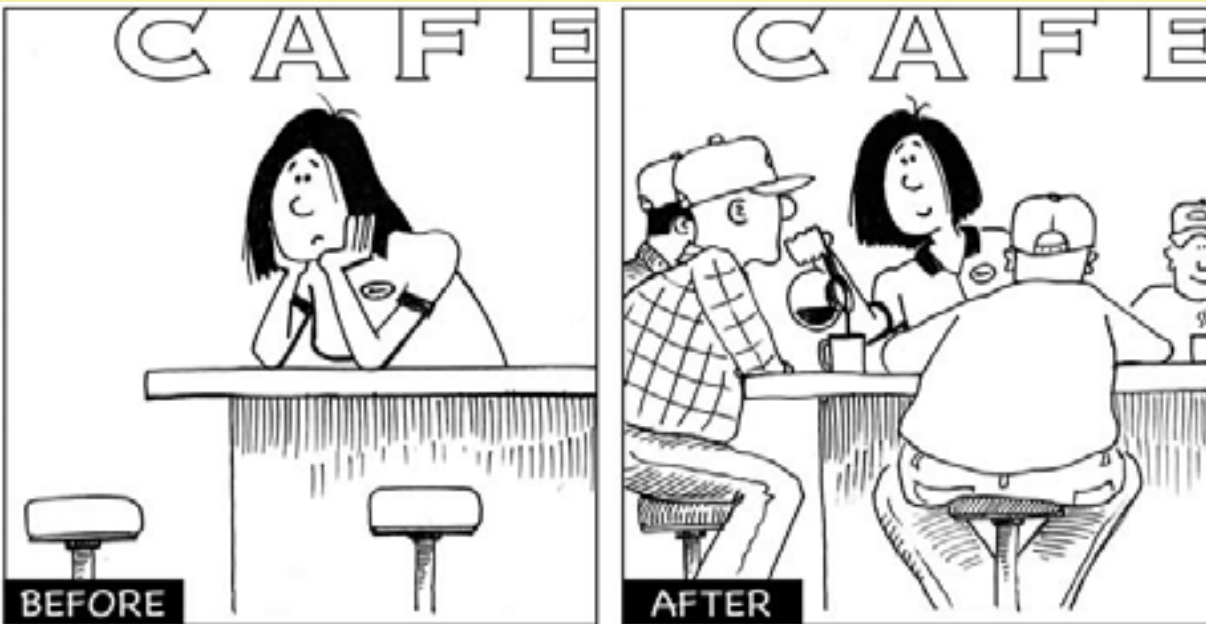


The Biofuels Revolution? The Promises and Perils of Biofuels Development for Rural Communities in Kansas

Theresa Selfa, Laszlo Kulcsar, Richard Goe and Gerad Middendorf,
Kansas State University, Department of Sociology

Do not use
without author's
permission

Prepared for the Sustainability of Biofuels Conference, K-State, September 16, 2008



A lot changes when an ethanol plant comes to town.

From: Food and Fuel America. com

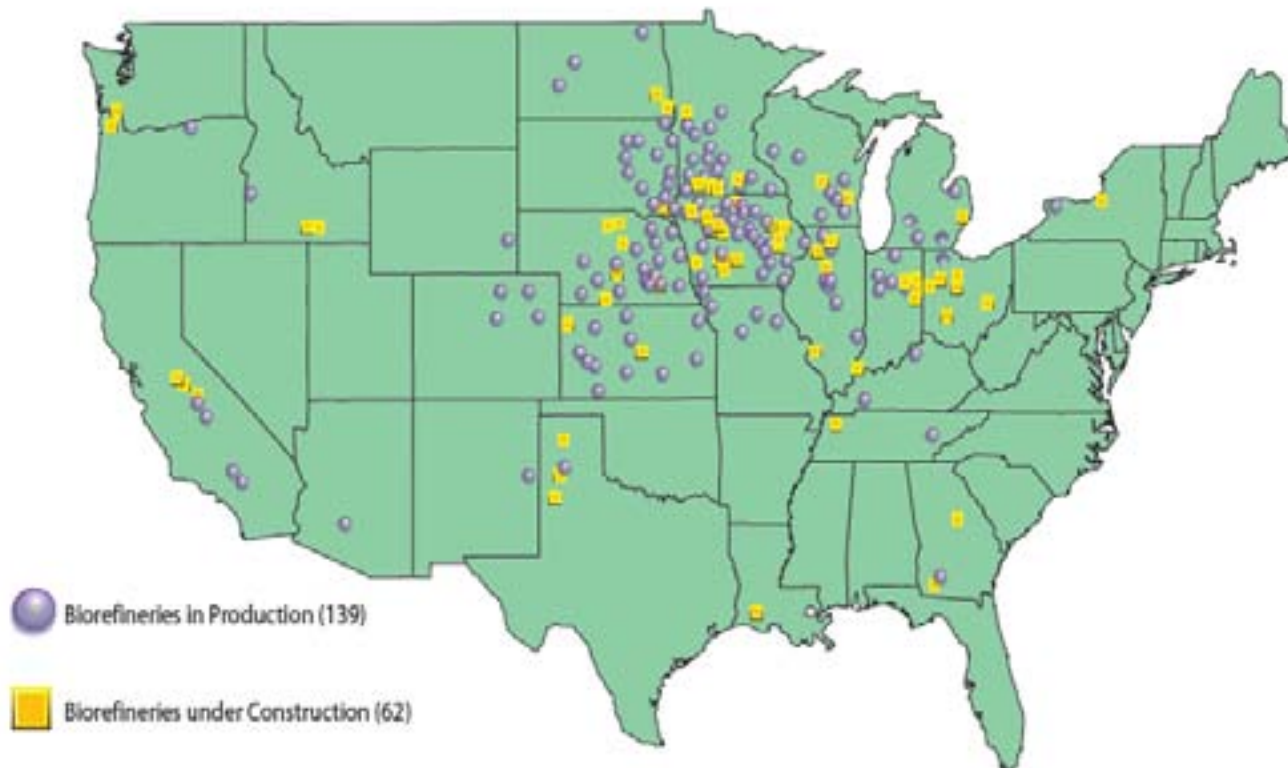
The Biofuels Revolution?

“Continued expansion of biofuel production will increase global demand for agricultural products and result in the **creation of new jobs** at every stage of the production process, from harvesting, to processing, to distribution. As more countries become producers of biofuels, **their rural economies will likely benefit** as they harness a greater share of their domestic resources. **But not everyone will benefit equally.**”

(World Watch Institute, 2006)

The Biofuels Revolution?

U.S. Ethanol Biorefinery Locations



Source: Renewable Fuels Association
01.24.08

The Biofuels Revolution?

Project Objectives:

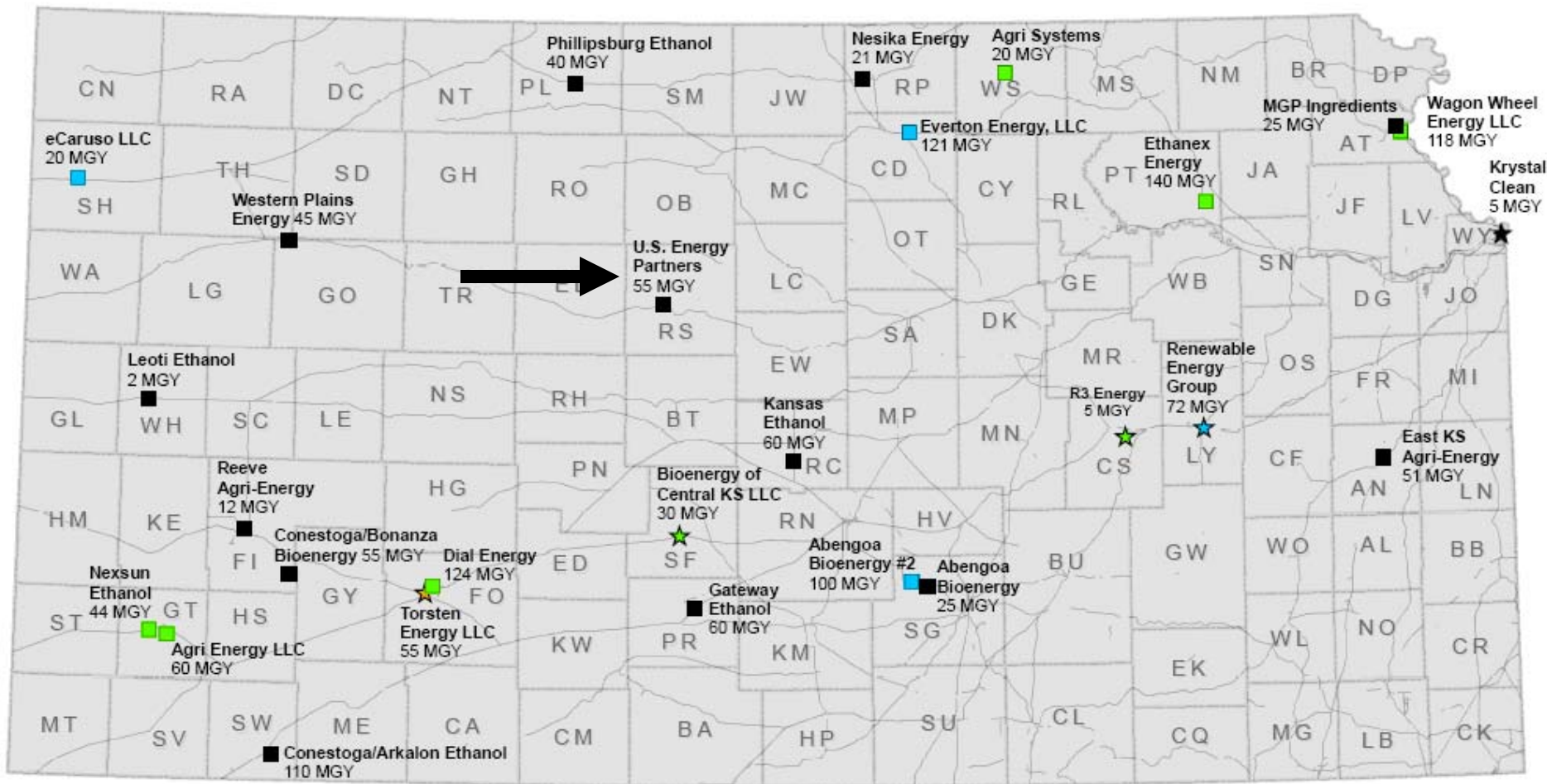
1. To understand how the shift to biofuel production has affected rural communities in terms of economic, demographic, and socio-cultural impacts.
2. To determine how state agencies, groundwater management districts and local governments manage competing demands for economic growth through expansion of biofuels with diminishing water resources.
3. To determine the relative importance of social-cultural, environmental and/or economic factors in the promotion of biofuels development and expansion in rural communities.

The Biofuels Revolution?

Methods

- Select Six Community Case Studies (4 in KS, 2 IA): variation in plant establishment date, plant size, ownership structure, community opposition/ support, water availability
- Comparative Community Case Study Methods
 - Track discourse around plant in local media
 - Develop profiles of demographic change, 1980-2007
 - Community survey of perceived benefits and costs of biofuels, environmental attitudes, Russell (N=246)
 - Focus groups and in-depth interviews w/ farmers, plant workers, & local business owners (N=3)

Ethanol and Biodiesel Plant Activity in Kansas July 2008



Ethanol Plants

- Existing
- Under Construction
- Permitted*
- Permit Pending*

Biodiesel Plants

- ★ Existing
- ★ Under Construction
- ★ Permitted*
- ★ Permit Pending*



MGY = Millions of gallons per year of permitted capacity.
Capacities courtesy of Kansas Department of Health and Environment

* Permitted and Permit Pending codes refer to KDHE Bureau of Air and Radiation – Air Construction permits.

Kansas Department of Agriculture
Administrative Services, GIS
July 2, 2008

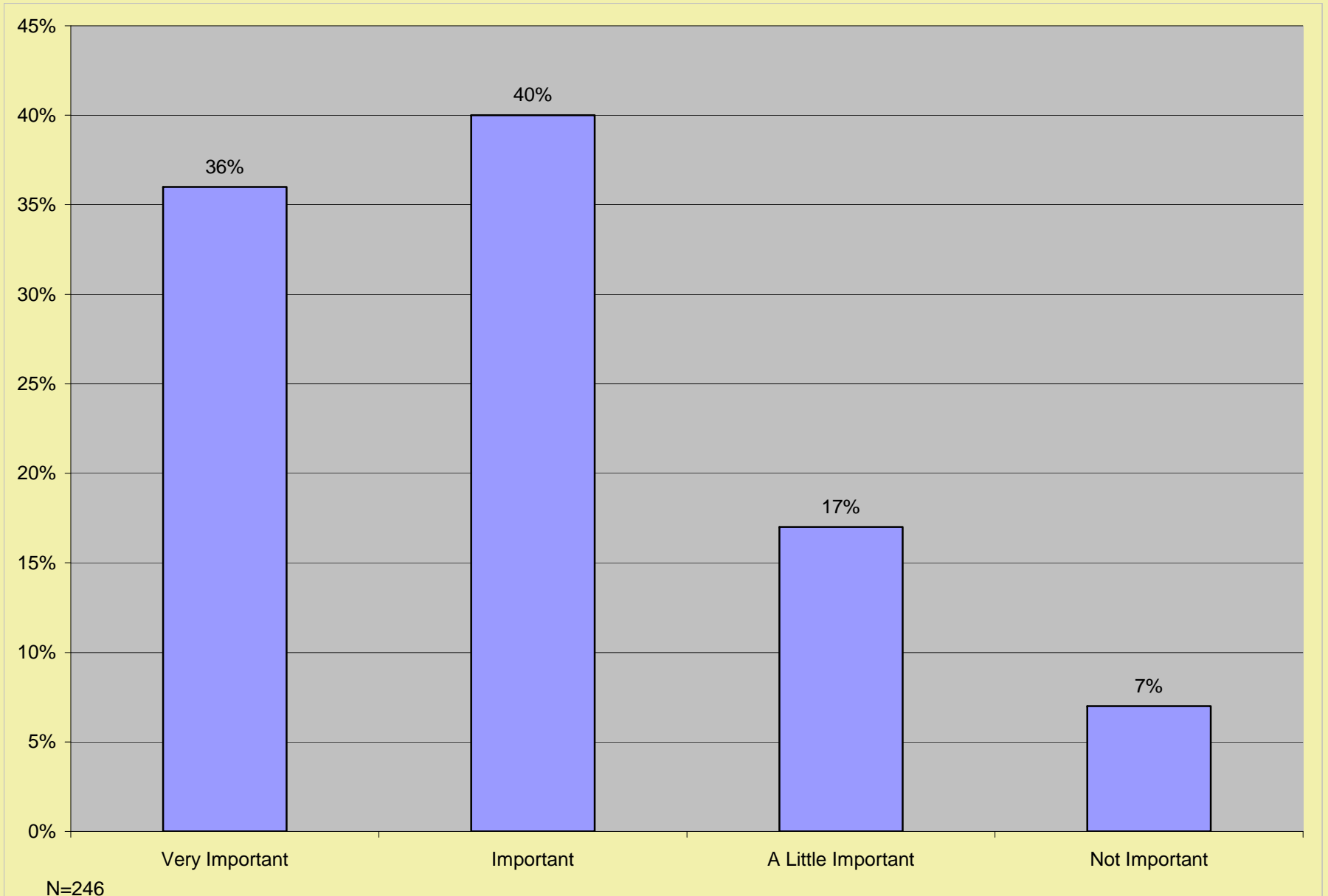
Biofuels Revolution?

Case Study : Russell, Kansas

- 2000 County Population was ~7,000+ and declining
- Average Farm Size (2002)= over 800 acres
- Market Value of Agricultural Products sold for average size farm in Russell were 30% of KS average
- Former oil town
- High Percent (~25%) of Population are 65+, as compared to KS non-metro and US non-metro
- Fire in 2000, power plant exploded, economic decline
- Ethanol Plant built in 2001

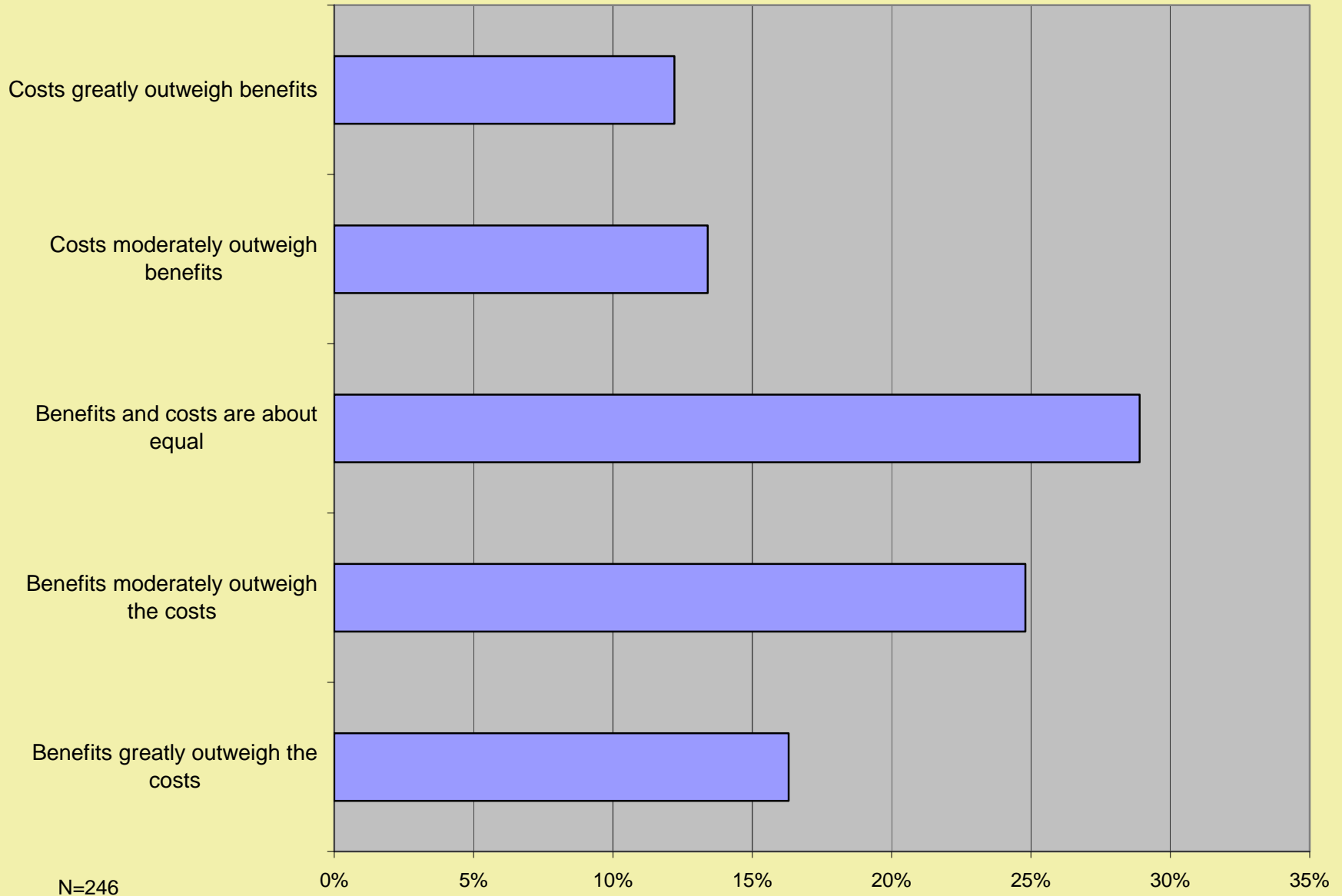
Findings from Russell Community Survey

In your opinion, how important is the ethanol plant to the economy of the local area?



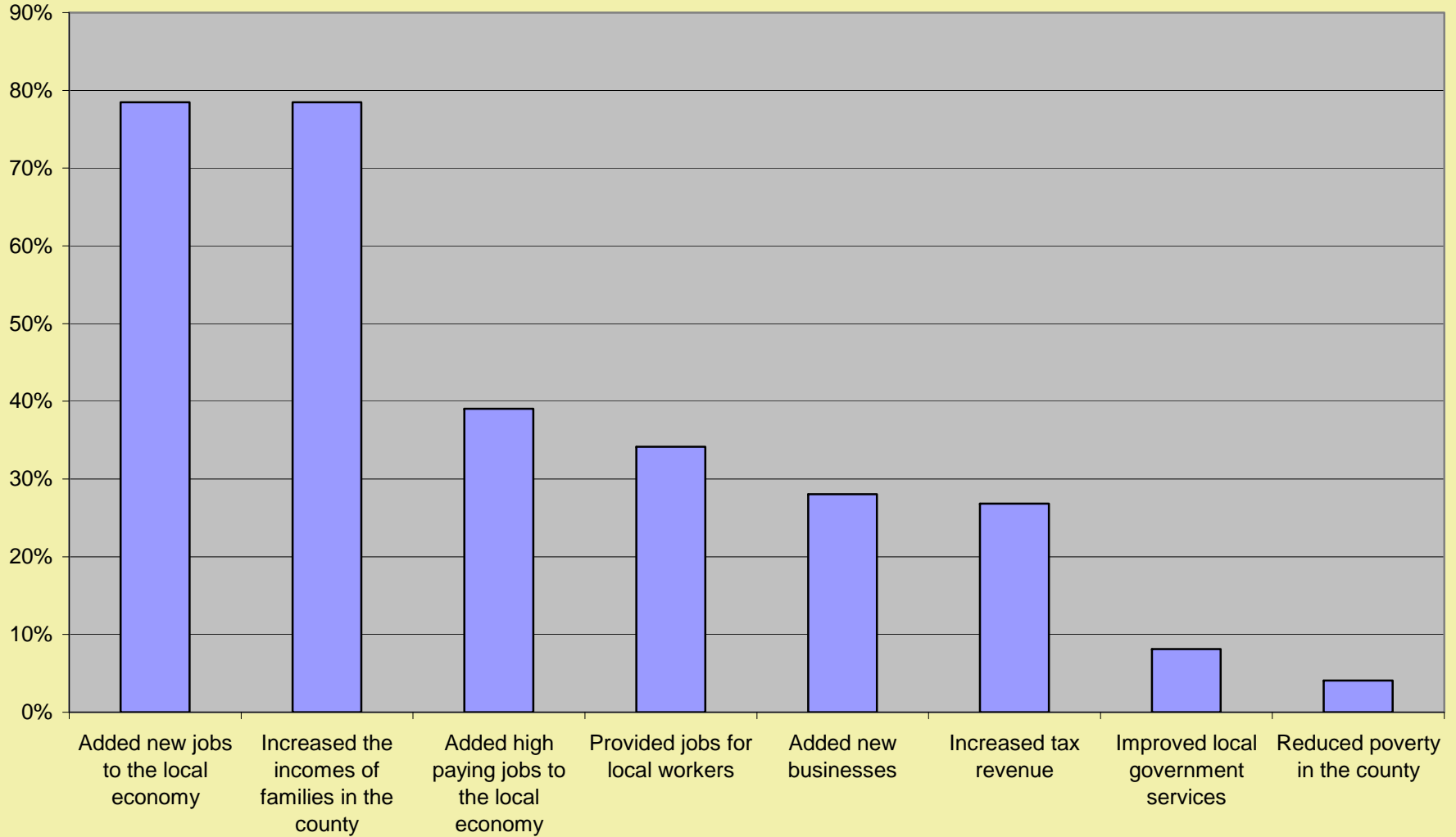
Findings from Russell Community Survey

How would you rate the impact of the ethanol plant on the quality of life in the county?



Findings from Russell Community Survey

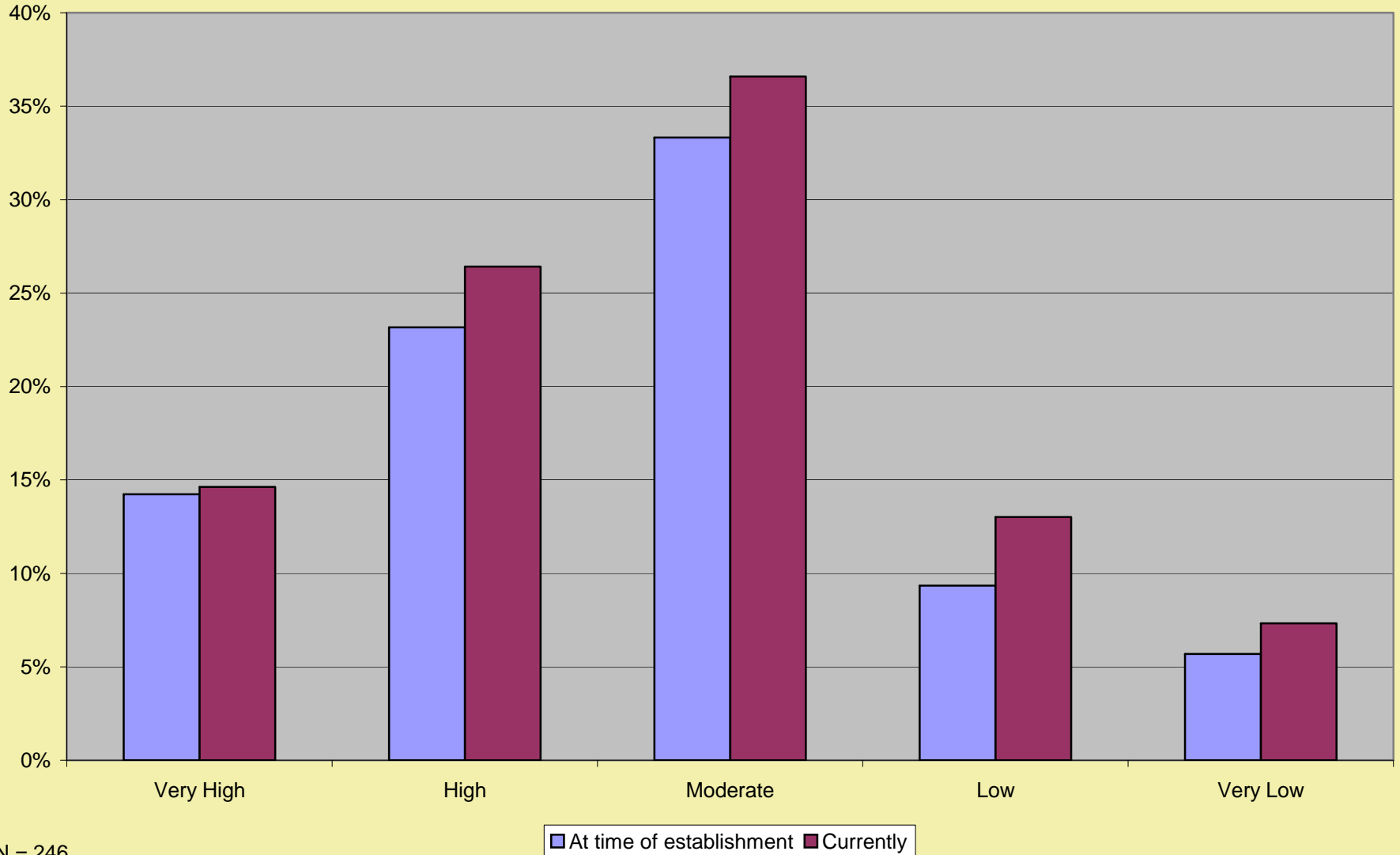
In your opinion, which of the following impacts has the local ethanol plant had on the county?



N = 246

Findings from Russell Community Survey

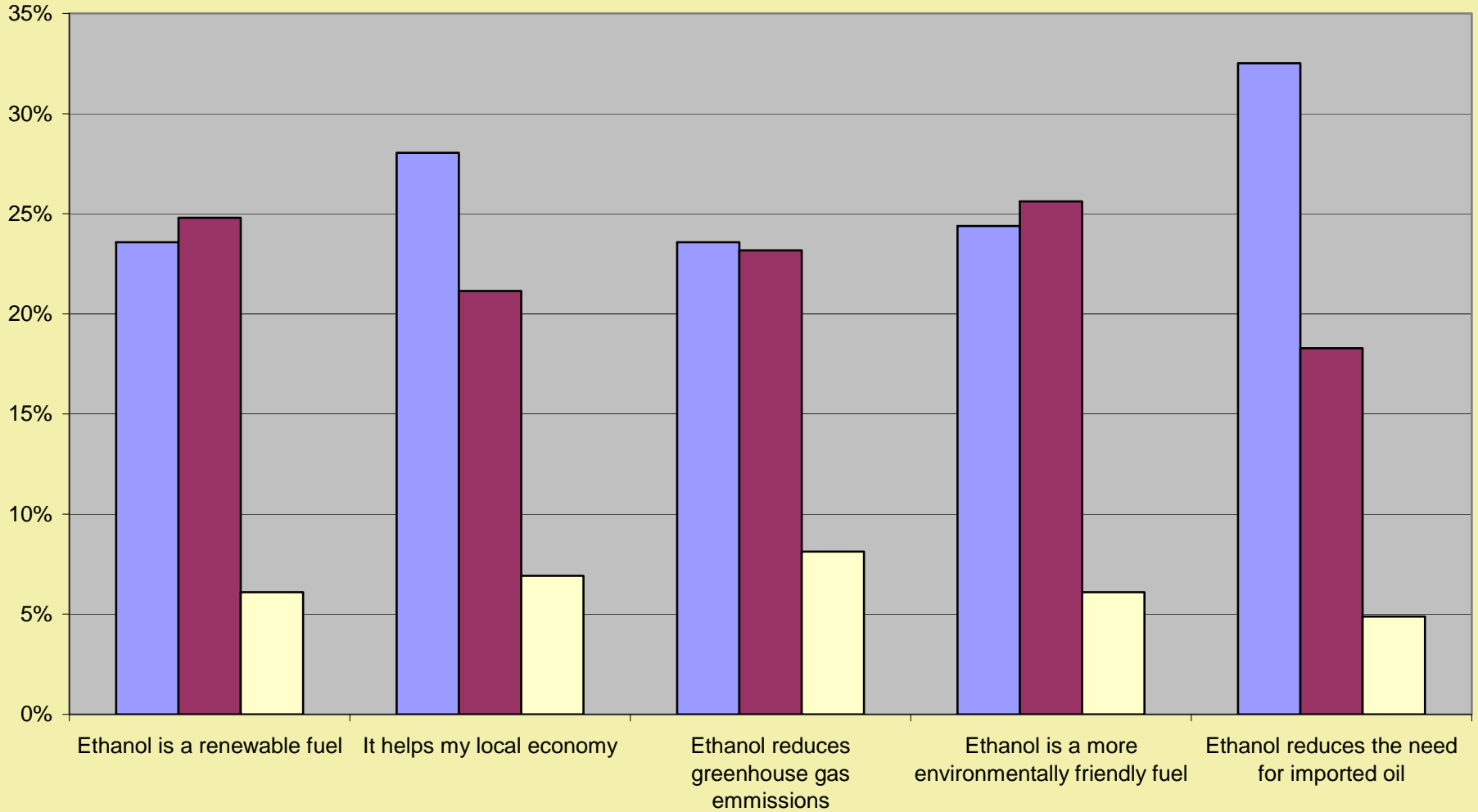
How would you describe your support for the local ethanol plant?



N = 246

Findings from Russell Community Survey

How important are the following reasons in your decision to use gasoline mixed with ethanol?

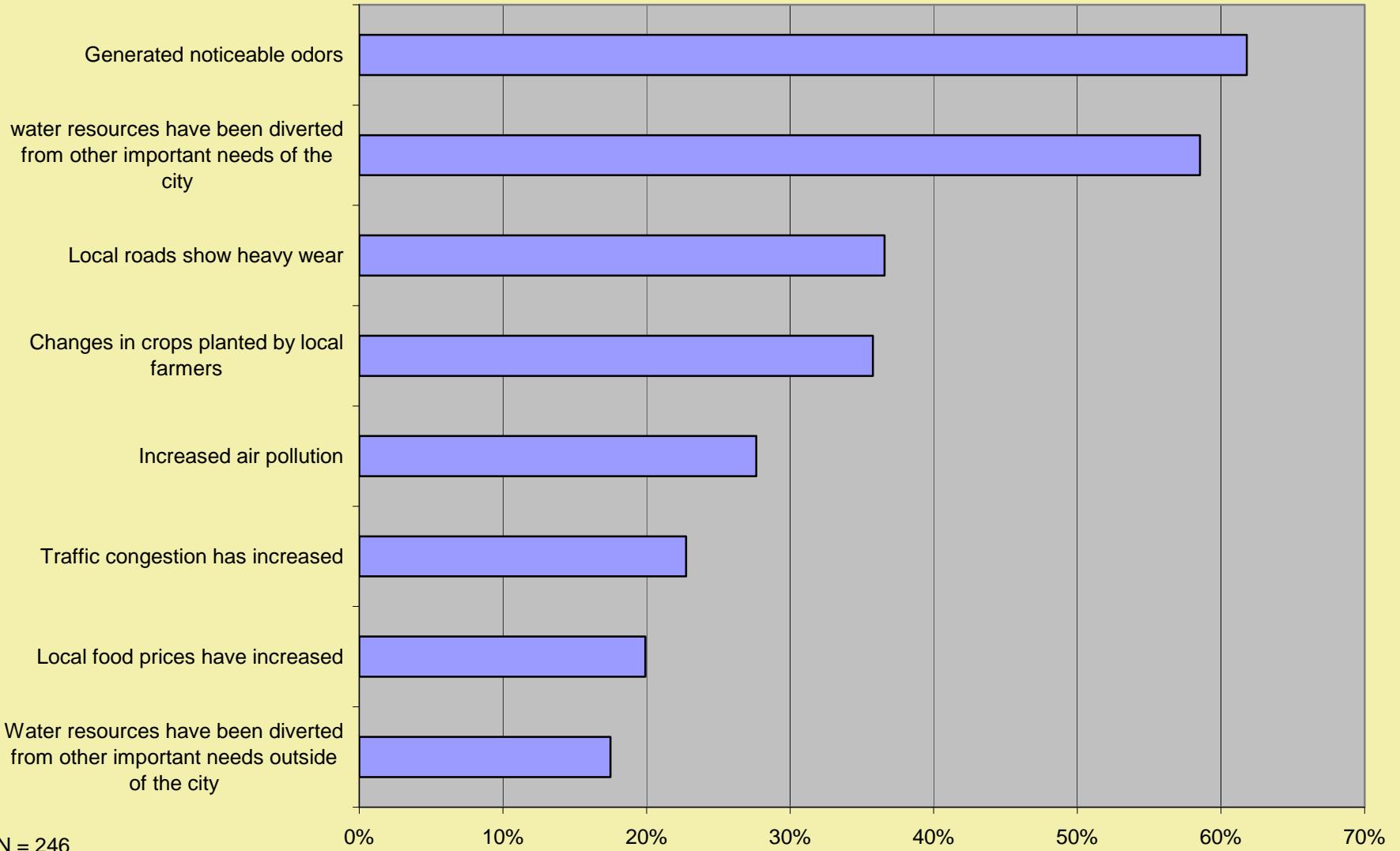


N = 246

Very Important Somewhat Important Of No Importance

Findings from Russell Community Survey

In your opinion, has the ethanol plant had any of the following impacts?



N = 246

Findings from Russell Community Survey

How would you describe the current public sentiment about the ethanol plant?'

“Citizens realize **we need the jobs but there are now water issues** and every day living issues--as more ethanol is produced--food prices are growing substantially”

“**Very negative. Our water rates have gone up**, while we are under severe water restrictions. The ethanol plant gets the water, the citizens get the bill. People in this community can't enjoy their own back yards.”

“**Overall I think people are happy to have the ethanol plant in Russell.** It has raised our economy. The only issue is the water usage.”

“**It may soon close and we will be burdened with the tax load**, as we already are and had no say about it no election! We done this, now you taxpayers of Russell; eat it.”

“**It smells and smokes but any job in this town is better than none at all.**”

“**Glad to have it**, especially with several communities losing jobs in western Kansas.”

“Why are these natural resource hogs sitting in the middle of a drought stricken region like Kansas. - Russell, Kansas We don't have the water they are capable of using, on a daily basis.”

Russell Focus Group Findings:

Stabilized Population

My opinion, **the city economically would have been worse off without it**. I don't know, because we're in a declining population area, things tend to move toward Hays and towards Salina. We probably were able to maintain population and jobs and economic activity.

Not a gain in population, just a maintain in it. Where we would have been dropping off, we stayed better.

I think in a matter of that it's um, its kind of helped with the uh, you know, **getting people here** and they was hoping that it would bring other industry in also, but sometimes everything that's associated with that is associated with water.

Well, for here being an oil town and then being able to have a job that linked the ethanol facility, also it goes back to that having steady employment so that you stay here. You don't venture off to another town or another job, just whether it's stable employment or to pick up for better pay or something like that. **So in some sense it keeps you here because it is a decent job, a decent place to work**, and then you, being here in this town, it also reflects on you're bringing your kids up here, you're spending your money here in the town.

Russell Focus Group Findings:

Positive Economic Benefits

[We] are in the real estate [business]. So we've seen the effects of this, **socially with people moving in for the housing. We've also seen the economic boost it's given us after the oil boom went bust**, is what the community called it back in the 80's and 90's, and it's provided jobs. The ethanol plant's been very good to us. ...And they've been very good hosts to us out there. They give a very thorough tour, they explain everything to our foreign visitors and so those are the things we've seen.

The upside is the fact that it's **more jobs because now we have local trucking contractors who have gone into business and now operate locally hauling raw materials** in and bi-products out. So the more people that are located here that now have trucking businesses that are able to maintain themselves can do very well.

I think [the plant] gave us a **big mental boost**. It brought us to a more positive outlook. ...It was a real feather in our cap

Russell Focus Group Findings:

If there is ethanol, we want it local

If you ask the question, do you think we're better off that there is an ethanol plant here and not in Salina or not in Garden City, I think that's pretty much a slam dunk answer. But if there's going to be one, the fact that it's right here is good for the community. Now whether or not ethanol plants are good for the long term agriculture is a whole different question, **but the fact that we've got one here gives us an advantage.**

If there is going to be an ethanol industry, you want it next to you. If you ask a lot of livestock people, depending upon the percentage of livestock income versus crop income, they're going to like it or not like it. But if you're a livestock person and there is one, you want it where you can benefit from it, which is a good thing for us here locally.

Russell Focus Group Findings:

Ethanol is Two Edged Sword for Livestock Industry

Kind of a two-edged sword for the livestock industry.

It does, I love it when I sell grain but when I buy cattle feed, it's killing me.

But I'm not naïve enough to think that's all because of the ethanol industry. Worldwide grain supplies are down and that's a big crunch there. Transportation of feed and grain is expensive caused by the petroleum situation.

Russell Focus Group Findings:

Concerns that DG not benefiting local producers

Cause when the plant went in they said that they would cater to people within a fifty mile radius from the plant and **we get all these guys out here in the country trying to go get DG or something and they are trying to weed us out.** They get belligerent on the phone with you and it's just terrible. Get this new group now they and we don't care whether you get it or not.

And they was just going with the big...before they was just going with the big companies. They knew that they could get a solid contract with them and it was always going out because they made so much, they needed to get rid of it. **So they were catering to the feed lots and it was all going hundreds of miles away from here, and then when someone, you know, I live fifteen miles out of town from the plant here. I said, hey I'm just fifteen miles from the plant and I couldn't get any.**

Russell Focus Group Findings:

Importance of Community Relations

I think it goes to a bigger issue. If you were advising a plant to go into, that is going into a community. I think it would be really good advice to **think about community relations**. At times it seems like the community was here, they [the plant] were here, and other than hiring people from the community, they were totally, there was no connection, and almost negative communications. But the change in management, change in people, and now I think it's working very well.

Russell Focus Group Findings:

Concerns about downturn on community

Any of us here, I think, are, locally, all of those things are true, but they come at a cost. And if you look at the macro versus micro. Micro if you're going to have a plant you want it in your town. Philosophically I'm not sure I'm a great ethanol person. **The downside that scares me to death is, we have built a lot of things around this plant and other towns have built around plants like it and at the stroke of the market could shut them all down. The upheaval caused would be tremendous.** A lot of money being lost in investment and...

So one of the things that any community has to look at now **is-are you hitching your star to a solid partner** because now the cost is far greater than it was when this one built and you need to really investigate who you're dealing and doing business with because you don't want some outfit that's going to come in and spend a lot of money and all of a sudden they don't have enough resources to operate. I mean that could be a real serious problem.

Russell Focus Group Findings:

Worries about future of ethanol

I guess I worry about as we move on in time **how important is ethanol going to become? Is it going to be phased out?** Or is it going to be there but how much are we going to utilize it? Are there going to be other sources of energy that are coming? ... I mean, we don't know what technology is out there, yeah we've heard reading books about hydrogen and switchgrass and we can use that, but it's going to work in this one little area, but if you have to truck it a long distance, I like we're seeing, that isn't going to work. ... Well, by the time we run a pipeline out there is ethanol going to be that important? Is there going to be enough refineries to take care of it, to even get it that far? I think these are some important things you know that, we get everything developed for ethanol and all the sudden there's another source of energy.?

Russell Focus Group Findings : *Ethanol as short term energy fix*

I think it's just **a short term kind of fix here**. You know it will get us through for a while, but there will be a new form of energy, fuel source or something that will come along. I've **never seen ethanol being more than maybe ten percent of the market** and that's about as much as you'll ever get just because of the economics of it.

You'll always hear so many people instead of talking about the companies and stuff could increase the mileage on the vehicles ... But it's obvious that they must not want to be doing too much either. **We could use a lot less fuel then.**

Biofuels Revolution?

Preliminary Conclusions from Case study

- If ethanol will be produced, want it to be local
- Stabilized population from further declines
- Ethanol plant brought jobs, not high paying jobs
- Ethanol is economically mixed for livestock farmers
- Big concerns about water availability, but not many other environmental concerns
- Concerns about long term viability of ethanol
- Concerns about community impacts if ethanol goes 'bust'
- Realization that ethanol is short term 'energy' fix, little interest in energy conservation

Biofuels Revolution?

References

- Broadway, M. and D. Stull. 2006. "Meat Processing in Garden City, KS: Boom and Bust." *Journal of Rural Studies* 22: 55-66.
- England, L. and R. Brown. 2004: "Community and Resource Extraction in Rural America" in David Brown and Louis Swanson (eds). 2002. *Challenges for Rural America in the Twenty-First Century*. Penn State University Press.
- Logan, J. and Molotch, H. 1987. *Urban Fortunes: The Political Economy of Place*. Berkeley, CA: University of California Press.
- Mol, A. 2007. "Boundless Biofuels: Between Environmental Sustainability and Vulnerability." *Sociologia Ruralis* 47 (4): 297-314
- Worldwatch Institute. 2006. *Biofuels for Transportation: Global Potential and Implications for Sustainable Agriculture and Energy in the 21st Century*. Prepared by Worldwatch Institute for the German Federal Ministry of Food, Agriculture and Consumer Protection (BMELV), in cooperation with the Agency for Technical Cooperation (GTZ) and the Agency of Renewable Resources (FNR).

Biofuels Revolution?

Questions??

Theresa Selfa, tselfa@ksu.edu

Partners at Kansas State:

K-CARE

*Office of Educational Innovation and Evaluation,
Center for Engagement and Community Development*

For ongoing project results, www.ksu.edu/sasw/kpc/biofuels/project_doe.htm

Funded By:

*Kansas State University Agricultural Experiment Station
US Department of Energy ELSI Program*