

MICROFILM DIVIDER

OMB/RECORDS MANAGEMENT DIVISION

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ROLL NUMBER

DESCRIPTION

1390

2001 HOUSE FINANCE AND TAXATION

HB 1390

2001 HOUSE STANDING COMMITTEE MINUTES

BILL/RESOLUTION NO. HB 1390

House Finance and Taxation Committee

☐ Conference Committee

Hearing Date February 6, 2001

Tape Number	Side A	Side B	Meter #
1	X		43
Committee Clerk Signature <i>Jamie Stein</i>			

Minutes:

REP. AL CARLSON, CHAIRMAN, Opened the hearing.

REP. PAM GULLESON, DIST. 26, SOUTHEASTERN ND, Introduced the bill as the prime sponsor. In its original form, this bill would have incorporated two percent biodiesel into the state fuel supply. In its original form, this bill is visionary and bold, allowing North Dakota to take the lead in the use of renewable fuel. It would be O.K for North Dakota to take the lead on this. I realize these types of bold moves do not come easy. I ask at the outset, that we change the scope of this bill to an interim study. The supporters of this bill and I recognize, that it is necessary to fully educate the public and legislators, and to answer concerns surrounding this issue. An interim study would provide us an opportunity to do that. She stated she would submit amendments to the committee to do that. She stated biodiesel is the name for a variety of fuels made from vegetable oil, soybean or sunflower, or animal fat. The concept of using vegetable oil as a fuel dates back to 1895, when Dr. Rudolph Diesel developed the first diesel engine to run on

vegetable oil. Diesel demonstrated his engine at the world exhibition in Paris in 1900, using peanut oil as a fuel. The advantages for introducing biodiesel in this state are tremendous.

Producing biodiesel from soybeans and other domestic crops, provides an additional use for our oil seed crops, increasing revenue to our farmers. It can create jobs to our communities.

Biodiesel is the only alternative fuel that can be used directly in any existing unmodified diesel engine. Because it has similar properties of petroleum diesel fuel, biodiesel can be blended at any ratio of petroleum diesel fuel. State fleet vehicles in Dickinson and Grand Forks have been using biodiesel on a trial basis for the last two years, with very satisfactory results. They have implemented this because of the price difference between number one and number two fuels.

They wanted to be able to use number two fuel throughout the winter. This study is about investing in this state by using our own renewable resources and supporting our farmers and the communities they live in.

REP. DAVE MONSON, DIST 10, Testified in support of the bill as a co-sponsor. He stated he is a farmer and does raise oilseed crops, such as canola. Biofuels will be a major player in the future of farming.

BILL DELMORE, KELSCH LAW FIRM, REPRESENTING THE NORTH DAKOTA

SOYBEAN COUNCIL Testified in support of the bill. Are supportive of a study. Gave concerns in marketing the product. A study is the best way to move.

REP. WINRICH Could you briefly, give us information as to what is happening in other states?

BILL DELMORE There are bills being looked at in other states. There are some in South Dakota and Minnesota. Some of the very concerns people here have raised, have been raised there. We need solid, technical, information, before we take something into this industry. It is

best to have the information to where you are going. In a study you can answer these questions before we look at something.

TERRY GOERGER, FARMER, CHAIRMAN OF THE NORTH DAKOTA SOYBEAN

COUNCIL, Testified in support of a study. See attached written testimony.

REP. CARLSON Is there any place that is producing it presently, in this state?

TERRY GOERGER Not at this time.

REP. CARLSON Where is this being produced?

TERRY GOERGER Iowa, more in the southern areas, across the central belt. I believe there are, currently, twelve plants in the United States with the potential of two hundred million gallons of production in place at this time.

REP. CARLSON What does it do to the price of diesel, if you add a twenty percent level like you recognized.

TERRY GOERGER At this time, it would add about fifteen cents. Two cents is what the mandate would be.

REP. CARLSON Is it at the pumps today?

TERRY GOERGER Last year, my supplier said it was in _____? _____ pipeline.

Information I have received, said there were thirteen pipelines in Minnesota.

REP. LLOYD What about variety selection process with regard to certain varieties performing better

TERRY GOERGER I don't know that varieties make a difference, we have some refinery people and they are saying, no, there is no difference in variety.

REP. BRANDENBERG Is there a move toward refineries moving into North Dakota?

TERRY GOERGER We have had some indication from Agri Oils that they are interested in looking at that. Also, we will have some testimony from the plant at Enderlin.

REP. CARLSON To be beneficial, wouldn't we need the producer here to actually produce the bio?

TERRY GOERGER That is our hope. It will have to be economically viable. We hope the demand will create that incentive.

REP. CARLSON How do we relate this to ethanol.

TERRY GOERGER I believe if we don't make a move to use our own products, we are not doing ourselves any good. We are not doing our agricultural industry any good. We are fortunate here in North Dakota, at this time, we have clean air, that doesn't mean we always will. This is one way we can come up with an answer for our ag economy. We can increase our percentages, if we can increase the useage of biodiesel by utilizing our domestic supplies, it seems to me we will increase the producers on the farm. I am a farmer, and when I make money, I pay more income tax, and I also invest in my operation. Not too many farmers leave money burn in their pockets very long.

REP. LLOYD Can we combine soybeans, cranby, safflower, canola, and sunflower oil all together?

TERRY GOERGER I can't answer that, I don't know what the makeup of all of those other oils are.

REP. RENNERFELDT Before this will be successful, you would have to compete. Who will use it, if it costs more than diesel? Your consumption rate is higher, don't you think that will be a deterrent?

TERRY GOERGER Yes, that is part of our marketing problem. Our checkout board is set up to do that, to find answers for that.

ROGER JOHNSON, STATE AGRICULTURAL COMMISSIONER Testified in support of the bill. See attached written testimony. He related to a meeting he went to twelve years ago in Rapid City, SD. He stated they took a tour in a greyhound bus which ran on one hundred percent soybean oil. It smelled like a big french fry factory, moving down the highway. This technology is there and has been there for some time. The suggested two percent biodiesel requirement would mean the use of more than two million bushels of North Dakota soybeans. According to the USDA estimates, if the country sustained an annual market of one hundred million gallons of biodiesel, it would add about seven cents to the price of soybeans. For North Dakota, alone, that would translate into an economic impact of about five million dollars toward the agricultural sector.

REP. HERBEL The two percent, is that some significance instead of five or seven?

ROGER JOHNSON Stated he was just speculating.

REP. RENNERFELDT Do you think people will be willing to pay an additional price just to support the soybean farmers?

ROGER JOHNSON The best way I can answer that is, for years I have voluntarily paid a higher price for ethanol blended fuel in my car. As soon as it was available, my Dad put it in every vehicle and engine possible. There are a number of producers out there who will use this.

REP. WINRICH Commented, wondering if this fuel would smell any better than diesel.

What is the relationship to ethanol, and what are we doing in terms of natural fuels?

ROGER JOHNSON I have supported the ethanol bill in this session as well. I would respond very much like Terry Goerger did. Anything we can do to increase these kinds of products, we ought to seriously look at. This is a very important part of our economy. This is an opportune time for us to look at some of these renewable sources of energy and try to move them into the main stream.

EDMUND GOERGER, PRESIDENT OF THE NORTH DAKOTA SOYBEAN

GROWERS ASSN., AND A FARMER, Testified in support of the bill. See attached written testimony.

REP. CLARK Was concerned about any corrosion related to the use of biodiesel.

EDMUND GOERGER The corrosion thing you are referring to is the same thing ethanol went through when it first came out, especially at the higher level, not so much at two percent. As you use this product, it tends to clean out your system. It will take any impurities which were built up in your tank or in your line. Initial use, may cause a filter plugging because it is cleaning out your system. After that corrosion is not a factor, as I understand it, it is just cleaning out your system.

DEAN PETERSON, NORTH AMERICAN COAL CORPORATION, Testified in opposition of the bill. See attached written testimony.

REP. CARLSON If this is moved into a study, what type of items would you like to have included in that study from your perspective?

DEAN PETERSON We will think about it as soon as we receive the study resolution. I know they are proposing a study, but specifically, we would like to take a look at before we respond.

PAUL TOKACH, BUTLER MACHINERY COMPANY AND CATERPILLAR, INC.,

Testified in opposition of the bill. See attached written testimony.

REP. SCHMIDT You state that Caterpillar is the largest builder of diesel engines in the world?
Where does Cummins stand compared to you?

PAUL TOKACH We bi-passed Cummins within the last five years.

REP. CARLSON Do you believe that your company would have trouble warranting a two percent requirement of biodiesel?

PAUL TOKACH It isn't so much the warranty concerned with the biodiesel, our warranty statement covers workmanship and materials. We take no responsibility for failures caused by alternate fuels, biodiesel would be one of those.

REP. CARLSON Asked for an example besides corrosion.

PAUL TOKACH Gumming, if you get a high enough percentage of biofuel, it could form gum. We are currently working on some very high pressure fuel systems, and to keep those fuel systems working, we have to have two micron fuel filters, any debris will plug those.

REP. BRANDENBURG Does this apply to all mixtures of diesel fuel?

PAUL TOKACH It does apply to all fuels. If the end user decides to formulate his own diesel fuel, if it burns in the engine, that's fine. However, if that fuel causes fuel system problems, they no longer warrant it. One of the problems with biofuel, there really aren't any standards right now.

RON NESS, EXECUTIVE DIRECTOR OF THE NORTH DAKOTA PETROLEUM

COUNCIL, Testified in opposition of the bill. We believe that all alternative energy should be looked at and considered at every point, however, mandates are troublesome to the industry.

They cause distribution problems, as we saw last summer, where EPA created a new mandate in the Chicago and Milwaukee areas, and what happened to the price of gasoline in those areas as a result of the mandate. Essentially, that is what happens when you mandate fuel extraction in the state. We have no problems with a study resolution.

TERRY GOERGER Explained a handout which was submitted to all of the committee members. See attached copy of handout.

GUY CHRISTIANSON, NORTHERN SUN A DIVISION OF ADM, Testified in support of the bill. He stated his company has an expanding presence in biodiesel fuel production overseas. They are operating in Germany. The popularity of biodiesel is growing in Europe. In response, we have created a new division within our company. We believe that a U S biodiesel program is a step in the right direction.

REP. CARLSON Are you telling me that your company would be interested in looking at the production in this biodiesel fuel here?

GUY CHRISTIANSON We would support the state.

REP. DROVDAL You stated that they accepted the use of biodiesel fuel in Europe, apparently, much easier than we have in the United States, is it mandated in Europe?

GUY CHRISTIANSON Yes, I believe it started with a mandate.

RUSS HANSON, NORTH DAKOTA PETROLEUM MARKETERS ASSOCIATION,

Testified in support of the bill. We are all for consumer choice. When the retailers have a directive from their consumers that they want a product, our retailers will get it to them. They do oppose mandates.

LANCE HAGEN, AG COALITION, Testified in support of the bill. It would not scare me one bit to run this through my diesel. Especially support the study resolution.

J P WIESZ, WIESZ TRUCK LINE, JAMESTOWN Testified in support of the bill. I have been in business since 1966, and diesel fuel has always been the second highest cost of doing business in my operation, second only to wages. Over the past years, we have seen highway use tax go up in excess of four hundred percent. Over the past thirty years, I have not contested the increase in the state highway use tax on a per gallon basis because the state needed the money. We needed the good roads, consequently, I did not contest the increase. But any other increases in the diesel fuel, I would contest, because the margin of profit is so small, that a penny a gallon takes away any potential margin of profit, which we have not seen in over a year. I am all for the idea of using North Dakota grown products, producing them, finishing them and using them in the state.

RICHARD OSTLIE, DIRECTOR ON THE AMERICAN SOYBEAN ASSN. BOARD,

Testified in support of the bill. See attached written testimony.

REP. CARLSON Asked that Dean Peterson and Bill Delmore help with drafting a study.

With no further testimony, the hearing was closed.

COMMITTEE ACTION 2-7-01, Tape #1, Side B, 5015

Committee members decided they would have a study resolution drafted instead of this bill.

REP. BRANDENBURG Made a motion for a **DO NOT PASS.**

REP. HERBEL Second the motion. **MOTION CARRIED**

15 YES 0 NO 0 ABSENT

REP. BRANDENBURG Was given the floor assignment.

COMMITTEE ACTION 2-13-01, Tape #1, Side A, Meter #2450

The bill was brought back to committee for amendments.

REP. WINRICH Made a motion to adopt the amendments #10637.0101, which would turn the bill into a study regarding biodiesel fuel. Another amendment was added which would add the words agricultural "and general business" communities.

REP. BRANDENBURG Second the motion. **MOTION CARRIED BY VOICE VOTE.**

REP. BRANDENBURG Made a motion for a **DO PASS AS AMENDED.**

REP. WINRICH Second the motion. **MOTION CARRIED**

13 YES 1 NO 1 ABSENT

REP. NICHOLAS Was given the floor assignment.

Date: 2-7-01
Roll Call Vote #: 1

2001 HOUSE STANDING COMMITTEE ROLL CALL VOTES
BILL/RESOLUTION NO. HB 1390

House FINANCE & TAXATION Committee

☐ Subcommittee on _____
or
☐ Conference Committee

Legislative Council Amendment Number _____

Action Taken

Do Not Pass

Motion Made By

Rep. Brandenburg

Seconded By

Rep. Herbel

Representatives	Yes	No	Representatives	Yes	No
CARLSON, AL, CHAIRMAN	✓		NICHOLAS, EUGENE	✓	
DROVDAL, DAVID, V-CHAIR	✓		RENNER, DENNIS	✓	
BRANDENBURG, MICHAEL	✓		RENNERFELDT, EARL	✓	
CLARK, BYRON	✓		SCHMIDT, ARLO	✓	
GROSZ, MICHAEL	✓		WIKENHEISER, RAY	✓	
HERBEL, GIL	✓		WINRICH, LONNY	✓	
KELSH, SCOT	✓				
KROEBER, JOE	✓				
LLOYD, EDWARD	✓				

Total (Yes)

15

No

0

Absent

0

Floor Assignment

Rep. Brandenburg

If the vote is on an amendment, briefly indicate intent:

Date: 2-13-01
Roll Call Vote #: 2

2001 HOUSE STANDING COMMITTEE ROLL CALL VOTES
BILL/RESOLUTION NO. HB 1390

House FINANCE & TAXATION Committee

☐ Subcommittee on _____

or

☐ Conference Committee

Legislative Council Amendment Number 10637. 0102

Action Taken Do Pass as amended

Motion Made By Rep. Brandenburg Seconded By Rep. Winrich

Representatives	Yes	No	Representatives	Yes	No
CARLSON, AL, CHAIRMAN	✓		NICHOLAS, EUGENE	A	
DROVDAL, DAVID, V-CHAIR	✓		RENNER, DENNIS	✓	
BRANDENBURG, MICHAEL	✓		RENNERFELDT, EARL	✓	
CLARK, BYRON		✓	SCHMIDT, ARLO	✓	
GROSZ, MICHAEL	✓		WIKENHEISER, RAY	✓	
HERBEL, GIL	✓		WINRICH, LONNY	✓	
KELSH, SCOT	✓				
KROEBER, JOE	✓				
LLOYD, EDWARD	✓				

Total (Yes) 13 No 1

Absent 1

Floor Assignment Rep. Nicholas

If the vote is on an amendment, briefly indicate intent:

REPORT OF STANDING COMMITTEE

HB 1390: Finance and Taxation Committee (Rep. Carlson, Chairman) recommends AMENDMENTS AS FOLLOWS and when so amended, recommends DO PASS (13 YEAS, 1 NAY, 1 ABSENT AND NOT VOTING). HB 1390 was placed on the Sixth order on the calendar.

Page 1, line 1, after "A BILL" replace the remainder of the bill with "for an Act to provide a legislative council study of biodiesel fuel and its integration into the agricultural economy of this state.

BE IT ENACTED BY THE LEGISLATIVE ASSEMBLY OF NORTH DAKOTA:

SECTION 1. LEGISLATIVE COUNCIL STUDY. The legislative council shall study the use of biodiesel fuel in this state. The study must include analysis of biodiesel fuel's operational impact on engines, its impact on engine warranties, its fuel economy, the impact its use would have on the state, the economic impact its use would have on the agricultural and general business communities, its environmental benefits, methods of better marketing biodiesel fuel by the agricultural and industrial communities, the potential for public use by the state and its political subdivisions, its benefit in cold flow conditions, microbial impacts of its usage, the demand for biodiesel fuel, tax incentives to promote the use of biodiesel fuel, and the current supply and potential for biodiesel plants in or near this state. The legislative council shall report its findings and recommendations, together with any legislation required to implement the recommendations, to the fifty-eighth legislative assembly."

Renumber accordingly

2001 SENATE AGRICULTURE

HB 1390

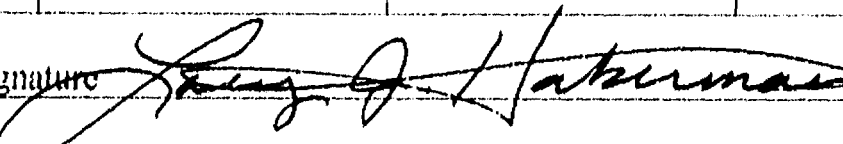
2001 SENATE STANDING COMMITTEE MINUTES

BILL/RESOLUTION NO. HB 1390

Senate Agriculture Committee

☐ Conference Committee

Hearing Date March 15, 2001

Tape Number	Side A	Side B	Meter #
March 15 1	X		0.0 - 21.6
1	X		50.1 - 51.2
3	X		32.0 - 38.7
Committee Clerk Signature 			

Minutes: March 15, 2001

REP. GULLESON; Sponsor, introduced the bill to the committee. See attached testimony.

SENATOR URLACHER; How available is this fuel to the public?

REP. GULLESON; Biodiesel is fairly available upon request.

REP. BRANDENBURG; Cosponsor, testified in support of this bill. Biodiesel is a very important issue to our state.

REP. MUELLER; Cosponsor, testified in support of this bill.

ED GOERGER; ND Soybean Growers, testified in support of this bill. See attached testimony.

TERRY GOERGER; ND Soybean Council, testified in support of this bill. See attached testimony and letter.

ROGER JOHNSON; Agriculture Commissioner, testified in support of this bill. See attached testimony.

BRIAN KRAMER; ND Farm Bureau, testified in support of this bill.

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Senate Agriculture Committee

Bill/Resolution Number HB 1390

Hearing Date March 15, 2001

RICHARD SCHLOSSER; ND Farmers Union, testified in support of this bill.

RICHARD OSTLIE; ND Soybean Growers, testified in support of this bill.

NEIL YONK; testified in support of this bill.

DOUG GOEHRING; Sunflower and Soybean Producers, testified in support of this bill.

The hearing was closed.

Discussion was held

SENATOR KLEIN moved for a DO PASS.

SENATOR NICHOLS seconded the motion.

Discussion was held.

Roll call vote: 6 Yeas, 0 No, 0 Absent and Not voting.

SENATOR KLEIN will carry the bill.

Date: 3-15-01
Roll Call Vote #: 1

2001 SENATE STANDING COMMITTEE ROLL CALL VOTES
BILL/RESOLUTION NO. HB 1390

Senate Agriculture Committee

☐ Subcommittee on _____
or
☐ Conference Committee

Legislative Council Amendment Number _____

Action Taken Do Pass

Motion Made By ~~Sen.~~ Sen. Klein Seconded By Sen. Nichols

Senators	Yes	No	Senators	Yes	No
Senator Wanzek - Chairman	✓		Senator Kroeplin	✓	
Senator Erbele - Vice Chairman	✓		Senator Nichols	✓	
Senator Klein	✓				
Senator Urlacher	✓				

Total (Yes) 6 No 0

Absent 0

Floor Assignment Senator Klein

If the vote is on an amendment, briefly indicate intent:

REPORT OF STANDING COMMITTEE (410)
March 15, 2001 4:36 p.m.

Module No: SR-45-5772
Carrier: Klein
Insert LC: . Title: .

REPORT OF STANDING COMMITTEE

HB 1390, as engrossed: Agriculture Committee (Sen. Wanzek, Chairman) recommends
DO PASS (6 YEAS, 0 NAYS, 0 ABSENT AND NOT VOTING). Engrossed HB 1390
was placed on the Fourteenth order on the calendar.

2001 TESTIMONY

HB 1390

Testimony

Fifty-Seventh Legislative Assembly

HB 1390

Chairman Carlson and members of the House Finance and Taxation Committee.

My name is Terry Goerger, I serve as Chairman of the North Dakota Soybean Council (NDSC). I am appearing before you today in support of HB 1390. Adding biodiesel to our current fuel supply is a safe, economical and wise decision. Not only is it the most economical means of alternative fuel available but the quality of diesel fuel is improved at a minimal cost while using a renewable resource. In addition biodiesel is the only fuel in the country that has completed a 3 year \$2.2 million testing regimen.

According to the USDA we are looking at an estimated 2.4 billion pounds of vegetable oil reserve. Adding a 2% blend of biodiesel would consume approximately 24 million pounds of vegetable oil or 1% of the forecasted supply. The point is, the supply is available right now, all we need to do is tap into it. With the increasing soybean acres in North Dakota and across the United States the oil reserve is only going to get larger. Utilizing this oil is economically positive, environmentally friendly and benefits North Dakota's economy and agriculture. North Dakota has the raw materials already available. This legislation can create the demand to attract new business and new jobs in the state. North Dakota currently has the ability to produce biodiesel with some conversion of equipment,

AgriOils in Carrington for example, could be easily converted to produce biodiesel creating economic development.

Biodiesel can be blended anywhere between 2 percent and 20 percent (20 percent being the most common) without any engine modifications. Biodiesel produces approximately 80 percent less sulfur dioxide emissions and contains almost 100 percent less sulfur dioxide. Cleaner burning. Less emissions. It is also safe to handle and transport since the flash point of biodiesel is 300 F which is 175 F higher than petrodiesel (125 F) and is ten times less toxic than table salt.

At the 2% blend level there is no change in the jell point or cloud point as compared to petrodiesel. Engine manufactures will stand behind biodiesel as being a safe and viable alternative for the lubricity problem created by removing sulfur. It has higher lubricity, it's better for engines and it's better for consumers.

Adding the proper amount of an additive for lubricity is a concern when the consumer has to do the blending. Having biodiesel available at the pump would not only eliminate the need for consumers to put additives in their tank themselves but would eliminate the chance of adding too much or too little. Simply put, it is safe, easy and user friendly.

The production and use of biodiesel is a sound and wise investment for the state of North Dakota. The ease of implementation, seamless transition and no capital investment makes good economical sense that will benefit North Dakota and North Dakota Agriculture. It is for these reasons I support HB 1390.

Thank you.

North Dakota Biodiesel Program
Biodiesel Standards and Engine Warranties

HB 1390 2
Terry Berger
Biodiesel

Background—Standards

All engines are designed and manufactured for a fuel that has certain characteristics. In the US the industry consensus organization that defines the fuel is the American Society for Testing and Materials—ASTM. In the case of diesel fuel (and biodiesel), the responsibility for setting standards lies within ASTM Committee D02 on Petroleum Products and Lubricants. In order to assure that the standards are rigorous and robust, ASTM committee D02 is comprised of fuel producers, engine interests, and third party interests (users, government agencies, consultants). ASTM also uses a complicated ballot process where one negative vote is enough to defeat a ballot—a true consensus organization. An ASTM standard is not an easy thing to achieve. Some standards can take over 10 years to gain agreement and be issued by ASTM. This rigorous, time consuming process is why ASTM standards are recognized and adopted by others world wide.

These ASTM fuel standards are the minimum accepted values for properties of the fuel to provide adequate customer satisfaction and/or protection. For diesel fuel, the ASTM standard is ASTM D 975. All engine and fuel injection manufacturers design their engines around ASTM D 975. In cooperative discussions with the engine community early in the industry's recent development, engine manufacturers strongly encouraged the biodiesel industry to develop an ASTM standard for biodiesel fuel which would then allow them to provide their customers with a more definitive judgment on how the fuel would affect engine and fuel system operation compared to fuel that which the engine was designed for--ASTM D 975.

In June of 1994, a task force was formed within Subcommittee E on Burner, Diesel, Non-Aviation Gas Turbine, and Marine Fuels of ASTM Committee D02 with the expressed objective of developing an ASTM standard for biodiesel. The biodiesel standard, ASTM PS 121, was approved by Subcommittee E, and subsequently issued by ASTM in June of 1999 (for copies, see the ASTM web site, www.astm.org). The standard covers the pure biodiesel, B100, for blending with petrodiesel in levels up to 20% by volume. Higher levels of biodiesel are allowed on a case-by-case basis after discussion with the individual engine company, since most of the experience in the US thus far has been with B20 blends.

The approval of this standard, and the discussions and technical review necessary to secure its approval, has provided both the engine community and customers with the information needed to assure trouble free operation with biodiesel blends.

North Dakota Biodiesel Program Biodiesel Standards and Engine Warranties

Engine Warranties

All diesel engine companies warranty the product they make—engines. They warranty their engines for 'materials and workmanship'. If there is a problem with an engine part or with engine operation due to an error in manufacturing or assembly within the prescribed warranty period, the problem will be covered by the engine company. Typically, an engine company will define what fuel the engine was designed for and will recommend the use of that fuel to their customers in their owners manual.

Engine companies do not manufacture fuel or fuel components. Therefore, engine companies do not warranty fuel—whether that fuel is biodiesel or diesel fuel. Engine companies warranty the materials and workmanship of their engines. If there are problems caused by the fuel (again, whether that fuel is diesel fuel or biodiesel fuel) that is not related to the materials or workmanship of the engine, they are the responsibility of the fuel supplier not the engine manufacturer. Each fuel supplier—biodiesel, petrodiesel, or a blend of the two--should stand behind their fuel and cover any such problems should they occur.

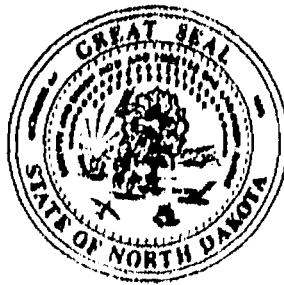
Therefore, the most important aspect regarding engine warranties and biodiesel is whether the engine manufacturer will void their parts and workmanship warranty when biodiesel is used, and whether the fuel manufacturer will stand behind their fuel should problems occur.

Most major engine companies have stated formally that the use of blends up to B20 will not void their parts and workmanship warranty. This includes blends below 20% biodiesel such as 2% biodiesel that are beginning to become more common. Several statements from the engine companies are attached. Some engine companies have already specified that the biodiesel must meet ASTM PS 121 as a condition, while others are still in the process of adopting PS 121 within their company or have their own set of guidelines for biodiesel use that were developed prior to the approval of PS 121. It is anticipated that the entire industry will incorporate the ASTM biodiesel standard into their owner manuals over time.

The National Biodiesel Board, the trade association for the biodiesel industry, has formed the National Biodiesel Accreditation Commission that audits fuel producers and marketers and issues a 'Certified Biodiesel Marketer' seal of approval. This seal of approval will provide added assurance to customer and engine manufacturers that the biodiesel marketed by these companies meets the ASTM standards for biodiesel and that the fuel supplier will stand behind their product.

With biodiesel meeting PS 121 specification, there have been over 30 million miles of successful, problem-free, real world operation with B20 blends in a wide variety of engines, climates, and applications. The steps taken by the biodiesel industry to work with the engine companies and to insure that fuel meets the newly accepted ASTM standards provides confidence to users and engine manufacturers that biodiesel use will be trouble-free.

COMMISSIONER OF AGRICULTURE
ROGER JOHNSON



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**Testimony of Roger Johnson
Agriculture Commissioner
House Bill 1390
House Finance and Taxation Committee
Fort Totten Room
February 6, 2001**

Chairman Carlson and members of the Finance and Taxation Committee, I am Agriculture Commissioner Roger Johnson. I am here today in support of HB 1390, which will mandate a 2 percent biodiesel content in all diesel fuel sold in the state.

As you are probably aware, we are facing a time when agricultural commodities are at record lows and fuel prices are escalating. Using biodiesel fuels provides a new market opportunity to our state's agriculture producers, in particular our soybean growers. Increased use of these fuels creates increased demand for the commodity. With increased demand, ultimately, we will see an increase in the price per bushel for soybeans. The suggested 2 percent biodiesel requirement would mean the use of more than two million bushels of North Dakota soybeans. According to USDA estimates, if the country sustained an annual market of 100 million gallons of biodiesel, it would contribute a minimum of \$.07 to the price of each bushel of soybeans. For North Dakota, that translates into an economic impact of approximately \$5 million to our agricultural sector.

In addition, by providing an alternative to conventional fuels, we begin to combat these escalating fuel prices by sourcing our fuels in the U.S., or more importantly, here in North Dakota. Our country spends a considerable amount of money on petroleum imports. Expansion of the biodiesel industry lessens our dependence on foreign petroleum suppliers. With the soybean industry in North Dakota on the rise, we can also consider a more direct economic impact from establishing biodiesel production facilities here in our state.

When you look at the potential economic impact to both our state and our nation, I believe we not only should support but rather take a leading role in the expansion of the biodiesel industry. Chairman Carlson and committee members, I urge a do pass on HB 1390. I would be happy to answer any questions you may have.

1

Testimony

Fifty-Seventh Legislative Assembly

HB 1390

Chairman Carlson and members of the House Finance and Taxation Committee. My name is Edmund Goerger, I serve as President of the North Dakota Soybean Growers Association (NDSGA). I am appearing before you today in support of HB 1390. This bill has a wide spectrum of advantages that proactively address some major issues we are faced today.

The Federal government has a mandate to reduce the sulfur content in diesel fuel by 97 percent by the year 2006. Removing the sulfur lowers the emissions produced but also leaves the fuel without any lubricating ability. Biodiesel is a very effective non-toxic alternative to sulfur. 1) The Cetaine rating of biodiesel is higher then straight petrodiesel. To help explain what the cetane rating is, think of it like the octane rating in gasoline. The higher the rating, the more power you get. 2) Some alternative fuels take as much energy to produce as they put out but biodiesel produces 3.24 units of energy for every unit put into producing it. That's like giving someone a dollar and getting \$3.24 cents in change. 3) Biodiesel can make a seamless transition into the market place. There are no changes that need to be made to the distribution and retail infrastructure or the engines that burn the fuel. Adding biodiesel to our current fuel supply can be done by simply deciding to do so. 4) HB 1390 has a positive economic impact on North Dakota for a wide variety of reasons. The most obvious reason is it will consume the glut of oil that is currently in storage throughout North Dakota and across the nation. It would make us less dependant on foreign oil. It is a safe renewable source of fuel. The

production of biodiesel in North Dakota can attract big business and create new jobs within the state. Producing biodiesel creates a value added product for the soybean industry in North Dakota.

The increase of soybean acres in North Dakota over the last ten years has been tremendous. Acreage has increased from under 500,000 acres ten years ago to an estimated 2.5 million acres in 2001. That soybean crop is increasing the gross farm dollars in the state. The higher gross dollars means more tax dollars that could be used to improve and maintain our road system.

An example of a comparable successful similar project would be the use of ethanol in Minnesota. Ethanol use in Minnesota positively increased economic activity in by \$211 to \$370 million. Just think of the possibilities for North Dakota.

My last comment is on our dependency of foreign oil, rising energy costs and the energy crises we are faced with right now. We need alternative sources of fuel. Biodiesel is a safe, renewable, home grown product that is available right now.

The benefits are huge the costs are small and it is the right thing to do.

Thank you.

HB 1390

FINAL REPORT

January, 1996

BIODIESEL HEAVY DUTY VEHICLE DEMONSTRATION PROJECT

Submitted by: Office of Equipment Support
Iowa Department of Transportation

The biodiesel demonstration project at the Iowa DOT maintenance facility in Boone has been completed. This project was undertaken to determine the feasibility of operating an entire heavy duty diesel fleet assigned to a highway maintenance facility on a 20% biodiesel blend of fuel. The demonstration fleet included nine snow removal trucks, four tractors, a motor grader, and a wheel loader. During the one year evaluation period, the Boone fleet used 15,650 gallons of biodiesel fuel.

A detailed analysis of the cost impact associated with replacing conventional diesel fuel with biodiesel fuel was not included in this evaluation. The Department spent about 2.5 times more to operate the Boone maintenance fleet on biodiesel than what it would have spent to operate this fleet with conventional diesel fuel.

Operational Problems

Fuel Gelling

A primary concern when using alternative fuels in highway maintenance equipment is that they must not cause operational problems. Biodiesel in the neat form (100% by volume methyl soyate) has higher cloud and pour point temperatures than conventional #2 diesel fuel. Blending methyl soyate and diesel fuel greatly increases the chances of having fuel gelling problems. A fuel gelling problem that removes a snow removal truck from service becomes a serious problem that could endanger the traveling public.

Several steps were taken to reduce the risk of fuel gelling in the Boone equipment fleet. Pour point depressant additives were mixed with the fuel and in-tank heaters were installed on most of the equipment. During the demonstration project only one truck experienced a fuel gelling problem. Fuel gelling occurred in a truck that was protected with an original in-line electric fuel heater; it had not been converted to an in-tank heater.

Loss of Power

Initially the fuel used in the demonstration consisted of a blend of 20% methyl soyate and 80% #1 diesel fuel. The #1 diesel fuel was used to reduce the chance of fuel gelling problems. This original fuel blend resulted in a reported unacceptable loss of engine power and a loss in fuel economy. The following table displays the Btu/gallon and a calculated percentage change in engine/fuel efficiencies of the various fuels.

FUEL	Btu/gallon	Fuel Efficiency
#1 Diesel Fuel	126,600	-3.4%
#2 Diesel Fuel	131,000	--
B20 w/#1 Diesel Fuel	125,000	-4.6%
B20 w/#2 Diesel Fuel	128,400	-2.0%

In May, after finishing winter operations, the original biodiesel blend was changed to 20% methyl soyate and 80% #2 diesel fuel. This change to #2 diesel fuel was made after receiving operator complaints about lower engine power. The change in the base diesel fuel resulted in improved power. However, the operators still expressed dissatisfaction with the fuel economy.

Poor Fuel Economy

The nine trucks participating in the demonstration project averaged 3.51 gallons of fuel per hour of usage. In the previous year, the same nine trucks averaged 3.28 gallons of fuel per hour of usage. The 7% increase in fuel consumption was more than what was expected and caused some operational problems.

Operators were used to running an entire 12 hour shift without having to refuel trucks. To reduce condensation problems in fuel tanks our recommended operational practice is to refill trucks with fuel at the end of a workday or shift. Some of the trucks with smaller fuel tanks ran out of fuel before the operators recognized the need to refuel during their shift.

A mechanical problem also contributed to the trucks running out of fuel. To reduce the chance of experiencing a fuel gelling problem the Department installed in-tank fuel heaters. The heaters installed in trucks included a fuel sender that replaces the truck's original fuel level sender. We were not able to get accurate fuel level readings using the aftermarket fuel senders that came with the in-tank heaters.

Running out of fuel in a truck during a snow storm is not an advisable approach for increasing operator support of biodiesel fuel. It is also important to realize that the extra time spent refueling represents a hidden cost associated with using biodiesel.

Material Deterioration

Two gasket material failures occurred during the demonstration project. The first failure involved the RTV gasket material used with an in-tank fuel heater. This material was used to hold a fuel level piezo tube in position inside a fuel heater. The original RTV silicone material swelled and broke apart when the heater was removed for a tank inspection. A bench immersion test indicated that Dow-Corning 730 Fluorosilicone sealant was compatible with biodiesel fuel.

The second material failure involved the rubber material used as a spacer between a fuel tank and the metal tank tie-down straps. Spilled or overflowed biodiesel fuel caused the spacer material to deteriorate. The fuel tank became loose and started to rub on the tie-down straps. New spacers were installed and periodic inspections of the spacer material were implemented on all of the equipment in the demonstration project.

Particulate Matter

In September, several equipment operators expressed concern about the amount of black soot that was discharged when starting the equipment. Soot was accumulating on the equipment and could actually be swept off the garage floor. Fosseen Manufacturing & Development suggested that this problem might have resulted from the use of single distilled methyl soyate. They had used a double distilled methyl soyate product at a Cedar Rapids demonstration and had experienced no apparent particulate problems. It was decided that the biodiesel fuel being used at the Boone maintenance facility should be replaced.

A total of 2920 gallons of biodiesel fuel, with single distilled methyl soyate, was pumped out of the underground fuel tank at Boone and was transferred to Ames where it was mixed with straight diesel fuel. The Boone tank was then filled with a biodiesel blend of 20% double distilled methyl soyate and 80% #2 diesel fuel. This reformulated biodiesel blend seems to have reduced the soot discharge when starting equipment.

Surface Protection

One potential operational problem was probably avoided due to operator awareness of the properties of methyl soyate. The operators were told that Biodiesel fuel was a solvent and they deduced that it would remove paint. They were careful not to spill fuel on painted surfaces and wiped up any spills as they occurred.

While operator fueling practices avoided a potential problem it is not a good management practice to depend solely on operators to protect the equipment's painted surfaces. Some type of coating is needed to protect painted surfaces. This is especially true on tractors where the fuel fill is located in the center of the hood.

COSTS

Fuel:

Initial Fuel Costs:

1127 gallons, #2 diesel @ \$0.5636/gallon	\$635.18
6217 gallons, #1 diesel @ \$0.6217/gallon	\$3,980.75
1900 gallons, methyl soyate @ \$3.9000/gallon	\$7,410.00

COST/GALLON = \$1.30

Second Fuel Purchase:

6800 gallons, #2 diesel @ \$0.5950/gallon	\$4,046.00
1700 gallons, methyl soyate @ \$3.9000/gallon	\$7,037.83

COST/GALLON = \$1.31

Third Fuel Purchase:

7001 gallons, #2 diesel @ \$0.6050/gallon	\$4,235.61
1650 gallons, methyl soyate @ \$5.5487/gallon	\$9,155.36

COST/GALLON = \$1.55

Miscellaneous Costs:

Cost to purchase and install in-tank fuel heaters: \$3,557.58

Cost to pump out and transfer fuel from the Boone underground fuel tank to a fuel tank in Ames: \$135.50

Cost to treat one gallon of fuel with a pour depressant: \$0.0153

SUMMARY and CONCLUSIONS

Based on this demonstration project there does not appear to be a major operational problem in using biodiesel fuel at a highway maintenance facility -- provided that the facility has an underground fuel storage tank. It would be prudent to evaluate biodiesel's wintertime performance when it is stored in above ground tanks before supporting widespread operational acceptance at locations with above ground fuel tanks.

During the demonstration period the Department of Transportation spent \$18,606 more to operate the Boone maintenance fleet on biodiesel fuel than it would have spent if it had used conventional diesel fuel. This cost represents increased fuel and equipment costs but does not include any project administration costs. On a per gallon basis, biodiesel fuel costs about 2.5 times more than conventional diesel fuel.

A conservative approach to using biodiesel fuel at a highway maintenance facility would be to only use it during the warmer months. This approach minimizes the concern that both operators and supervisors have for the fuel gelling tendencies associated with biodiesel.

Senate Bill 1390

Mr. Chairman and Committee members.

My name is Duane Dows. I farm in the Page area and also serve as the chairman of the North Dakota Corn Utilization Council.

Senate Bill 1390 is the type of bill that has the ability to make a significant impact on the future of agriculture in our State. We must begin the process of converting what has traditionally been a food product into a source of energy. With this bill North Dakota has the opportunity to become a leader in that area.

As our country continues to require the additional removal of Sulfur from diesel fuel we must replace the lubrication that Sulfur provided. Biodiesel is the logical, environmentally friendly option for the job.

With this bill North Dakota has the ability to help Agriculture, help the Environment and help the States economy.

I would ask you to give this bill a DO PASS vote.

TESTIMONY BEFORE THE HOUSE FINANCE AND TAXATION
COMMITTEE

Concerning HB1390

February 6, 2001

Dean Peterson, THE NORTH AMERICAN COAL CORPORATION

Mr. Chairman and members of the Committee, my name is Dean Peterson. I am here today representing The North American Coal Corporation - North Dakota's largest lignite producer. North American Coal has two subsidiaries, The Coteau Properties Company and The Falkirk Mining Company that collectively produce over 23 million tons of lignite each year for energy conversion facilities located in North Dakota.

We are opposed to HB1390 because it mandates the use of biodiesel. The equipment used by our surface coal mining operations consumes ten million gallons of diesel fuel annually. We operate a wide range of equipment that is powered by conventional diesel engines ranging up to 1800 horsepower. These engines represent some of the most sophisticated technology produced in this country. However, we do not have any operating experience with biodiesel fuel in our equipment.

Our goal each year is to produce lignite for our various customers that meet their quality specifications and at the lowest possible cost. The lignite we produce to fuel energy conversion facilities is the single largest operating cost they incur. At this time we have no reliable data to use for accurately forecasting the costs associated with the use of biodiesel in our equipment fleets. We estimate that our annual operating costs could increase by as much as \$2 million. That cost would be passed on to our customer and ultimately to the consumer.

Therefore, North American respectfully asks this committee to support a **do not pass position for HB1390.**

House Finance and Taxation Committee Testimony
HB1390

February 6, 2001

Paul Tokach – Butler Machinery Company – Caterpillar

Mr. Chairman and members of the Committee, my name is Paul Tokach and I am here today representing Butler Machinery Company and Caterpillar Inc. Butler Machinery Company is the Caterpillar dealer for North and South Dakota and Caterpillar is the World's largest manufacturer of diesel engines, construction and mining equipment.

While we recognize the importance of biodiesel to North Dakota's agriculture industry, Butler Machinery Company and Caterpillar opposes HB1390 for the following reasons:

1. We oppose the mandate of a specified fuel. We believe there should be a level playing field for all fuels, allowing the end user to make a choice of fuel based on performance and cost while meeting applicable environmental standards.
2. There is a lack of standards for biodiesel fuel. To date, the American Society for Testing and Materials (ASTM) has only released a preliminary specification for biodiesel fuel. Caterpillar only recognizes biodiesel fuel that meets ASTM PS121, DIN51606 or Caterpillar's own specifications. (See attachment "A") This lack of standards may result in lower quality fuel that could lead to diesel engine reliability issues.
3. As environmental requirements become more stringent, diesel engine manufacturers will be required to add after-treatment devices to control emissions. The quality of the diesel fuel is critically important to the operations and effectiveness of these emissions control devices. Caterpillar does not currently emissions certify its engines to use biodiesel.

Due to these concerns, Butler Machinery Company and Caterpillar respectfully request this committee to support a do not pass position on HB1390.



Interoffice Memorandum

Facility MP&S - LC
Date January 15, 2001
Plant/Office Maintenance Products & Services - LC
Department Corporate Fluids/ MP&S

Plant/Office	Department	Attention

Attention All

Subject: Caterpillar Position on the use of Biodiesel Fuel

This document applies, within the stated limitations, to Caterpillar engines.

The following biodiesel fuel specification is being released. It will first be published in Service Magazine, Engine News and Truck Engine News articles. It will then be included in Caterpillar "Fluids Recommendations" and "Operation and Maintenance Manuals".

Background:

With increased world interest in emissions and reducing the use of petroleum distillate based fuels, many governments and regulating bodies encourage the use of biofuels. Governmental incentives and/or environmental legislation to use biofuels may have an impact on the sales and use of Caterpillar engines and equipment. This document outlines Caterpillars criteria and parameters when using biodiesel fuel.

Biodiesel is a fuel that can be made from a variety of sources, primarily from soybean oil or rapeseed oil. Without esterification, these oils gel in the crankcase and fuel tank and may not be compatible with many of the elastomers used in today's engines. In their original form, these oils are not suitable for use as a fuel in compression ignition engines. To use these oils as fuel, they must be esterified. Alternate base stocks for biofuel may include animal tallow, waste cooking oils, or a variety of other feedstocks.

Caterpillar has participated with the American Society for Testing and Materials (ASTM), and various technical societies through their work with the University of Idaho in support of a "feedstock

neutral" fuel specification strategy. As a result, ASTM has recently authored a provisional specification for biodiesel, PS121. Caterpillar recognizes BioFuels meeting the ASTM PS121, DIN 51606 or the Caterpillar biodiesel specification (attachments A and B).

Caterpillar certifies its engines using the prescribed EPA and European Certification Fuels. Caterpillar does not certify engines on any other fuel. It is the user's responsibility to use the correct fuel as recommended by the manufacturer and allowed by EPA or other local regulatory agencies. In the United States, the EPA allows use of only registered fuels for on-highway applications. A list of certified biofuels in the United States can be found on the EPA website:
<http://www.epa.gov/otag/regs/regs/fuels/additive/web-fuel> .

It is the responsibility of the user to obtain the proper local, regional, and/or national exemptions required for the use of biodiesel in any emissions regulated Caterpillar engine.

Warranty and the Use of Biodiesel Fuel in Caterpillar Engines

Caterpillar neither approves nor prohibits the use of biodiesel fuels. Caterpillar is not in a position to evaluate the many variations of biodiesel fuels, and the long-term effects on performance, durability or emissions compliance of Caterpillar products. The use of biodiesel fuel does not affect Caterpillars materials and workmanship warranty. **Failures resulting from the use of any fuel are not Caterpillar factory defects and therefore the cost of repair would NOT be covered by Caterpillar's warranty.**

Rae Baum
Corporate Fluids – MP&SG
LC2172
6-5136

Attachment "A"

Recommendation for the use of Biodiesel Fuel in Caterpillar Engines

For Caterpillar 3046, 3064, 3066, 3114, 3116, 3126, 3176, 3196, 3208, 3306, C-10, C-12, 3406, C-15, C-16, 3456, 3408, 3412, 3500 series, 3600 series, CM20, CM25 and CM32 engines: Biodiesel meeting the requirements listed in the table, Attachment "B", dated January 15th, 2001, or meeting either ASTM PS121 or DIN 51606, are acceptable. They may also be blended in any percentage with an acceptable diesel fuel, provided the biodiesel constituent meets the requirements outlined in the Table prior to blending.

For Caterpillar 3003 through 3034, 3054 and 3056 engines: Biodiesel meeting the requirements listed in the table, Attachment "B", dated January 15th, 2001, or meeting either ASTM PS121 or DIN 51606, may be blended with an acceptable diesel fuel at a maximum of 5% biodiesel fuel blended with 95% diesel fuel. The biodiesel must meet the requirements outlined in the Table prior to blending. Use of more than a 5% biodiesel fuel can cause premature failures whose repair would not be covered under Caterpillar warranty.

When burning biodiesel, or any blend of biodiesel, it is the responsibility of the user to obtain the proper local, regional, and/or national exemptions required for the use of biodiesel in any emissions regulated Caterpillar engine. When using a fuel that meets the specifications stated in Attachment "B", (dated January 15th, 2001), and when adhering to the following recommendations, the use of biodiesel should pose no problems.

Recommendations:

- The oil change interval can be affected by the use of biodiesel fuel. Use Scheduled Oil Sampling (SOS) to monitor the engine oil condition and to determine the optimum oil change interval.
- Biodiesel provides approximately 5-7% less energy per gallon of fuel when compared to distillate fuels. To avoid engine problems when the engine is converted back to 100% distillate diesel fuel, do not change the engine rating to compensate for the power loss.
- Elastomer compatibility with biodiesel is still being monitored. The condition of seals and hoses should be monitored regularly.
- Biodiesel fuels may pose low ambient temperature problems for both storage and operation. At low ambient temperatures, fuel may need to be stored in a heated building or a heated storage tank. The fuel system may require heated fuel lines, filters, and tanks. Filters may plug and fuel in the tank may solidify at low ambient temperatures if precautions are not taken. Consult your biodiesel supplier for assistance in the blending and attainment of the proper cloud point fuel.
- Biodiesel has poor oxidation stability, which can result in long term storage problems. The poor oxidation stability qualities may accelerate fuel oxidation in the fuel system. This is especially true in engines with electronic fuel systems because they operate at higher temperatures. Consult the fuel supplier for oxidation stability additives.
- Biodiesel fuel is an excellent medium for microbial growth. Microbes cause fuel system corrosion and premature filter plugging. The effectiveness of conventional anti-microbial additives, when used in biodiesel is not known. Consult your fuel and additive supplier for assistance.

- Care must be taken to remove water from fuel tanks. Water accelerates microbial growth. Water is naturally more prevalent in biodiesel fuels than in distillate fuels.

Attachment "B"

To be used with interoffice memo, "Caterpillar Position on the use of Biodiesel Fuel"
dated January 15, 2001, including "Attachment A"

Caterpillar Biofuel Specification

Property	Test Method United States	Test Method International	Units Fuel Specific Properties	Limits
Density @ 15°C	ASTM D1298	DIN/ISO 3675	g/cm ³	0.86-0.90
Viscosity @ 40°C	ASTM D445	DIN/ISO 3104	mm ² /s	4.0-6.0
Flash Point	ASTM D93	DIN/ISO 22719	°C	100 min
Cold Filter Plugging - Summer - Winter	ASTM D4539	DIN EN 116	°C	0 6 below ambient
Pour Point - Summer - Winter	ASTM D97	ISO 3016	°C	-9 max -20 max
Sulfur Content	ASTM D2622	ISO 8754	% weight	0.01 max
Distillation - 10% Evaporation - 90% Evaporation	ASTM D1160	ISO 340	°C	To Be Determined 345
Carbon Residue, Conradson (CCR)	ASTM D189	DIN/ISO 10370	% weight	0.5 max
Cetane Number	ASTM D613	ISO 5165		45 min
Ash Content	ASTM D482	DIN 51575 ISO 6245	mg/kg	0.02 max
Water Content	ASTM D1796	DIN 51777-1 ISO 3733	g/m ³	500 max
Particulate Matter	DIN 51419	DIN 51419		15
Copper Corrosion	ASTM D130	DIN/ISO 2160		No.1
Oxidation Stability	ASTM D2274	IP 306 mod.	mg/100 mL	15 max
Esterification			% volume	98.0 min
Acid Value	ASTM D664	DIN 51558	mg NaOH/g	0.5 max
Methanol Content	GC Method	DIN 51608	% weight	0.2 max
Monoglycerides	GC Method	DIN 51609	% weight	0.8 max
Diglycerides	GC Method	DIN 51609	% weight	0.2 max
Triglycerides	GC Method	DIN 51609	% weight	0.2 max
Free Glycerine	GC Method	DIN 51609	% weight	0.02 max
Total Glycerine	GC Method	DIN 51609	% weight	1.2 max
Iodine Number	DIN 53241 or IP 84/81	DIN 53241 or IP 84/81	cg I ₂ /g	110 max
Phosphorus Content	DGF C-VI4	DIN 51440-1	mg/kg	0.2

HOUSE BILL 1390

BNSF Railway Company opposes mandating the use of bio-diesel fuel in the state.

Bio-diesel May Cause Operational Problems

- Increased fuel filter plugging
- Decreased ability to flow without "gelling" at cold temperatures
- Increased oxidation of fuel leading to microbial growth and reduced shelf life
- Casts a cloud over engine warranties

Bio-diesel Will Increase Costs for the Railroads and Their Customers

- Diesel fuel is already the second-largest operating cost for BNSF, at 13 percent. Only labor costs more than fuel. BNSF annually loads approximately 3.7 million gallons of diesel fuel in North Dakota.
- The railroad's fuel costs have already skyrocketed in the past year.
- The annual fuel cost to BNSF in North Dakota would be nearly \$1 million per year. (Based on preliminary estimate of 5-cent/gallon cost increase)
- There would be additional costs associated with malfunctioning locomotives, stalled trains and repairs.
- These costs would be passed on to our customers.

Such a Mandate Is Premature

- No adequate or conclusive studies on performance in this climate have been conducted
- No infrastructure to insure adequate product supply



HB 1390

BIO-DIESEL MANDATE FACT SHEET (Draft 1/23/01)

The Minnesota Trucking Association (MTA) opposes HF76/SF87 which mandate the adding of biodiesel* to all diesel fuel sold in Minnesota. The MTA opposition is based on:

A Biodiesel Mandate Can Cause Operational Problems In Diesel Engines

- Loss in engine performance
- Increased filter plugging
- Decreased ability to flow without "gelling" at cold temperatures
- Degradation of engine gaskets and seals
- Increased oxidation in fuel leading to microbial growth and reducing shelf life
- Engine warranty coverage is at risk
- Considered an "experimental" fuel by Engine Manufacturer's Association

A Biodiesel Mandate Will Increase Costs to Users and Refiners

- Biodiesel will add a minimum of 1 cent per gallon of diesel fuel for every percent of the product added (e.g. 5% blend equals 5 cent increase). This does NOT include other blending, storage, transportation, vehicle maintenance and market impact costs.
- This mandate will affect truckers, school districts (buses), municipalities (snow plows), transit systems (buses), farmers (off road equipment), airlines and railroads
- Road construction projects will cost more
- Mandate unfairly punishes Minnesota intrastate business that cannot buy fuel elsewhere
- Minnesota fuel retailers will lose sales revenues as truckers buy fuel in other states
- Creates significant new handling procedures and costs for fuel dispensers
- The product cannot simply be dumped in to a fuel tank

Science and Infrastructure Do Not Support A Biodiesel Mandate

- Minnesota lacks the infrastructure to prevent possible shortages of the product
- There is no federal program to support development of a biodiesel industry
- Diesel fuel is significantly higher than 18 months ago; users cannot bear more increases
- The science is not there yet; no adequate conclusive studies on performance in Minnesota's unique northern climate have been conducted
- New federal diesel emission standards, slated for adoption in 2006, are being challenged
- Biodiesel may enhance lubricity but could increase nitrous oxide emissions
- No objective biodiesel fuel formulation standard currently exists

* See glossary and flow chart for definitions and description of the process for adding biodiesel

Minnesota Trucking Association

2515 Wabash Avenue, Suite 150, St. Paul, MN 55114

Voice: 651-646-7351, Fax: 651-641-8995, E-Mail: MTA@MNTRUCK.ORG

Testimony

Fifty-Seventh Legislative Assembly

HB 1390

Chairman Carlson and members of the House Finance and Taxation Committee. My name is Richard Ostlie, I serve as a Director on the American Soybean Association (ASA) Board. I am here to voice my support of HB 1390. Adding biodiesel to our current fuel supply is an important viable economic benefit to North Dakota. Utilizing the resources that we have available in our state right now is a wise healthy economic decision that will benefit all. Other states have also seen the potential as well. Minnesota, South Dakota, Iowa, Kansas and Missouri are looking at the same opportunities as we are here in North Dakota. I think that we all see the need to eliminate emissions and create a healthier and safer environment. It is not very often that we get such a great opportunity to stimulate economic growth in agriculture, become less dependant on foreign energy and create an environmentally safe product all at the same time. We, the soybean industry, do many things at the national level to find new uses for our own American grown soybeans. We, the ASA, are funded by soybean producers across the US to find ways to increase the benefits of soybeans and soybean products. Now that we have the product and the availability we need the opportunity to get to the consumer. HB 1390 will allow us to do just that.

Thank you.

Testimony presented to House Finance and Tax
HB 1390 Biodiesel Content of Fuels
Representative Pam Gulleason

Good Morning, Mr Chairman. It is my pleasure to introduce HB 1390. In its original form, this bill would have incorporated 2% biodiesel into this states fuel supply. In its original form, it would have placed North Dakota as a leader in the embracing the use of renewable fuels in its fuel supply. I recognize that those types of bold moves do not come easy. So, the bill in its present format provides for an interm study which will allow us an opportunity to fully study the issue. The supporters of this bill and I recognize that it is necessary to provide a window of time in which we can answer concerns surrounding this issue and better educate the public and legislators, and an interm study will provide us an opportunity to do just that. The study will look at the economic impact of biodiesel to producers and the states economy, engine warranty concerns, tax implications, and the impact of Federal Energy Policy Act on diesel fuels, as well as any impacts on the petroleum industry.

Biodiesel is the name for a variety of fuels made from vegetable oils, such as soybean or sunflower, or animal fats. The concept of using vegetable oil as a fuel dates back to 1895 when Dr. Rudolf Diesel developed the first diesel engine to run on vegetable oil. Dr. Diesel demonstated his engine at the World Exhibition in Paris in 1900 using peanut oil as fuel. Biodiesel is the only alternative fuel that can be used directly in any existing, unmodified diesel engine. It provides superior fuel lubricity, even at very low blend levels. Because it has similar properties to petroleum diesel fuel, biodiesel can be blended in any ratio with petroleum diesel fuel. Paul Feyereisen from the State Fleet Service has been incorporating biodiesel into the fleet vehicles in Dickinson and Grand Forks on a trial basis for the last two years with very satisfactory results. There is about an

18 cent price difference between #1 and #2. In an effort to save money, they were testing to see if they could use a blend of #2 fuel and soyoil as a winter additive. They had positive results and plan to continue to incorporate it.

The advantages for introducing Biodiesel in this state are tremendous. Producing biodiesel from soybeans and other domestic crops provides an additional use for our oilseed crops, increasing revenue to our farmers. By adding value to our product, we take it one step up the chain and create valuable jobs to support the processing of the oilseeds into biodiesel. It is a domestically produced, renewable resource that would allow us to be less dependant on foreign petroleum for our nations fuel supply. It is biodegradable and meets the standards for lower sulfur levels that the National Energy Policy Act will require by 2007.

There are a lot of positive reasons for supporting this study, but the most important reason is because it gives us a huge opportunity to invest in this state and its resources. I ask for your support for HB 1390.

*Testimony**Fifty-Seventh Legislative Assembly**HB 1390*

Chairman Wanzek and members of the Senate Agriculture Committee. My name is Edmund Goerger, I serve as President of the North Dakota Soybean Growers Association (NDSGA). I am appearing before you today in support of Engrossed HB 1390. This bill studies the wide spectrum of issues that proactively address some major problems we are faced today.

I would like to focus on some facts and misconceptions about biodiesel. First of all the cold flow properties or Cold Filter Plugging Point (CFPP) has been misinterpreted. Extensive research and testing has been conducted to find out just how the CFPP is affected when biodiesel is added. It has been scientifically proven that there is not a difference in the CFPP when normal cold weather precautions are taken. Examples of normal precautions are blending #2 diesel with kerosene or #1 fuel, using additives and fuel tank heaters. When a mixture of fifty percent #1 fuel and fifty percent #2 fuel with up to a five percent blend of biodiesel was tested it proved that there were no significant changes in the CFPP and it met standards set by the ASTM.

Another point I would like to address is the myth that using biodiesel will void engine warranties. The fact is that most major engine manufacturers have formally stated that the use of biodiesel up to a blend up to 20 percent will not void their parts and workmanship warranty. In fact, its use is supported by some.

Engine manufacturers do not warranty the fuel, they warranty engine components and workmanship. If there is a problem with the fuel, it is the responsibility of the refiner. Biodiesel along with conventional fuels are regulated by and comply with the standards set by the ASTM (American Society for Testing Materials).

Why is it so important to study the use of biodiesel?

- The Federal government has a mandate to reduce the sulfur content in diesel fuel by 97 percent by the year 2006. Removing the sulfur lowers the emissions produced but also leaves the fuel without any lubricating ability. Biodiesel is a very effective non-toxic alternative to sulfur.
- The Cetane rating of biodiesel is higher than straight petrodiesel.
- Some alternative fuels take as much energy to produce as they put out but biodiesel produces 3.24 units of energy for every unit put into producing it. That's like giving someone a dollar and getting \$3.24 cents in change.
- Biodiesel can make a seamless transition into the market place. There are no changes that need to be made to the distribution and retail infrastructure or the engines that burn the fuel.
- The study of biodiesel in North Dakota is very important and can have a very positive economic impact on the state.

Consuming the glut of soybean oil that is currently in storage throughout North Dakota and across the nation along with making us less dependant on foreign oil are only two of the numerous economic benefits that biodiesel offers. It is a safe renewable source of fuel. The production of biodiesel in North Dakota can attract big business and create new jobs within the state. Producing biodiesel creates a value added product for the soybean industry in North Dakota.

With the highly publicized visit of our President, George W. Bush, some of our state farmers, including members of the North Dakota Soybean Growers Association, had the opportunity to sit down after the March 8th rally and talk to the president. Energy Policy and the need to utilize alternative fuels in the U.S. was discussed with the

President. President Bush strongly supports value added agriculture and the need to build markets for American crops, with a focus on the demand side.

The increase of soybean acres in North Dakota over the last ten years has been tremendous. Acreage has increased from under 500,000 acres ten years ago to an estimated 2.5 million acres in 2001. That soybean crop is increasing the gross farm dollars in the state. The higher gross dollars means more tax dollars that could be used to improve and maintain our road system by consuming a North Dakota produced product.

We need alternative sources of fuel. Biodiesel is a safe, renewable, home grown product that is available right now. The benefits are huge the costs are small and it is the right thing to do.

Testimony

Fifty-Seventh Legislative Assembly

Engrossed HB 1390

Chairman Wanzek and members of the Senate Agriculture Committee. My name is Terry Goerger, I am a soybean producer and serve as Chairman of the North Dakota Soybean Council (NDSC). I am appearing before you today in support of Engrossed HB 1390. The Study of adding biodiesel to our current fuel supply is an economically wise decision. Not only is biodiesel the most economical means of alternative fuel available, but the quality of diesel fuel is improved at a minimal cost while using a renewable resource. Biodiesel is also the only fuel in the country that has completed a 3 year \$2.2 million testing regimen on the national level.

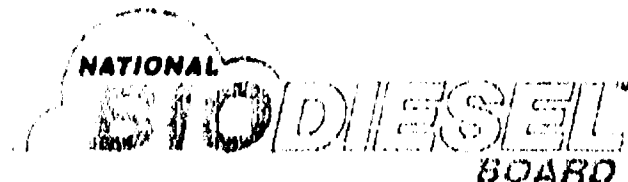
According to the USDA we are looking at an estimated 2.4 billion pounds of vegetable oil reserve. We need to find uses for this surplus. Using biodiesel would utilize that surplus. The point is, the supply is available right now, all we need to do is tap into it. With the increasing soybean acres in North Dakota and across the United States the oil reserve is only going to get larger which means we cannot afford to wait. Utilizing vegetable oil is economically positive, environmentally friendly and benefits North Dakota's economy and North Dakota's agriculture. This legislation is what the industry and consumers need to become educated on biodiesel and how its benefits can attract new business and jobs to the state and in turn benefit themselves. I believe that North Dakota currently has the ability to produce biodiesel with some conversion of equipment. AgriOils in Carrington for example, could be easily converted to produce biodiesel creating economic development.

Biodiesel can be blended anywhere between 2 percent (B-2) and 20 percent (B-20) (20 percent being the most common) without any engine modifications. Biodiesel produces approximately 80 percent less sulfur dioxide emissions and contains almost 100 percent less sulfur dioxide. Cleaner burning. Less emissions. It is also safe to handle and transport since the flash point of biodiesel is 300 F, which is 175 F higher than petrodiesel (125 F) and is ten times less toxic than table salt.

At the 2% blend level there is no change in the jell point or cloud point as compared to petrodiesel when using normal cold weather precautions. Engine manufactures have formally stated that they will stand behind biodiesel as being a safe and viable alternative for the lubricity problem created by removing sulfur. It has higher lubricity, it's better for engines and it's better for consumers.

Adding the proper amount of an additive for lubricity is a concern when the consumer has to do the blending. Having biodiesel available at the pump would not only eliminate the need for consumers to put additives in their tank themselves but would eliminate the chance of adding too much or too little. Simply put, it is safe, easy and user friendly.

This referendum to study the production and use of biodiesel in North Dakota is a sound and wise investment for the state and the people. I believe this study will illustrate the ease of implementation, seamless transition of biodiesel. Using biodiesel makes good economical sense that will benefit North Dakota and North Dakota Agriculture. It is for these reasons I support Engrossed HB 1390.



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The Honorable Terry Wanzek
State Senator
600 East Blvd. Ave
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March 12, 2001

Dear Senator Wanzek:

I am writing in response to the development of the biodiesel resolution, which is being considered by the North Dakota General Assembly. I understand that this resolution would authorize a comprehensive study of the impacts of the implementation of a major biodiesel program in North Dakota.

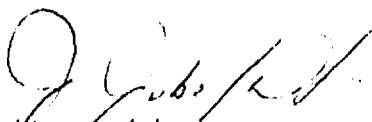
The National Biodiesel Board (NBB) is a non-profit coordinating body for biodiesel research and development in North America. It is the foremost information clearinghouse of biodiesel data. Over ten years and millions of dollars in investment, NBB has conducted, coordinated, or cooperated with biodiesel development efforts around the world. NBB has developed a network of contacts throughout government, the research community, and industry through an information-sharing process in order to leverage maximum cooperation and effectiveness of efforts. This stakeholder-coordination process provides directed focus of limited resources to minimize duplicative efforts and maximize effective progress.

It is to this end that NBB provides input to the resolution being considered by the North Dakota General Assembly. If this measure is approved, and properly implemented, it could provide some valuable data which could be used in the decision-making process in North Dakota, as well as provide information which could be utilized by other stakeholders in industry, government, and research groups. In fact, NBB is currently working with the US Department of Energy and the alternative fuels committee of the Engine Manufacturer's Association (EMA) to further quantify the use of biodiesel in various blend levels through documentation of real-world data.

If the impact study is approved, NBB would like to extend an offer to help North Dakota in this effort by committing our expertise, data, and resources toward the successful implementation of the study, in order to maximize its effectiveness. We will do what we can to provide objective technical data, relevant information about industry dynamics, and coordinated industry input. We will also assist in identifying leveraged funding through federal grant opportunities.

If you or others in North Dakota have questions about NBB or our on-going efforts for biodiesel development, don't hesitate to contact me at 1-800-841-5849 or visit our Web site at www.biodiesel.org.

Sincerely,


Joseph Jobe
Executive Director
National Biodiesel Board

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**Testimony of Roger Johnson
Agriculture Commissioner
House Bill 1390
Senate Agriculture Committee
Roosevelt Park Room
March 15, 2001**

Chairman Wanzek and members of the Agriculture Committee, I am Agriculture Commissioner Roger Johnson. I am here today in support of HB 1390. In its original form, this bill mandated a 2 percent biodiesel content in all diesel fuel sold in the state. Now, the bill comes to you from the House as a study resolution on the use of biodiesel fuels.

As you are probably well aware, we are facing a time when agricultural commodities are at record lows and fuel prices are escalating. Using biodiesel fuels provides a new market opportunity to our state's agriculture producers, in particular our soybean growers. Increased use of these fuels creates increased demand for the commodity. With increased demand, ultimately, we will see an increase for the price per bushel for soybeans. The suggested 2 percent biodiesel requirement equates to the use of more than two million bushels of North Dakota soybeans.

According to USDA estimates, if the country sustained an annual market of 100 million gallons of biodiesel, it would contribute a minimum of \$.07 to the price of each bushel of soybeans. For

North Dakota, that translates into an economic impact of approximately \$5 million to our agricultural sector.

In addition, by providing an alternative to conventional fuels, we begin to combat these escalating fuel prices by sourcing our fuels in the U.S., or more importantly, here in North Dakota. Our country spends a considerable amount of money on petroleum imports. Expansion of the biodiesel industry lessens our dependence on foreign petroleum suppliers. With the soybean industry in North Dakota on the rise, we can also consider a more direct economic impact from establishing biodiesel production facilities here in our state.

When you look at the potential economic impact to both our state and our nation, I believe we should support and take a leading role in the expansion of the biodiesel industry. I have attached an overview of biodiesel initiatives in other states as of March 2, for your information.

Chairman Wanzek and committee members, I urge a do pass on HB 1390. I would have preferred to urge a do pass on the original bill, but a study resolution is arguably better than nothing. I would be happy to answer any questions you may have.

State Biodiesel Initiatives

March 2, 2001

The following overview represents a current snapshot of state biodiesel activities. Actions change almost daily.

Arizona

House bill 2123 would remove existing restrictions on the use of biodiesel as a means for public vehicle fleets in Arizona to meet their requirements under state alternative fuel programs. The measure would make biodiesel eligible for use in city bus fleets, and allow fleets to achieve all, instead of just half, of their requirements using biodiesel. The measure would provide a credit for each 450 gallons of biodiesel used, consistent with the biodiesel use provisions of the Energy Policy Act.

California

The state has included biodiesel as an option in the proposed Health Risk Reduction Plan for diesel emissions. Biodiesel is also under evaluation for use in electricity generation.

Connecticut

House Bill 6319 would add biodiesel to the listing of alternative fuels under the statutory and regulatory scheme, thus, making it eligible to satisfy mandates and qualify for state incentives.

Delaware

NBB responded to a request for information from the Delaware Secretary of Agriculture and other officials in February. Delaware policymakers are expected to introduce legislation to provide excise tax relief on blends of biodiesel at the B-20 level or higher.

Hawaii

There are three pro-biodiesel bills before the Hawaii House of Representatives. House bill 1281 offers a procurement preference to biodiesel while House bill 1345 would provide a tax incentive. House bill 661 sets mandates for biodiesel use in vehicles.

Illinois

Policymakers plan to introduce legislation to cut the state sales tax on biodiesel and ethanol. The measure provides for a formula proportionate to blend level, which would allow for an approximate 2 cent credit on each gallon of B100 used in a B2 blend.

Iowa

Senate File 9 would require B-20 fuel use in the heavy duty vehicles operated by the Iowa Department of Transportation fleet. The legislation also calls for biodiesel use in 25% of vehicles starting July 1, 2001 and increasing to 100% in four years.

Kansas

Members of the Kansas House and Senate are backing legislation that would require some state vehicles to use fuels with a 2% biodiesel blend (B2).

Minnesota

House Bill HF0362 and its companion legislation in the Minnesota Senate call for the inclusion of B-2 into the majority of Minnesota's diesel pool, including diesel used in on-road and off-road motor vehicles. It would create demand for an estimated 16 million gallons of biodiesel annually.

Nevada

The state recently implemented a temporary rule recognizing B-20 and B-100 that goes into the B-20, as alternative fuels eligible to satisfy state mandates.

North Dakota

SB2454 would provide for a 2.1 cent state excise tax credit for each gallon of diesel fuel containing at least 2% biodiesel. The bill has cleared the Senate on Feb 16.

House bill 1390 would fund a study of the economic, environmental, and technical benefits to the state of implementing a statewide program, which would utilize a 2% blend of biodiesel as a renewable lubricity additive in low sulfur diesel fuel.

Texas

House bill 788 would provide a 20-cent per gallon incentive to producers for the production of biodiesel and ethanol for the first 10 years of the plants' production.

Utah

Following NBB's presentation at a Salt Lake City meeting, the city committed to use of B-20 in at least 12 dump trucks and may add more. Biodiesel is also being considered for use in the 2002 Winter Olympics to fuel the 900 diesel shuttle buses that will be operating to transport spectators to the events. Utah officials have requested that EPA allow Utah to incorporate biodiesel into its State Implementation Plan to receive emissions reduction credits..

Washington

Senate bill 5492 would provide a 50% excise tax on blends of B20 or higher and offer a 50% tax credit for infrastructure development for biodiesel and other alternative fuels.