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Good morning. It is a pleasure to address this distinguished group. For those of you who are unfamiliar with AGP, we are a regionally federated cooperative owned by nearly 220 local and regional cooperatives that are in turn owned by nearly 300,000 farmer stockholders. Our primary business is soybean processing and vegetable oil refining.

In 1995 AGP entered both the ethanol and soydiesel businesses. Our 50 million-gallon ethanol plant is located in Hastings, Nebraska and our 10 million gallon soydiesel plant is located in Sergeant Bluff, Iowa**.**

Introduction:

Biodiesel is on the threshold of becoming a viable diesel fuel extender in the United States. Our technical work is largely complete, regulatory compliance has been achieved, production facilities have been built and satisfied customers are spreading the positive experience. One hurdle remains – that is to level the economic playing field with petroleum in the marketplace.

As you all know by now, the United States Congress has finally taken action to partially "detax" biodiesel as part of the "JOBS" bill signed by President Bush in October. This action, although only a two-year provision, will put biodiesel on the path toward significant growth. It will probably be spring before the implementation issues will be worked out by the Internal Revenue Service. I expect that by summer the soy crushing and refining industry will begin to grasp the implications of the new legislation.

Biodiesel is a term that covers a broad array of fuels and fuel additives derived from various feedstocks each having specific properties. Biodiesel is commonly defined as a methyl or ethyl ester derived from vegetable oils, animal fats or various waste fats and oils.

Raw vegetable oils and fats, while exhibiting some characteristics of petroleum oil, are generally unsuitable for use in modern diesel engines without either modification to the engine or the fat source. Through a chemical process known as esterification the fat source is reacted with an alcohol in the presence of a catalyst. The esterification reaction converts the raw fat source into an ester that is highly compatible with modern diesel fuels and diesel engine technology.

Market Penetration:

Nearly 80 percent (40 billion gallons) of diesel fuel use is for on-road transportation. Rail, marine and other off-road applications consume the transportation balance (10 billion gallons). Diesel fuel use in these applications dwarfs the current and future production capabilities of the vegetable oil and animal fat industry. Hence, petroleum based hydrocarbons will continue to be the workhorse for diesel engines as far as the eye can see.

Does that mean that there is no place for biodiesel? No. Keep in mind that ethanol, a fuel that has been in commercial production since the 1930's, now has a market penetration of just over 2.5 percent of the gasoline pool. That 2.5 percent market penetration accounts for over 1.4 billion bushels of corn – or about 12 percent of the crop. Ethanol is an important contributor to the total demand for corn and an important extender for the domestic liquid transportation pool.

It will be a long time before biodiesel reaches the market penetration level of ethanol. However, there are niche markets where the unique properties of biodiesel have their place. These niches are beginning to open up and will continue to emerge due to factors I will discuss a little later.

The Supply/Demand Equation:

At the outset it must be understood that economic forecasts about the future of biodiesel rests on assumptions about the structure of a three legged stool. For the moment, one leg is fixed. The fixed leg is the government incentive -- $1 per gallon of vegetable oils and animal fats and $.50 per gallon of recycled oils. The second leg of the stool is raw material prices. The third is petroleum prices. The trick is to estimate the spread between raw material prices and petroleum prices and then relate that to the government subsidy in order to determine the economic viability of biodiesel. The question at hand is how much biodiesel can be produced without widening the spread to the point that production becomes uneconomic.

Raw Material Availability:

Soybean oil is the mother of all oils in the United States. Soy has about an 80 percent market share that has held steady for over 20 years. In addition, soybean acreage has recovered to levels not seen since 1980. Around 10 million acres of soybeans were lost in the early 1980's due to depressed returns and the attractiveness of farm program crops such as wheat, feedgrains, cotton and rice. Provisions of the 1980 Farm Bill allowed farmers to grow their program crop base. Soybeans did not have a target price or deficiency payments at that time so farmers reacted to the government signals by switching to protected crops. The 1985 farm bill corrected the "race for base" signal but did not allow planting flexibility or subsidy neutral income and price supports. By 1990, "triple base" and "0/92" provisions began to encourage market-based planting decisions. Soybean planting began a slow rise as a result. The 1996 Freedom to Farm legislation decoupled income supports from planting decisions and unleashed pent up demand for soybean crop rotations. Today soybean acres and production are at historically high levels. Most analysts see some fluctuation in soybean acres but no big increase or decrease as farmers have reached an agronomic equilibrium.

Near Term Soybean Oil Availability:

For purposes of this paper I will assume a near term soybean crop of around 3 billion bushels, domestic crush of 1.7 billion bushels and oil yield of 11.3 pounds per bushel providing about 19 billion pounds of soybean oil.

I will also assume that human food use will always prevail in the demand equation. This is logical from an economic perspective since there are few substitutes for food and many substitutes for energy and industrial feedstocks. As evidence one need only look to the market response of ethanol producers in 1996 when corn prices reached historically high prices. Ethanol plants could not compete with livestock feed markets when corn was rationed by price. It took until 1999 (four years) for ethanol production to exceed 1995 after drought hit the 1996 crop.

Soybean oil carryover has drifted between 1 and 2 billion pounds over the recent past. For assumption purposes I believe that biodiesel could only count on being able to pull .5 -1.0 billion pounds from the available domestic vegetable oil supply without raising short-term prices beyond those that would curtail the biodiesel industry. At a conversion rate of 7.7 pounds per gallon, about 65-130 million gallons could be produced from the expected vegetable oil carryover. Other edible oils account for around 3.5 billion pounds of total consumption and are from sources such as corn, cotton and sunflower. Oils from these feedstocks are typically higher priced than soy and unlikely to be used for biodiesel purposes.

Assuming on and off-road diesel fuel use of over 50 billion gallons, 130 million gallons (1.0 billion pounds) represents under three tenths of a percent of total use. However, 1 billion pounds of soybean oil represents 5 percent of total domestic soybean oil use and most of the current carryover stocks.

Near Term Animal Fat and Waste Grease Availability:

Unlike soybean oil, animal fats and waste greases have no carryover from which to draw. Animal fats and waste greases are rendered or processed for use in soap, food, feed, industrial and export markets. They are consumed as they are made available. Supply is a byproduct of other activities such as animal slaughter and fast food preparation. Products clear the market at whatever prices it takes.

The historic price discount between these feedstocks and soybean oil has varied from 25-75 percent. Apples to apples, biodiesel price comparison using different feedstock assumptions is difficult without knowing the quality of soybean oil and the quality of alternative feedstock used as a beginning point in the conversion to biodiesel. Generally, conversion yields are lower and processing losses higher for lower quality feedstocks.

In 2003 total US tallow and grease production was 8.6 billion pounds. Of this amount 1.6 billion pounds goes to edible and technical tallow, 5 billion for inedible tallows and grease and 2 billion pounds for yellow grease. At the right price and assuming no technical barriers, a significant portion of these feedstocks could be bid away from their current uses toward biodiesel.

The "JOBS" legislation provided that animal tallows and fats will receive the same incentive as soy. Thus, it is expected that tallow would be the feedstock of choice as long as it is priced below soy. I would expect tallow/soybean oil price spreads to narrow as biodiesel demand rises. Similarly, yellow grease is incentivised at $.50 per gallon. Yellow grease prices would be expected to rise to approximately a $ .07 per pound spread to soybean oil ($.50/gallon).

My assumption is that a significant demand increase from the fuel side will quickly drive non-soy feedstock prices up to the price of soybean oil (discounted by the difference in tax incentive). This result can be predicted due to the byproduct nature of the raw materials. There is little domestic supply response as a result of a demand increase. At some price point users will either reduce usage and/or switch to soybean oil and vegetable oil byproducts as substitutes for the animal fat and waste grease materials.

For purposes of this paper I have assumed that biodiesel could pull .5 to 1.0 billion pounds of material from the non-soybean oil sector. This converts to between 65 and 130 million gallons of biodiesel.

Total Current Domestic Availability:

> 65- 130 million gallons from soybean oil
> 65-130 million gallons from alternative feedstocks
> Total equals 130 to 260 million gallons or at maximum, about six tenths of one percent of transportation diesel fuel use.

Esterification Capacity:

It is important to note that the above domestic availability does not consider the available esterification capacity. There are few reliable estimates of actual esterification capacity. Esterification and transesterification are processes long used by the oleochemical industry as front-end processes in the manufacture of soap, detergents, cosmetics and other products.

The National Biodiesel Board has 29 manufacturing members who claim total capacity of 144 million gallons (1.1bl.lbs of oil).

USDA has registered 32 entities as eligible for the CCC biodiesel production incentives. USDA does not publish capacities.

In addition, there are at least two plants under construction in Minnesota that claim a total of 60 million gallons of capacity (462 ml. lbs. oil).

Dozens of other plant projects are in various stages of planning and development.

These claimed capacities should be viewed in the light of actual production history. It is safe to say that very little, if any, biodiesel has been produced outside the USDA program. In FY2004 production under the USDA program totaled 18.8 million gallons – only slightly above FY2003. In addition, only five plants accounted for 85 percent of the subsidy program since starting in 2001. Also, only 18 of the 32 registered plants have ever claimed production incentives in any amount.

Obviously, this production is a far cry from the claimed capacity figure. Part of the difference can be accounted for by the structure of the CCC program. It would be logical to believe that existing plants could have double the capacity indicated by production under the CCC program. That would bring us to 40 million gallons.

Another factor is the use of swing capacity in olechemical or petrochemical plants. If all capacity in these plants was switched to methyl ester the capacity would be substantial. Probably as much as another 40 million gallons could be swung by these plants if the economics were profitable. That would bring us to 80 million gallons.

The difference between 80 million gallons and 144 is best explained as hopes and dreams. Again, this does not include two plants under construction in Minnesota that claim 30 million gallons each. There may be others under construction, not yet members of the National Biodiesel Board or registered by USDA that are unknown to me at this time.

If margins were adequate, I believe there is capacity to convert around 500 million pounds of fats and oils in the immediate or near future without consideration of new plants or plants under construction.

Supply and Demand Balance:

The question is often asked "How much biodiesel will the market take"? My response is always "as much as we produce". Again, we need only look at ethanol as our guide. The gasoline market will absorb as much ethanol as is produced. The real question is: at what price? I believe that biodiesel demand will be virtually unlimited when biodiesel is priced at a discount to diesel fuel. Will the price of diesel fuel, in relation to fats and oils (the diesel/fat spread) be greater or lesser than the tax incentive? That is a question I can't answer.

So what is predictable?

Domestic feedstock availability of 1-2 billion pounds coupled with .5 - 1.0 billion pounds of installed and under construction conversion capacity indicates that the industry is already to the point that further capacity increases will likely impact trade flows.

Both vegetable oils and animal fats are imported and exported. If biodiesel demand exceeds my benchmark 1-2 billion pound demand estimate, domestic to foreign fat and oil spreads would widen and exports would decrease, imports would increase or both.

We have looked at some econometrics that predict price impacts from a demand shock. The assumptions were that diesel fuel stays at historically high prices of around $1.20 per gallon (rack untaxed) and that soybean oil is 23 cents per pound. Seven hundred million pounds of soyoil demand raised the price of soyoil 3 cents and 1.5 billion pounds raised it 6 cents per pound. Two percent blends (B2) went from a slight discount to diesel to a premium between 700 and 1.5 billion pounds of use.

The conclusion from this exercise is that at current diesel fuel prices biodiesel can only pull about 700 million pounds (90 million gallons) from domestic soybean oil supplies before B2 blends move to a premium over diesel. After that either B2 must be sold at a premium or trade flows will be impacted to keep feedstock prices in check.

Future Raw Material Availability:

Future raw material availability for biodiesel production is significant. Additional sources include expanded soybean acreage, higher oil soybeans, and higher oil soybean substitute crops, greater domestic crush and imports of foreign oils or their esters.

Expanded Soybean Acreage:

Soybeans could capture another 10 million acres due to global increases in demand for protein fed meat such as poultry and pork. These acres will primarily be drawn from small grains such as wheat where US comparative advantage is slim or nonexistent. If all the additional oil were available for fuel, the supply impact would be an additional 500 million gallons.

Higher Oil Soybeans:

If the soybean oil yield were to increase from 18 percent to 20 percent – a level already achievable – soy oil availability would increase by 10 percent. At an assumed future domestic crush of 1.8 billion bushels the additional oil would amount to 1 pound per bushel or 1.8 billion pounds or 230 million gallons.

Higher Oil Crops:

Sunflower and canola are crops with higher oil content than soybeans. Depending on yield assumptions either crop could produce 10 gallons per acre more oil than soybeans. Additional oil could come from switching out of soybeans to these oil crops or from switching out of other crops to sunflower or canola. Alternative oilseeds are climatically compatible with the northern tier and high plains states. These are primarily wheat and other small grains growing areas. Coincidentally, these are the areas with the highest concentration of Conservation Reserve Programs (CRP) government idled ground. Ten to fifteen million acres could be freed up to plant oil crops simply through release of the government ground. A conservative 10 million-acre CRP release could yield 600 million gallons of biodiesel raw material without drawing acres from other crops.

Another 20 million acres could switch from lower value small export grains to higher value domestic oil crops. Switched acres would come from those currently used to supply the highly competitive and still distorted export markets for wheat and other small grains. These acres could yield another 1.2 billion gallons of raw material.

Expanded Domestic Soybean Crush:

About 1 billion bushels of soybeans can be exported assuming a crop of around 3 billion bushels and a domestic crush of 1.8 billion bushels. If the value of oil began to exceed the value of protein, crush would expand and additional oil would be available. Similarly, if protein were to lead the way, crush could expand and additional oil would be available. The bottom line is that roughly 11 billion pounds of oil leaves the United States in the form of raw soybeans. At the right oil or protein price level crush will expand and additional oil will become available. The biodiesel raw material equivalent is 1.4 billion gallons.

Imports:

Lurking out beyond our shores are hundreds of millions of pounds of raw materials in the form of animal fats, waste greases, and raw fats from various sources. At the right price, our virtually open border will allow imported raw materials to supply US demand for biodiesel. Obviously, for a domestic biodiesel producer the prospect of imports is not savory. However, reality is that commodities will find a home where their value is greatest when borders are open. Any significant run up in domestic prices will draw imported materials to meet demand and equalize domestic and foreign prices (less duties and freight).

Gauging the impact of trade flows is one of the more tricky exercises. Imported vegetable oils are subject to an import duty but imported animal fats are not. Also, vegetable oils and animal fats are exported. Some exports are government sponsored and would be expected to continue. Other exports are commercial. It could be expected that commercial exports of fats and oils would come under pressure as domestic demand increases. For example, there has been 1 billion pounds of inedible tallow and grease exported in past years.

Conclusions:

I have estimated domestic near term economically available raw material at 130-260 million gallons or about six tenths of one percent of transportation diesel fuel use.

My longer range estimates of availability from increased soybean oil acres, soybean oil content, idle acres, switched acres, increased domestic soybean crush amount to nearly 4 billion gallons (about 10 percent of transportation diesel fuel use).

However, as I said at the outset, biodiesel is a niche fuel or fuel additive and in this sense does not compete against diesel. In fact, neat or high blend (20 percent) biodiesel only makes sense in those markets where alternatives to diesel have been demanded by the government or consumers. In the non-alternative fuel markets, lubricity, health and environmental benefits of biodiesel may give it a place in the diesel fuel formulation.

Ag Processing Inc and our marketing subsidiary, Ag Environmental Products, L.L.C., see diesel and diesel technology as the only viable short term solution to increasing transportation efficiency. In their government sponsored effort to find the 80-mile per gallon car, auto manufacturers have come up with the diesel/electric hybrid. A new idea? Not really, locomotives have used this concept for 40 years. The point is that if the United States were ever to get serious about fuel economy, the medium duty (yes that means pickups and SUV's) and the light duty fleet would need to be converted to diesel technology. Ironically, in the rest of the world were fuel is not so cheap, diesel is a major force in the light and medium duty market.

While inherently more efficient and therefore more environmentally friendly, the US environmental structure is more hostile to diesel than in other countries. NOx and particulate matter emissions are a real challenge for diesel given the US EPA and California Air Resources Board (CARB) direction on air pollution. Over time, however, we believe that biodiesel will have a role to play in helping diesel through a transition to becoming a cleaner and more environmentally friendly fuel. For example: ultra low sulfur fuel is being considered in California. The lubricity problems with low sulfur fuel could be a fit for biodiesel. On the health front, some components of diesel particulate matter have been identified as potential carcinogens. Recent EPA Tier II health effects testing show very positive results for biodiesel speciated particulate matter emissions.

In addition, if the talk about the need to reduce greenhouse gases ever turn into something real, biodiesel value will increase substantially due to the closed carbon loop nature of a renewable fuel source.

The Energy Policy Act of 1992, approved in the aftermath of the Gulf War, set a goal of alternative fuel displacement of 10 percent by 2000 and 30 percent by 2010. We are nowhere close. However, under the right set of incentives or use requirements the supplies would be available to at least get to the 10 percent level by 2010.

A less ambitious, but probably more practical proposal has been proposed on Capitol Hill to require 5 billion gallons of renewable fuels use by 2012. For diesel, assuming a 40 billion-gallon baseline, the renewable standard combined with a tax incentive could mean 80 million gallons of biodiesel. While these numbers seem small compared to the availability outlined above, it would be an achievable target. If phased in over time then the goal could be met by domestic sources without disruption to the agricultural or energy markets.