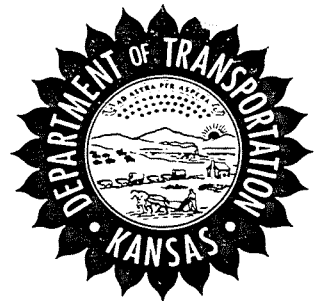
The meeting was adjourned at 3:00 p.m.

  
Rex Crowell, Chairman



# KANSAS DEPARTMENT OF TRANSPORTATION

STATE OFFICE BUILDING—TOPEKA, KANSAS 66612



JOHN B. KEMP, Secretary of Transportation

JOHN CARLIN, Governor

MEMORANDUM TO: House Transportation Committee  
FROM: Kansas Department of Transportation  
DATE: February 28, 1984  
REGARDING: House Bill 3054

House Bill 3054 was requested by the Department to clarify provisions in K.S.A. 1983 Supp. 75-5803 pertaining to contracts for engineering services.

These provisions require agencies to accept any and all qualification statements that may be submitted by interested firms. The statute per se, does not allow agencies negotiating such contracts to establish cut off dates for the receipt of qualification statements. Qualification statements can be submitted even up to the time when the contract negotiations are being finalized.

This requirement could produce delays in finalizing of contract negotiations.

The Kansas Department of Transportation requests the amendments in H.B. 3054 to permit the agency to establish cut off dates for the receipt of qualification statements.

The agency asks that the Committee report H.B. 3054 as favorable for passage.

*Attach 1*



**KEA**

**KANSAS  
ETHANOL  
ASSOCIATION**

TESTIMONY ON HB #3070 - 2/28/84

House Transportation Committee  
State Capitol Building  
Room 519 S  
Topeka, Kansas

Mr. Chairman, members of the Transportation Committee. My name is Terry Ruse and I'm here today representing the Kansas Ethanol Association in support of H.B. 3070.

The ethanol industry in Kansas is a fledgling industry with tremendous growth potential, if given the opportunity to mature. But like many of our country's great industries, incentives have been necessary until the newly produced product achieves natural parity in the marketplace, with the products it competes against.

The Federal Government fostered the creation of the alternative fuels industry, and specifically the ethanol industry, as a result of the oil embargo of 1973. It reasoned, that if the United States ever hoped to achieve energy independence, a renewable, alternate energy source must be developed.

Towards this end, the Federal motor fuels excise tax incentive and approximately 35 state motor fuel tax incentives were legislated to generate private investment in production facilities that would provide a product to displace foreign crude oil imports and create a stable, domestic market for surplus agricultural products.

Because of this Federal and State commitment to the ethanol industry, private investors accepted the challenge to build production facilities in Kansas, entirely with private funds, to bring to market a premium quality, renewable energy source.

The Kansas Ethanol Association believes that large quantities of imported ethanol from Brazil and giant producers outside of Kansas, endanger these Kansas investors through a non-return, exit of Kansas tax dollars, providing benefits to economies and agriculture outside the State.

Brazil exported approximately 60,000,000 gallons of ethanol to the U.S. in 1983 at a price 50¢ per gallon below their own domestically subsidized selling price. This allowed their product to land in the U.S. at about \$1.40 per gallon, clearly allowing them a competitive advantage that no Kansas or U.S. producer could duplicate profitably.

The net result is pressure on the state treasury, due to tax incentives paid on ethanol, without the resulting return benefits to Kansas farmers, communities and the State of Kansas.

Investment in Kansas ethanol production has created approximately 477 directly related jobs and 576 indirectly related positions. Additional planned production will generate another 447 direct and 672 indirect jobs. Grain consumed by existing production amounts to approximately 7,200,000 bushels annually with another 8,400,000 bushels projected annual consumption to be utilized by additional plants that are presently on the drawing board.

The USDA estimates that the price of grain increases 7¢ to 12¢ per bushel for every 100,000,000 bushels of grain diverted from normal market channels to ethanol production. This could mean additional income to a very vital segment of the Kansas economic system thus creating a stronger state, financially.

In closing, the Kansas Ethanol Association supports passage of HB #3070 because it encourages privately financed ethanol production in the State of Kansas, which benefits the Agricultural community and the local communities where plants are located,

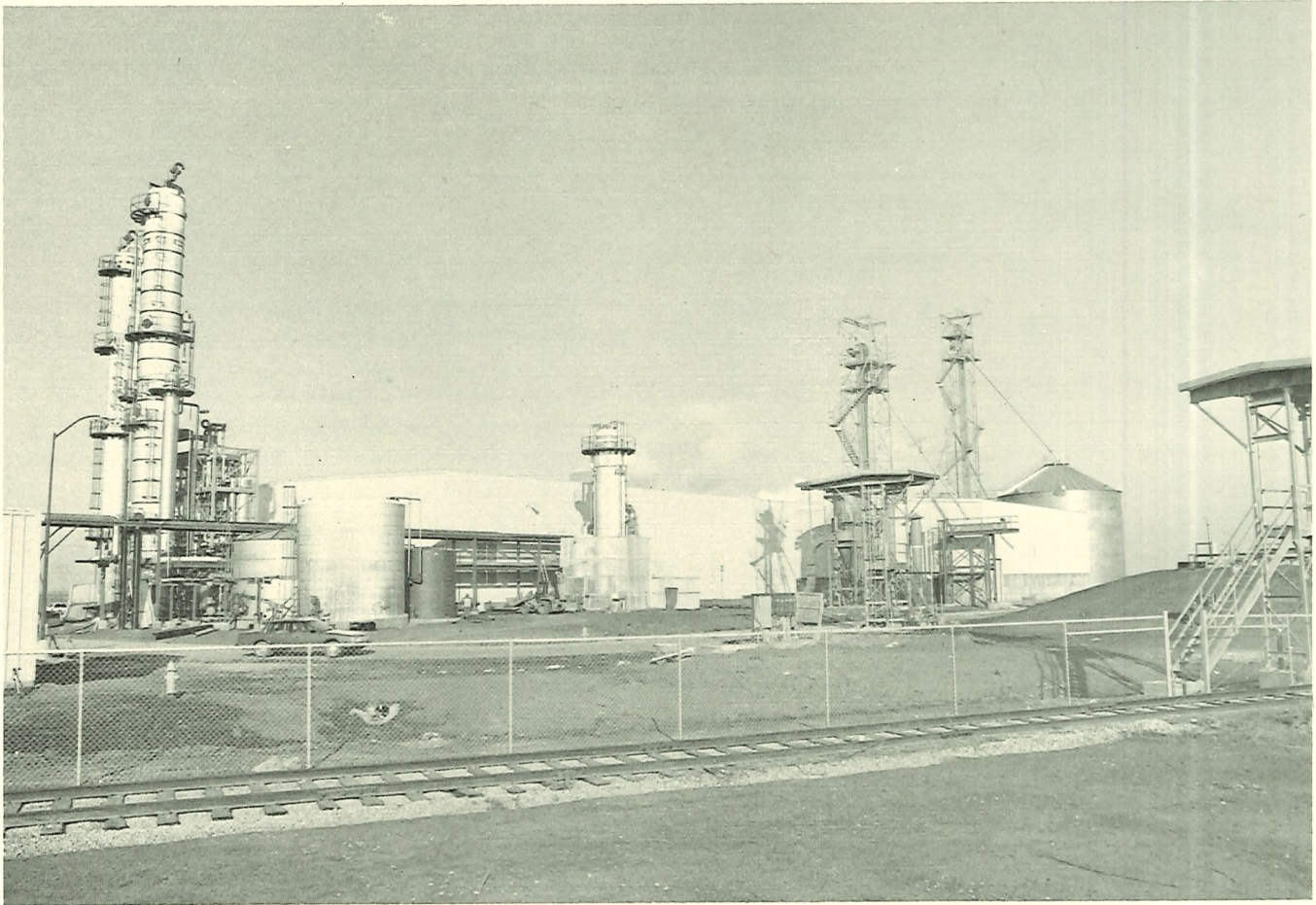
in addition to the added plus of reducing dependency on imported oil. Additionally, it severely reduces the net outflow of Kansas tax dollars to other non-Kansas economies, creating a long term, growth atmosphere for the Kansas Ethanol Industry.

A handwritten signature in cursive script, appearing to read "Terry A. Ruse".

Terry A. Ruse  
President



# ETHANOL PRODUCTION



## HIGH PLAINS CORPORATION PLANT — COLWICH, KS

- Approximately 4 million bushels annual grain consumption.
- Home owned by over 700 Kansas residents.
- \$480,000.00 annual payroll generation.
- \$20,000,000.00 investment — privately financed.
- 10,000,000 gallons per year production.
- \$40,000,000.00 contribution to State economic activity.

FOR FURTHER INFORMATION CALL THE KANSAS ETHANOL ASSOCIATION AT (316) 262-4035

KANSAS ETHANOL ASSOCIATION  
LEGISLATIVE POSITION PAPER

PROBLEM

1. Kansas faces losses of tax revenues in support of non-Kansas ethanol producers (domestic and foreign) who are selling ethanol in Kansas. Since the Kansas incentive has been implemented to encourage Kansas ethanol production and the associated use of Kansas grain, it should be used to the economic advantage of Kansas ethanol producers and grain growers and not unnecessarily benefit those producers outside of the state or country.
2. In order to provide a stable economic climate for ethanol producers and to recoup their new and extensive capital investment, the current 5 cents per blended gallon exemption should be extended to 1992, to parallel the Federal tax exemption.
3. Methanol is confused with Ethanol.

RECOMMENDATION - To minimize loss of tax revenues and make the incentive work for Kansas producers and farmers as intended, the Kansas laws should be revised as follows:

1. Restrict the eligibility for tax credits to ethanol produced from plants no larger than 17,000,000 gallons, utilizing feed stocks of agricultural products produced in the U.S (this has been successfully done in Colorado - House Bill 1188).
2. Require gasoline pump labeling for methanol and ethanol.
3. Define and clarify power ethanol, as it relates to the denaturant when that denaturant is unleaded gasoline, to ensure that the ethanol blend qualifies for the tax credit by percentage volume (the intent of the law), when it is in fact by weight less than 10%. (currently the State Weights and Measures Division tests of 10% ethanol blends by volume indicate less than 10% by weight).

## ETHANOL FACTS

### I. WHAT IS ETHANOL?

- a. Ethanol is 200 proof (100% anhydrous alcohol) used as a motor fuel additive by blending 90% gasoline with 10% ethanol. This blended mixture use to be referred to as "Gasohol": It is now called Super Unleaded or Unleaded, with ethanol added.
- b. Ethanol blended fuels burn cleaner with lower noxious emissions and have up to a 3 point higher octane rating than unleaded fuels.
- c. Ethanol is approved for use by almost all domestic and foreign automobile manufacturers.
- d. Ethanol should not be confused with methanol. Methanol, also known as "wood alcohol" is made from natural gas and can be highly corrosive to plastic and rubber parts in automobile engines.

### II. HOW IS ETHANOL PRODUCED?

- a. Ethanol is produced from the fermentation of bio-mass material, most notably corn, milo and other grains.
- b. One bushel of milo will produce 2.5 gallons of ethanol plus 17 pounds of distillers dry grain (DDG). DDG has as much as 30% protein content and is used as a livestock feed.
- c. A ten-million gallon ethanol plant will consume 4-million bushels of grain annually.

### III. THE IMPORTANCE OF ETHANOL FUEL

- a. Production of ethanol is a vital new market for surplus grain. The USDA estimates for every 100,000,000 bushels of grain diverted from food use, approximately 7 to 12¢ per bushel will be added to market prices.
- b. Ethanol is a renewable fuel while petroleum resources, which are rapidly being depleted throughout the world and Kansas, are not.
- c. Ethanol can provide one alternative source of energy to help reduce the nation's and Kansas' reliance on petroleum resources. For every gallon of ethanol produced and sold, a gallon less which needs to be imported.

### IV. THE U.S. ETHANOL INDUSTRY

- a. The ethanol industry was born in the late 1960s in response to America's gasoline shortage. In 1978, ethanol blends were marketed for the first time at the retail level. In that year, motorists used 40-million gallons of ethanol.

- b. By the end of 1983, the ethanol industry had increased nearly ten times to a projected annual sales level of 380-million gallons sold by over 70 ethanol manufacturers located throughout the United States. Most producers are in the Midwest. Twelve large companies account for nearly 80% of total ethanol sales, which include the involvement of Texaco, Ashland Oil, Chevron and Archer Daniels Midland.

V. ECONOMICS

- a. Since it costs more to produce a gallon of ethanol than a gallon of gasoline, the ethanol industry has needed tax subsidies from Federal and State governments. The Federal government provides a 5¢ per gallon reduction on Federal Motor Fuel Tax for each gallon of ethanol blended fuel sold. This law expires in 1992. Additionally, 35 states have separate tax incentives which range from 2¢ to 11¢ per gallon.

VI. THE KANSAS ETHANOL INDUSTRY

- a. The ethanol industry in Kansas is relatively new and is represented by the Kansas Ethanol Association. The industry consists of four companies and two additional companies are expected to be in production within the next 18 months.

<u>Current Producers</u>	<u>Plant Location</u>	<u>Annual Capacity</u>
Reeves Cattle Co. (Garden City)	Garden City	1,500,000 Gal.
ESE Alcohol (Leoti)	Leoti	500,000 "
Midwest Solvents (Atchison)	Pekin, IL	6,000,000 "
High Plains Corp.	Colwich	10,000,000 "
<u>Potential Producers</u>		
Circle Energy	Garden City	15,000,000 Gal.
Farmers Fuel & Grain	Liberal	6,000,000 "

- b. Within the next two years, the Kansas' ethanol industry may produce approximately 40-million gallons of ethanol and 148,000 tons of DDG.
- c. The industry will consume 16-million bushels of grain annually, directly employ 160 people in production, create 990 new jobs in supporting industries and generate \$160-million in economic activity for State.

C" cc. Terry Ruse  
PROPOSED RFA POSITION REGARDING

PUMP LABELING

FOR ALCOHOL CONTENT

PRESENTED BY:

RFA SUB-COMMITTEE ON FUEL LABELING

MR. HOWARD HINTON, MIDWEST SOLVENTS, CHAIRMAN

MR. RONALD MILLER, PEKIN ENERGY COMPANY

MR. ROBERT REYNOLDS, THE SOUTHLAND CORP.

DECEMBER 8, 1983

CHICAGO, IL.



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PROPOSED RFA POSITION REGARDING  
PUMP LABELING  
FOR ALCOHOL CONTENT

1. INTRODUCTION -

The RFA representing producers, marketers, and others affiliated with the fuel ethanol industry believes the consuming public has the right to be informed about the products they use. Specifically, the consumer using motor fuels that contain any blending agents added for octane enrichment or gasoline extension, has the right to know which blending components were used in preparing the fuel being purchased.

Such information will help determine that the fuel being used will not adversely affect the automobile warranty. Also, providing this type information on the pump will help protect the public from unscrupulous dealers that may use illegal and harmful quantities of blending additives to make excessive profit.

2. BACKGROUND -

Pump labeling has a long history dating back to the time when the disclosure of the addition of tetra-ethyl lead was required. Therefore, the labeling of pumps is not a new concept.

Furthermore, the regulating arm of the various states are inclined toward the concept of "consumer protection". Moreover, many states are now requiring pump labels which identify certain additives included in the gasoline. Thus, a nationwide requirement that alcohol blends be labeled for identification is probable.

While the consumer is not likely to differentiate between types of alcohol (ethanol vs. methanol) or even other additives, the automobile manufacturers (through the warranty provisions on their products) may force the fuel

purchasers to be aware of the alcohol additive type and amount to protect the warranty. Public psychology may be such that identifying the specific quantity of additive would not work to the favor of the ethanol industry. Therefore, the specific pump label language needs to provide information about the additive content without listing a specific amount.

One organization widely recognized for developing product standards which help provide performance information for consumer protection is the American Society for Testing & Materials. Their standards are quite specific in terms of product quality and have been proven to be the accepted norm for all motor fuels. Currently, ASTM is in the final stages of preparing standards, when published, will become a controlling influence on gasoline-alcohol blends. Therefore, it is appropriate that all pump label language reflect the need to meet these standards.

### 3. CONCLUSIONS AND RECOMMENDATIONS -

Upon completing the study of the pump labeling issue, the committee has the following conclusions:

1. A requirement that all fuel pumps at retail outlets be labeled to identify the presence of any alcohol additives is eminent.
2. It is to the benefit of RFA to support and direct the efforts of pump labeling proponents and to support a requirement to identify the type of alcohol blended in the gasoline.
3. Due to mass marketing considerations, label language can't be too specific regarding content amounts.
4. For consumer protection, all motor fuels should meet acceptable standards, such as ASTM. Therefore,

all pump label language should reflect that fact.

It is the recommendation of this committee that the RFA adopt the following position regarding gasoline pump labeling.

1. The RFA strongly supports the concept of labeling gasoline pumps to identify the presence of alcohol blending agents.
2. The RFA believes the public good is best served if label language (while kept simple) identifies the type alcohol used and that the fuel has been blended to conform to ASTM specifications.  
(See sample label language attached.)
3. The RFA believes the public is entitled to reasonable disclosures of the contents of the motor fuel purchased. Therefore, the RFA encourages all marketers to adequately test their product and provide detailed information about blending components to consumers upon request.
4. We suggest that the President of RFA be directed to inform the appropriate groups and the public interested in pump labeling of this position in whatever manner deemed appropriate.

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CONTAINS  
ETHANOL  
Octane Enhancer  
Conforms to  
ASTM Specifications

4"

4"

CONTAINS  
METHANOL  
Octane Enhancer  
Conforms to  
ASTM Specifications

4"

4"



AN INDUSTRY REPORT BY THE RENEWABLE FUELS ASSOCIATION

ETHANOL.  
PERFORMING FOR AMERICA.







1978.

The fuel ethanol industry was born in the late '70's as a reaction to America's gasoline shortage. There is no serious shortage at the moment. But the ethanol industry is here to stay.

The fuel ethanol industry will produce 400 million gallons of fuel alcohol in 1983. That ethanol will be added to gasoline at a 10% level to produce the high octane fuel needed in today's motors. This translates into 4 billion gallons of high quality motor fuel for the nation in 1983, or 4 percent of our total gasoline needs.

As a friend to farmers, as a provider of jobs and economic growth, as a contributor to a cleaner environment, as a bolsterer to national security, the fuel ethanol industry is performing for America. In fact, one of the great success stories of American industry, agriculture and government has been written in the last five years.

In June, 1978, "gasohol" was marketed for the first time at the retail level. In that first year, the nation's motorists used 400 million gallons of ethanol-enhanced fuel. Just five years

later, it had increased 10 times over.

In 1978, it was called gasohol. Some people still ask, "Whatever happened to gasohol?" The answer: It's now called super unleaded or super regular with ethanol. It accounts for four percent of the nation's gasoline market, and it's growing fast.

What's more, the product has rapidly been accepted. All of the nation's major auto manufacturers include the use of ethanol-enhanced fuel in their warranties.

A major factor contributing to the growth of fuel ethanol consumption has been ethanol's dual role as fuel extender and octane enhancer. A 10-percent ethanol blend with gasoline increases octane ratings an average of three points. With the demand for premium unleaded fuel expected to represent 20 percent of the market by 1990, the need for an octane booster is obvious.

There are more than 80 fuel ethanol production facilities throughout the country. Right now, the fuel ethanol industry is increasing demand for our agricultural production. Right now, it's providing





POWERED BY  
**SUPER UNLEADED**  
WITH ETHANOL

1983.

thousands of jobs in plant operations, construction, steel fabricating and many other industries. Right now, the industry is reducing oil imports. Right now, it's replacing fuel products that damage our air, land and water. Right now, it's helping our national security.

Gasoline shortages made Americans realize their national security was threatened by dependence on foreign oil. As a result, the nation began looking for new domestic fuel sources. The fuel ethanol industry responded with millions of dollars of private investment and millions of gallons of high octane additives.

In contrast, multi-billion-dollar fuel projects such as oil shale have faltered, despite government assistance.

The incentives provided the fuel ethanol industry are a textbook example of successful cooperation between the government, agriculture, and industry. These incentives have stimulated a marketplace demand sufficient to justify massive private investment. New production technologies, such as the continuous fermentation process and new yeast and enzyme strains, are making the

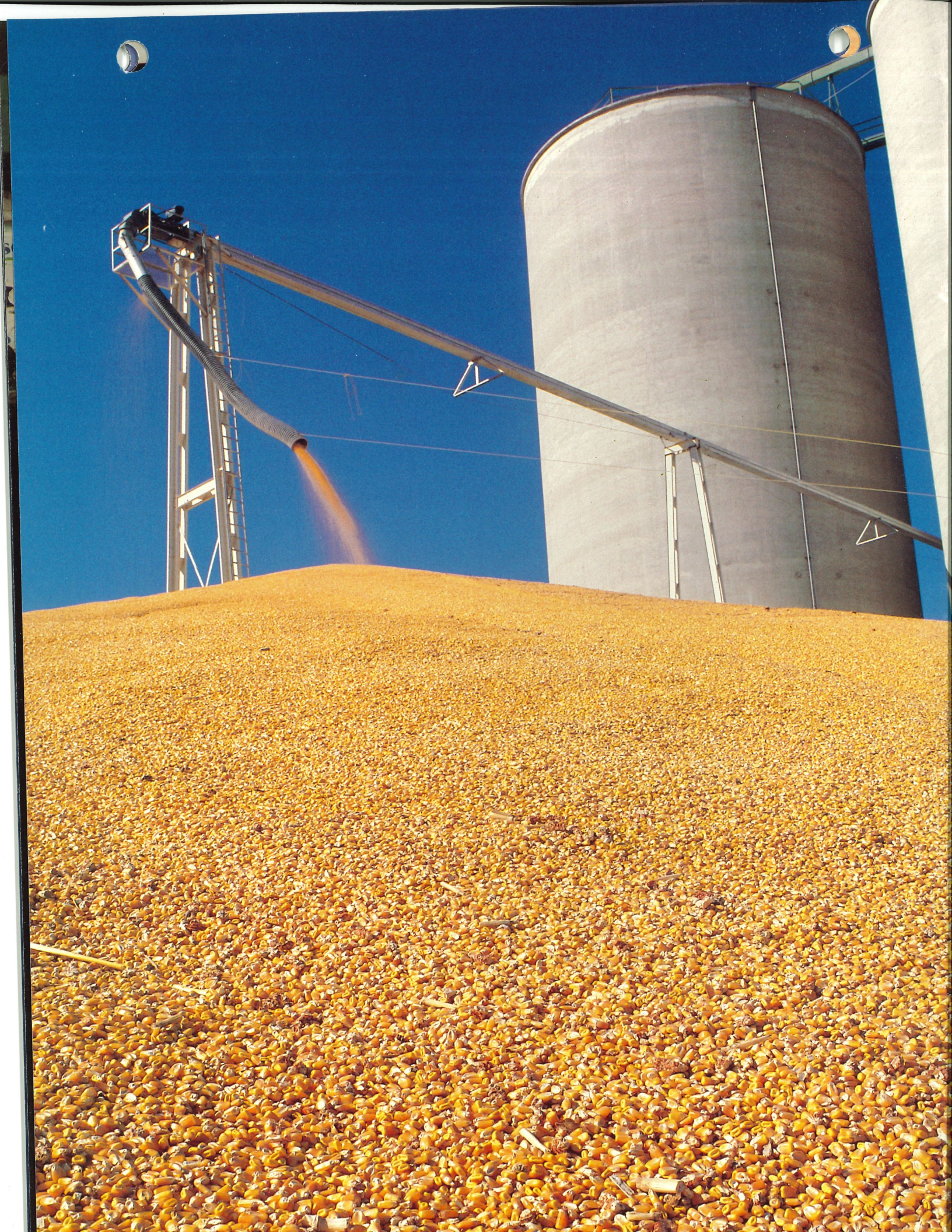
industry more efficient and more competitive. This is exactly what the fuel ethanol industry said could happen. But instead of talking, the fuel ethanol industry has invested, produced, employed, and improved. And this American success story is just in its infancy.

APPROVED USE OF ETHANOL FUELS\*

✓ CHEVROLET	✓ CADILLAC
✓ FORD	✓ MAZDA
✓ OLDSMOBILE	✓ VOLKSWAGEN OF AMERICA
✓ TOYOTA	✓ SUBARU
✓ PONTIAC	✓ AMC
✓ NISSAN	✓ CHRYSLER IMPORTS
✓ CHRYSLER/PLYMOUTH	✓ VOLKSWAGEN
✓ LINCOLN MERCURY	✓ VOLVO
✓ HONDA	✓ MERCEDES BENZ
✓ DODGE	✓ AUDI

\*TOP TWENTY U.S. AUTO MARKETERS







# A NEW MARKET FOR FARMERS, RIGHT HERE AT HOME.

American farmers grew over 8 billion bushels of corn in 1982. That was the second record harvest in a row, a testament to our agricultural efficiency. But this incredible productivity was bad news for farmers and taxpayers, because sufficient commercial markets did not exist. In fact, three-and-a-half-billion bushels of corn from previous years were sitting in storage at the beginning of 1983. That's nearly 40 percent of our own annual needs. These grain surpluses lowered prices, squeezed farm income, and raised government expenditures needed to support this important industry.

Agriculture is like a factory, employing about 20 percent of U.S. workers. Lack of demand wastes the productive capacity of land, workers, water, energy, and fertilizers—everything that goes into crop production. As a result of the surpluses, the government, through PIK, paid farmers to keep land idle. PIK caused the surplus to fall, but other workers who depend on farmers for their own livelihood will suffer. A Georgia state economist estimates as many as a quarter million agricultural jobs may have been lost due to PIK.

The government has spent millions supporting agricultural research and education to achieve higher levels of productivity. But there is no complementary government policy to take full advantage of productivity.

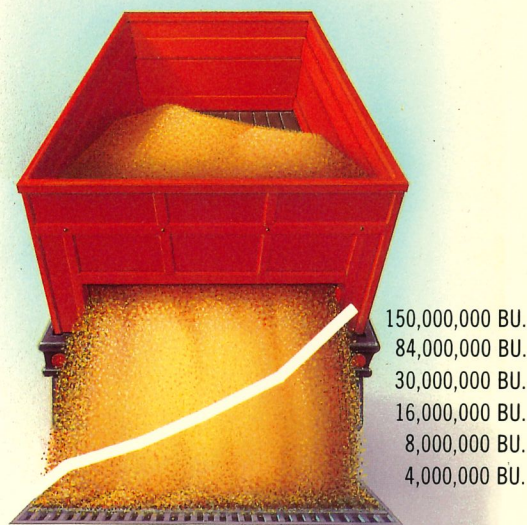
As a result of the expansion of the market for farm products to include energy, as well as food and feed, the fuel ethanol industry has demonstrated its ability to reduce surpluses and move us toward restoring the balance of supply and demand.

A healthy, growing fuel ethanol industry will help in developing a stable, permanent outlet for U.S. agricultural products right here in the U.S. In the crop year 1982, fuel ethanol consumed just under 100 million bushels of corn. This raised the market price of corn an average of five cents a bushel. This, in turn,

saved the federal government more than \$150 million in deficiency payments to farmers.

While the U.S. was forced to pay farmers not to produce in 1983 to reduce surplus, the long term needs for food production cannot be overlooked. For this reason the nutritional co-products of ethanol production are especially meaningful. Each 56-pound bushel of corn, when processed in a wet mill, yields 2½ gallons of ethanol; 12.5 pounds of 21-percent protein feed; 3 pounds of 60-percent protein gluten meal; and 1.7 pounds of edible corn oil. Dry mill processing results in some 17 pounds of feed by-product. In both cases, only the starch is used to produce the fuel ethanol.

All of the original protein, vitamins, and minerals from the corn are retained in a concentrated product one-third the weight of the bulk grain. This product is used both here and abroad for food and animal feed. There is no "food versus fuel" tradeoff because the nutritional components of greatest need throughout the world—protein and calories—are separated and redirected into the food chain. In fact, concentrating the valuable food components will improve U.S. capabilities to provide food aid.



1978 1979 1980 1981 1982 1983\*  
CORN USED FOR ETHANOL PRODUCTION

\*Projected







# AN ENERGY SOURCE THAT KEEPS ON GROWING.

Americans want to produce their own energy so they're not dependent on foreign suppliers. One way to do this is by replacing non-renewable sources, such as oil, with renewable sources, such as ethanol. A million bushels of grain used to produce ethanol this year can be replaced by another million bushels grown next year on the same land.

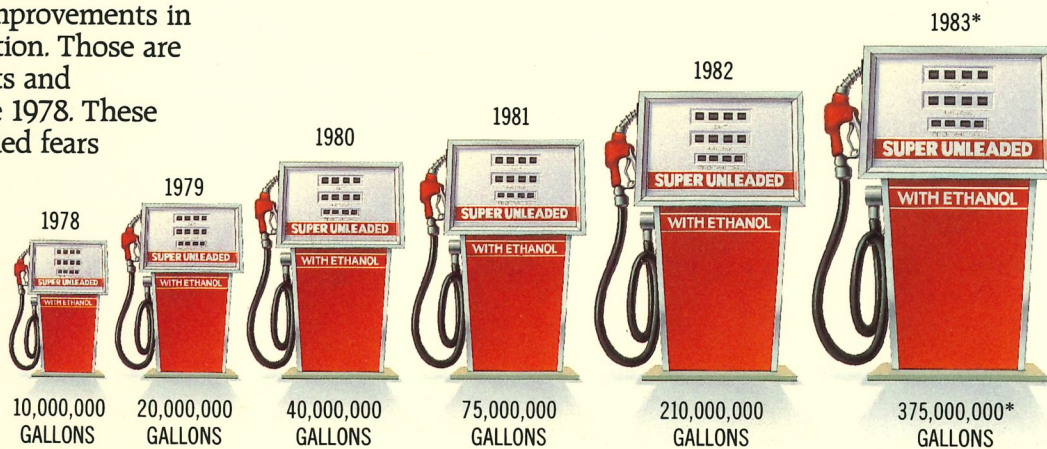
The rapid acceptance of fuel ethanol and the growing demand for it have stimulated private investment in research and development. The early results of this research have been new technology which is increasing industry efficiency. Advanced strains of yeast and enzymes and continuous fermentation engineering have shortened fermentation time. Heat exchange and advanced heat recovery equipment have improved the efficiency of production. The availability of waste heat and CO<sub>2</sub> have led to significant improvements in hydroponic vegetable production. Those are just some of the new products and technologies introduced since 1978. These advances already have dispelled fears that fuel ethanol production would use more energy than it produced.

In 1982, the U.S. Departments of Agriculture and Energy found that "the energy balance in a modern,

well-managed facility is 1.5:1, or a yield of one-and-a-half times the energy used," including the energy needed to plant, fertilize, irrigate, harvest, and transport the crop.

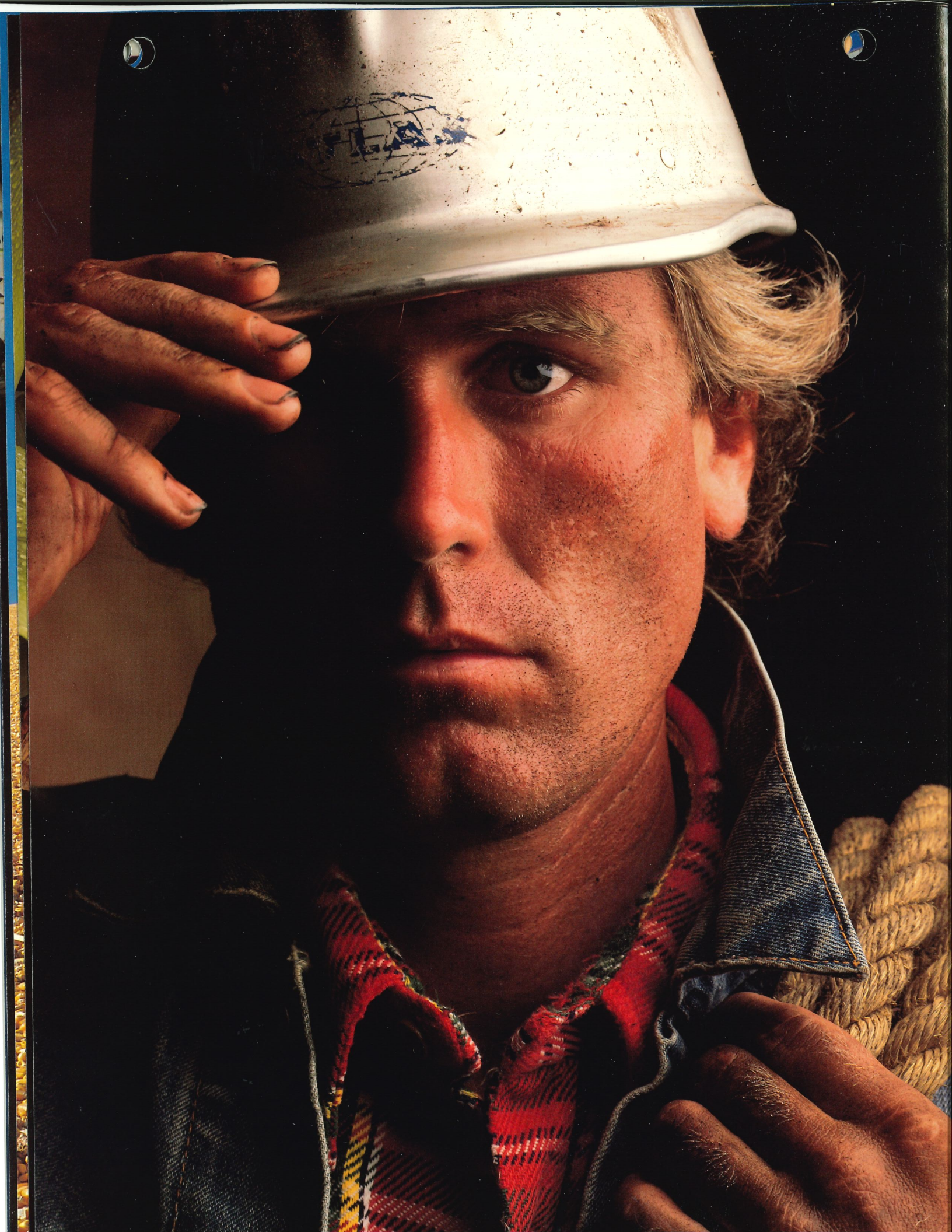
Continued technological advances will improve the viability of fuel ethanol production from a whole new set of raw materials. Even today, the 80-plus ethanol production facilities are using feedstocks as diverse as citrus wastes, forestry residues, and cheese whey. As has always been the case, American ingenuity has demonstrated its ability to respond to demand. And it's just beginning.

U.S. ETHANOL PRODUCTION



\*Projected







# WHEN THE ETHANOL INDUSTRY WORKS, SO DO A LOT OF OTHER PEOPLE.

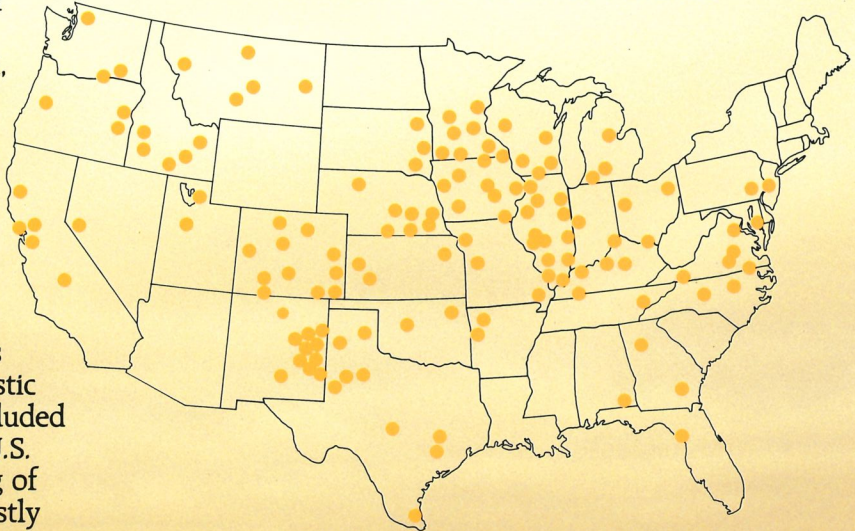
The fuel ethanol industry is one of the few which can boast of creating new jobs during a time of severe unemployment. Four years ago, there were only a handful of jobs in the fuel ethanol industry. Today, thousands of Americans are at work supporting more than 80 production facilities throughout the nation. Roughly one job is directly created for every 100,000 gallons of ethanol produced. This means at least 4,000 direct jobs in 1983.

Work created indirectly adds to this number. A 1981 Oak Ridge University report shows that each 50-million-gallon-per-year ethanol plant creates about 640 jobs for farm workers who plant and harvest corn, and about 24 jobs for truck drivers who transport the raw and finished products. When the fuel ethanol industry reaches a capacity of five billion gallons a year, Oak Ridge estimates 100,000 workers will be earning \$450 million annually.

Employment Research Associates of Michigan projected 960,000 jobs from the construction and operation of facilities in a 12-billion-dollar, 6-billion-gallon domestic fuel alcohol industry. This study also concluded that the investment of \$12 billion in the U.S. economy would result in an annual saving of \$9.6 billion, due to the "backing out" of costly foreign oil imports.

The fuel ethanol industry jobs will be spread around, too. Unlike other energy facilities such as oil shale, which must be centralized, and must be developed on a large scale with billion-dollar investments, ethanol production facilities can be decentralized, and can be almost any size. Production can be geared up quickly with today's technology, and with a comparatively low investment.

U.S. ETHANOL PRODUCTION FACILITIES



Under construction by New Energy Company of Indiana is a 52 million gallon per year ethanol plant in South Bend, Indiana.















# A SUPPLY OF FUEL WE CAN COUNT ON WHEN WE CAN'T COUNT ON ANYONE ELSE.

Admiral Thomas H. Moorer (USN-Ret.), former Chairman of the Joint Chiefs of Staff, testifying before Congress last September, had this to say:

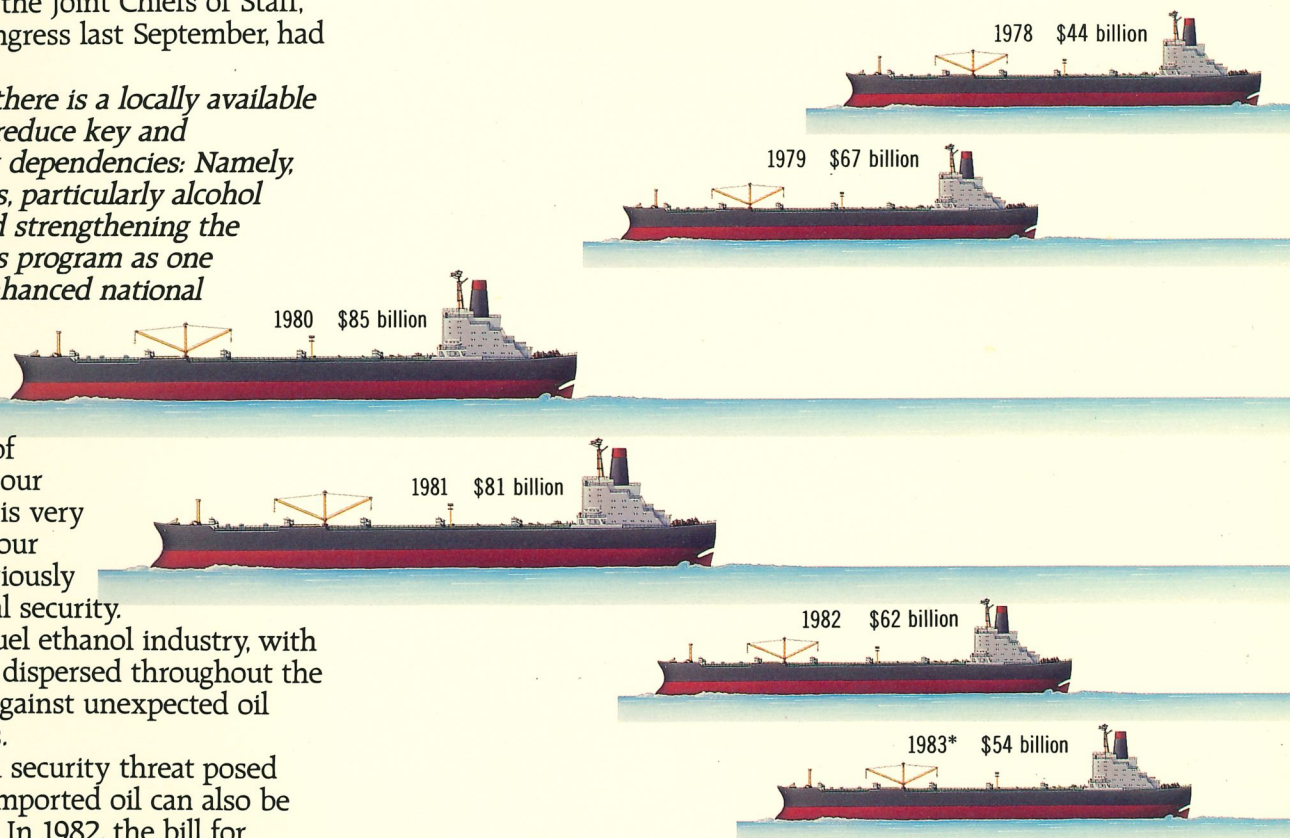
*"Fortunately, there is a locally available insurance policy to reduce key and potentially crippling dependencies: Namely, farm energy systems, particularly alcohol fuels...I recommend strengthening the nation's alcohol fuels program as one component of an enhanced national security posture."*

Lines at gas stations are gone for the moment. But the probability of future disruption in our imported oil supply is very real. Curtailment of our oil supply would seriously threaten our national security.

A growing fuel ethanol industry, with production facilities dispersed throughout the country, is a buffer against unexpected oil supply interruptions.

The national security threat posed by dependence on imported oil can also be measured in dollars. In 1982, the bill for imported oil came to \$62 billion. That's money that could have been better expended in this country to stimulate investment, business and jobs.

## U.S. EXPENDITURES ON FOREIGN OIL



\*Projected





USE LOCAL  
TO EXIT AT  
Greenfield Rd  
Schaefer Hwy  
d River Ave  
Wyoming Ave

14' 0"

14' 3"

Fullerton



# YOU CAN BREATHE EASIER WITH ETHANOL AROUND.

Americans want a clean and safe environment. Using fuel ethanol contributes to that goal.

Automobiles that run on a blend of 10-percent ethanol and 90-percent gasoline show significantly reduced hydrocarbon and carbon monoxide tailpipe emissions. A Department of Energy study of the findings of 26 various fleet tests of alcohol/gasoline blends, such as those of Illinois Bell and the State of Colorado, reported the following:

"One fairly consistent finding was that gasohol produced fewer emissions of two regulated pollutants...carbon monoxide and hydrocarbons...than did unleaded gasoline. In most cases, carbon monoxide emission reductions were fairly dramatic—a decrease of 25 percent or greater with gasohol than with unleaded gasoline."

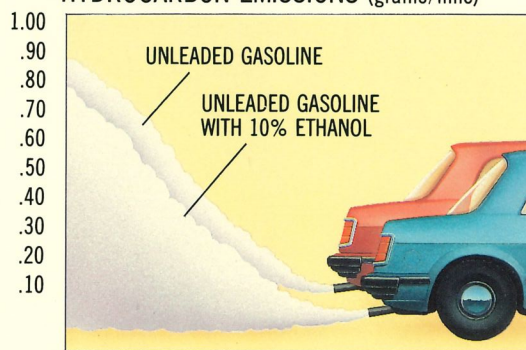
In addition, the production of fuel ethanol doesn't pose any of the threats to land, air, and water that are present in many of the other alternative energy products.

Ethanol's growing acceptance as an octane-enhancing additive makes it a logical replacement for lead in gasoline. The health dangers of lead in the environment are well documented. The July, 1983, issue of the *New England Journal of Medicine* reported a dramatic reduction of lead content in the blood of children. This reduction paralleled the reduction in the amount of lead in gasoline and resulting decrease in polluted air. The noted medical journal stated the following: "Although strong correlation does not prove cause and effect, the most likely explanation for the fall in blood levels is a reduction in the lead content of gasoline."

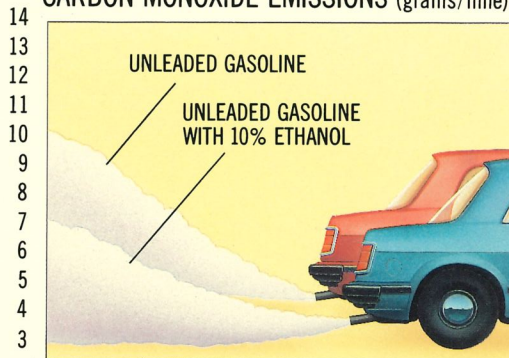
The U.S. Environmental Protection Agency recently tightened regulations on the amount of lead that can be in gasoline. Total lead usage must decrease by 34 percent. Ethanol has demonstrated its ability to provide

needed octane for motor fuel, and its dramatic growth in recent years is enabling it to help fill the octane gap of lead phasedown.

HYDROCARBON EMISSIONS (grams/mile)



CARBON MONOXIDE EMISSIONS (grams/mile)



## ETHANOL. PERFORMING FOR AMERICA.

A GROWING INDUSTRY

AN EXPANDING NEW MARKET FOR FARMERS

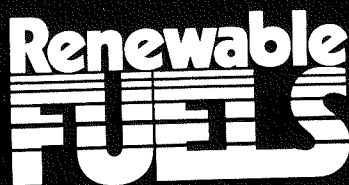
A RENEWABLE DOMESTIC FUEL SOURCE

CREATING NEW EMPLOYMENT

INCREASING THE GROSS NATIONAL PRODUCT

REDUCING DEPENDENCY ON FOREIGN OIL

IMPROVING THE ENVIRONMENT



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TESTIMONY ON HB #3070 - 2/28/84

BY: Richard B. Stowell, President  
High Plains Corporation  
Wichita, Kansas

House Transportation Committee  
State Capitol Building  
Room 519 S  
Topeka, Kansas

Mr. Chairman, members of the Transportation Committee. My name is Dick Stowell and I am President and Chief Executive Officer of High Plains Corporation, a major ethanol producer and marketer in the State of Kansas. I am here today to represent my company, as well as the interests of other Kansas ethanol producers in support of HB #3070.

High Plains Corporation was a dream which began over 3 years ago due to the interest of the Federal Government and the State of Kansas in promoting and providing incentives for the production of ethanol as an alternative motor fuel. In the late 1970's, ethanol was perceived as a motor fuel extender and a means of combating the expensive importation of foreign crude oil. Today ethanol has proven itself in the market place as a high quality octane enhancer which burns cleaner and has lower noxious emissions than any other motor fuel additive currently in commercial use.

Today, after 3 years of hard work, our dream has become a reality. Two weeks ago we began the start-up and shake down phase of our 10-million gallon ethanol plant in Colwich, Kansas. Last week we began producing our first quantities of ethanol, which are being sold into the gasoline market today.

Our company undertook what many consider a very high risk investment. We sold stock in the public market to raise approximately \$5 million dollars in equity capital and after persevering through the period of

**HIGH PLAINS**

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high interest rates, we were successful in obtaining \$20 million of construction and permanent debt financing. All of this was done because we were sure of the availability and maintenance of motor fuel tax incentives at the State and Federal level, which are vital to the economics of this fledgling industry.

We have invested almost \$22 million, all privately financed, in the completion of our plant in Colwich. This plant will consume 4-million bushels of grain annually and provide 65 jobs in direct employment and 320 jobs indirectly in service and agricultural employment. The plant, in addition to producing ethanol, also produces 37,000 tons of distillers dried grain which are returned to the agricultural sector in the form of high protein feed for use with livestock and dairy cattle. The sales of ethanol and DDG from our plant alone, will contribute to nearly \$40 million of economic activity within the State of Kansas.

Ethanol today is sold widely through most gasoline retailers, including Getty Oil, Amoco, Derby and large independents such as Total, Town and Country and Quik Trip. There is no question that ethanol has wide scale consumer acceptance.

We support the passage of HB #3070 because, while we feel that the existing motor fuel tax incentive which currently exists in Kansas is an essential ingredient for this industry for the several years ahead. At the same time, we also recognize that if the State is going to provide an incentive for one of its industries, the resulting economic benefits from that incentive should remain largely in the State. Restricting the size of the plants, in parallel to the law currently existing in Colorado, which has successfully withstood court challenges, will ensure that "dumping" ethanol by large scale

 **HIGH PLAINS**

out of state producers, as well as by Brazil, will not continue. However, HB #3070 allows smaller plants, such as ours and those which exist on our borders who consume Kansas grain, to continue to produce enough ethanol which will provide benefits to the consumer in a competitive market environment.

 **HIGH PLAINS**