

## Making Sustainability Pay



### Sustainable Crop Production?

When is a farm sustainable? Do my management choices impact the sustainability of my cropping systems? How does my management compare to my peers? Can an increase in field sustainability pay by reducing inputs? Field To Market<sup>®</sup> Fieldprint Calculator can help a farmer visualize a field and its inputs and outputs in new ways as well as compare them to local, state and national averages.

### What is Field to Market?

Field To Market<sup>®</sup> is a diverse alliance working to create opportunities across the agricultural supply chain for continuous improvements in productivity and environmental quality in commodity crop production. The group provides national leadership for defining and measuring “Sustainability” in cropping systems grounded in science, built upon an industry-wide dialogue, and open to the full range of technology choices.

### Why is Nebraska Extension and Nebraska Corn Board Involved?

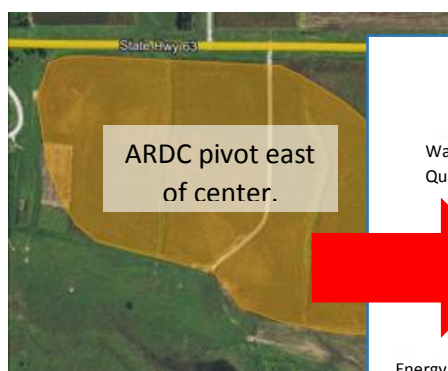
Our two organizations are members of Field to Market and have initiated efforts to apply appropriate sustainability tools to Nebraska farms because of our common support for these principles:

- ✓ Sustainability in crop production should emphasize a science based foundation, technology neutral solutions, continuous improvement, using inputs efficiently, and benefitting the environment;
- ✓ Sustainability in crop production should be demonstrated with measurable metrics;
- ✓ The consumer should know the story of US agriculture’s efforts to improve sustainability and be good stewards of natural resources.

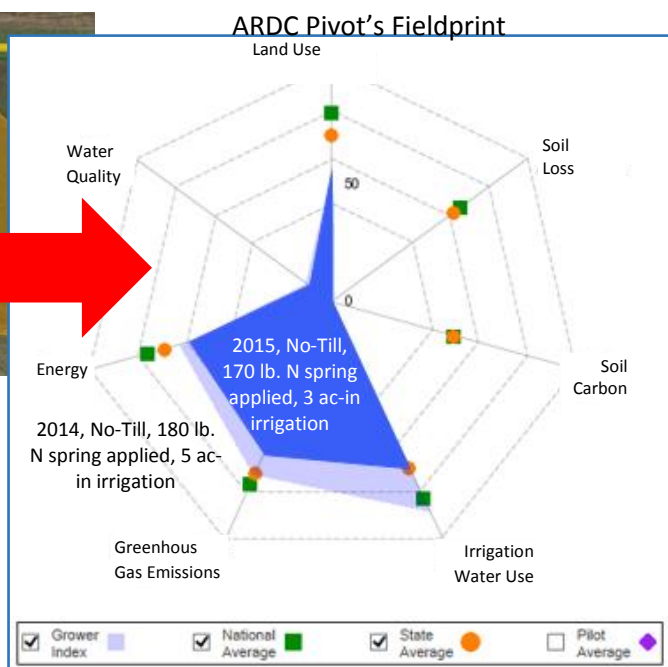
Our intent is to apply these principles and appropriate tools such as the Fieldprint Calculator in Nebraska. Our current focus is to engage with the leadership for Nebraska agriculture and agri-businesses in planning future application of Field to Market sustainability concepts and tools.

### What is a Fieldprint?

The fieldprint calculator is a tool that estimates an individual field’s sustainability based upon seven measures summarized in the figure to the right. Farm specific information for an individual field is used to create a fieldprint.



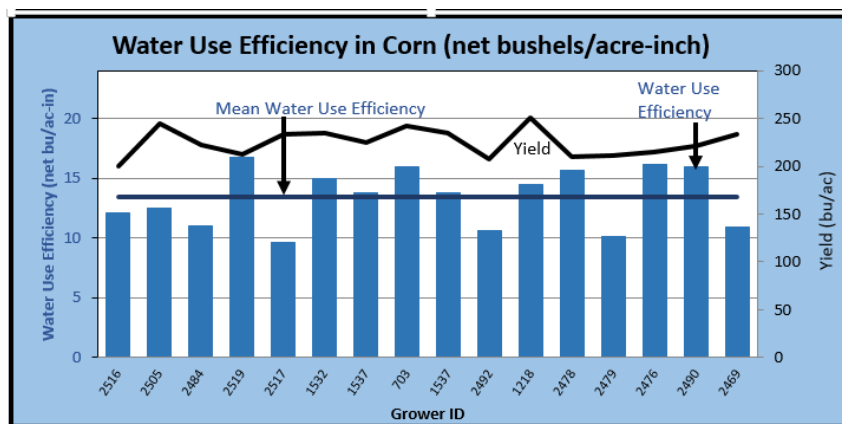
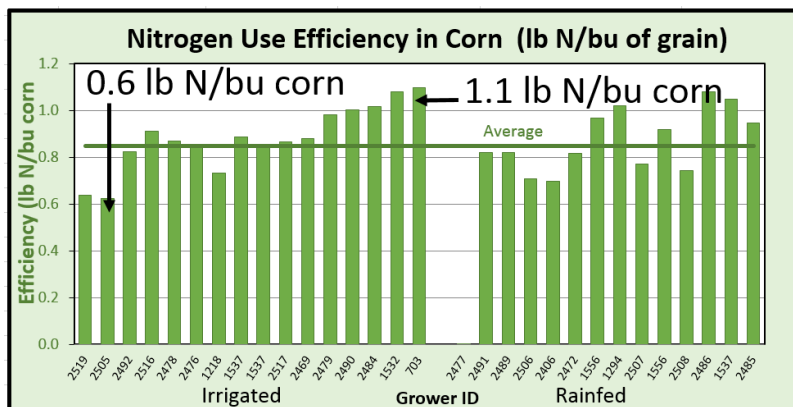
The Fieldprint to the right was created for a University of Nebraska field. Two field prints are shown (superimposed on one another) to allow a comparison of the environmental benefit of a lower rate of water and nitrogen use.



### Some Lesson's Learned From 2015 Southeast Nebraska Pilot

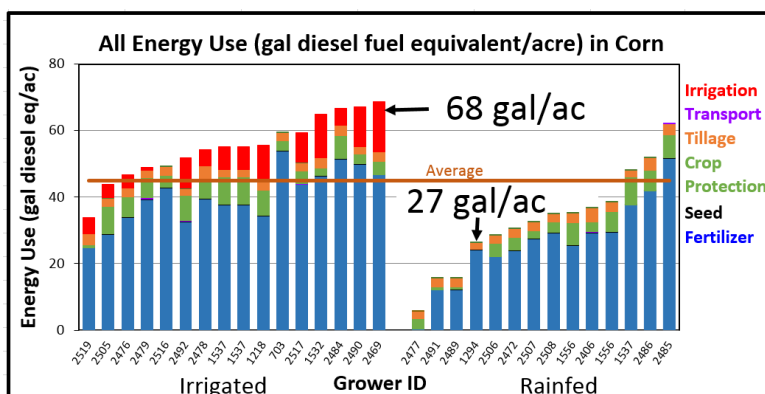
We don't all farm the same. Some fields are more efficient, some less. This may be due, in part, to controllable management choices and local environmental factors beyond the farmer's control.

*Nitrogen Use:* Southeast Nebraska farms produced a bushel of corn with 0.85 lbs of nitrogen on average. Some approached 0.6 lbs N per bushel and others used 1.1 lbs. N per bushel.



*Water Use Efficiency:* Southeast Nebraska farms produced, on average, 13 bushels of corn per acre-inch of water applied. But the range was from 9 to 17 bushels per acre-inch. This is the increase in yield over what would be expected from a dryland crop. A reasonable goal for corn fields would be 12 to 14 bushels yield increase per acre-inch. A goal for soybeans would be 3 to 3.5 bushels yield increase per acre-inch.

*Energy Use:* Southeast Nebraska farms produced an acre of corn with an average of 45 gallons of diesel fuel equivalent. The energy used to manufacture the nitrogen fertilizer applied was the largest energy input. A future focus on using nitrogen efficiently will have value to reducing agriculture's energy use.



### Contacting Nebraska Extension FTM Team

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