November 15, 2007

Position Paper

Bion Working Group

The Bion Working Group first convened in July, 2007 over questions we had about a rough proposal for an ethanol plant combined with a large feedlot operation. There were a number of initial concerns that triggered the group, but the most obvious was the addition of 84,000 cattle to the 39-56,000 cattle (estimates vary) currently in the county.

When we started looking at the project, we found that Bion had floated a number of proposals that differed in the number of cattle, amount of corn used and amount of ethanol produced.

While many of our questions remain unanswered, we felt that it would irresponsible to not communicate our concerns about the project. Generally these concerns fall into three primary categories: Environment, energy, and economy.

Environment

Manure

Management of manure from 84,000 head of cattle is of significant concern, particularly because of the possibility of spills. Currently the largest dairy CAFOs (concentrated animal feeding operations) in the County are under 2,000 head of cows and calves. Even with the 84,000 beef cattle divided up among six facilities, each of these facilities will be seven times larger than our largest dairy farm.

As the concentration of animals on farms has increased, the handling of manure has become increasingly complex. When our traditional small farms produced much of their own feed, manure was recycled in a fairly tight loop: Farmers transported corn, silage and hay from the fields to the barn and manure was transported back to the fields as fertilizer. In summer months, cows grazed in the fields and much of the manure was left there. With newer mid-sized dairy operations, it is no longer practical to raise all the feed on farm or to transport all the manure back to the fields. Feed is bought in and large volumes of liquid manure is held in lagoons and spread in high concentrations on fields.

Accidental spills of liquid manure, whether caused by human error, lagoon failure, or extreme weather events, do happen. In recent years, there have been several spills from lagoons in this region, some causing serious damage to bodies of water and taking years to completely mitigate.

Air Quality

The nuisance odor study that was carried out by three Clarkson professors relied on comparisons to existing subjective standards. Unfortunately, the Bion process is new and does not yet have a standard. It is estimated that it will have a lower impact than conventional manure management methods, but there are no guarantees. The Clarkson

study is available at http://www.biontech.com. What we do know is that large feedlots in other communities have serious nuisance odor problems.

In addition to nuisance odor, there is the issue of methane. Methane is a highly potent greenhouse gas and cattle and other domesticated ruminants are a significant source. Bion has predicted that its method for processing manure will reduce the methane output, but this is a new technology that is untested at this scale. Burning of manure solids is also a concern. There has been too little documentation related to the emission control components of this system.

Water

Water is an abundant resource in the region and an increasingly precious resource worldwide. Contamination and depletion of this resource in St. Lawrence County could be devastating. A group of students at Clarkson has calculated that the processing of corn to ethanol at the Bion facility will require 319 gallons of water per *minute*. The CAFOs will require 583 gallons/minute. Total consumption is estimated at 900 gallons per minute or almost 1.3 million gallons a day! While some water will be recycled, water will have to be drawn from wells or other sources. Where will it come from and where will it go? What will happen in heavy precipitation events? What is in the discharge water?

Transportation

The Bion project will significantly increase truck traffic. Calves will be brought in and cattle transported out to slaughterhouses in the Midwest. Assuming cattle stay for one year in the feedlot, over 1,600 calves will be brought in each week and 1,600 cattle transported out. Using figures from Ohio State University (http://ohioline.osu.edu/b889/b889_4.html and http://ohioline.osu.edu/b889/b889_5.html) that translates to over 28 truckloads of calves/week and over 52 truckloads of steers. If the cattle stay for six months in the feedlots, the number doubles.

The Bion project proposes to feed the cattle wet distiller's grain from the ethanol process, but there will necessarily be supplemental feed. In a conventional feedlot there are over 13 truckloads of feed for every truckload of calves (http://ohioline.osu.edu/b889/b889_4.html).

Energy

One question that arises with an ethanol plant is whether the energy available in the ethanol will be greater than energy used in its production. Some of the energy inputs that we need to look at are:

1. Corn will need to come from outside the region to the ethanol plant. How will this be transported? How much energy is used in the transportation?

2. The plant will need heat and electricity. How much?

3. The distillation of ethanol requires a large energy input. Some of that will come from the burning of manure, but some will have to come from other sources. What is the BTU

requirement for this distillation?

4. The wet distillers' grains will have to be transported from the ethanol plant to the feedlots. How much energy will this take?

5. Manure will have to be transported back to the plant to be burned. How much energy will this take?

6. The separation of the solids from the liquids requires energy. How much?

Overall – how much valuable transportation fuel will be generated versus that consumed by the processes both locally and in the Midwest where the corn is grown?

Economy

Although the economic impact study prepared by Bridge Associates presents a glowing picture of the economic consequences, the authors are careful to point out that these are short-term predictions. Furthermore, the proposal that Bion would create 198 jobs and spend $32.3 million annually still seems to be in flux.

The study further predicts that if more of the inputs to the operation (corn, hay and cattle) were to come from the region, the economic impact would be greater. This would also have the effect of having a larger portion of the local agricultural production dependent on a single business.

What is not noted in the Economic Impact Statement is the fragile nature of the finances. The plant depends on a Federal subsidy for ethanol production. Should this subsidy be reduced or eliminated, the plant could become unprofitable and close. Other variables that could influence its financial viability are: the cost of corn and/or hay, the cost of replacement animals and the market for beef.

Although the federal government still supports the production of ethanol from food resources such as corn to supplant imported oil, the public and scientific communities are beginning to protest. The corn ethanol bubble is likely to burst – and the tax subsidy to disappear – during the working life of this facility.

What are the probabilities for long-term economic viability of this plant? What is Bion's and the County's plan for decommissioning the plant if it does not meet economic expectations? What impact would closing the facility have on the region's farmers who have become dependent on Bion for their market?

Agriculture in St. Lawrence County is growing in two different directions. Dairy farms are becoming much larger and are falling under the State's regulation of Confined Animal Feeding Operations (CAFOs), but they remain locally owned. In addition there is a significant growth in organic and sustainable small farms. Bion poses a threat to both these lines of agricultural production by driving up the cost of local agricultural resources including hay, corn and land.

Conclusion

At this point, there is not enough information to fully evaluate the impacts of the Bion project on the region. Given that this is the first large scale project that Bion is proposing, we are unlikely to get much more information. What we can say is that there is a significant potential for adverse impacts on region's environment, culture and economy.

We therefore believe that before this project advances any further, the public should be fully informed and given an opportunity to air its views.

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