# UNL Extension: Acreage Insights

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**Changes In Gasoline Are Here**
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Fuel changes are here. Lower octane gasoline is now flowing up the pipelines to local terminals. This "sub octane" fuel will change the choices and prices we see at the pump.

Previously gasoline in the pipeline was about 87 octane, starting now gasoline in the pipeline will be about 83-84 octane. This "sub octane" will need to be blended with an octane enhancer to meet the 87 and above octane ratings we see at the pump. This is where ethanol comes in, as the lowest cost octane booster (ethanol has an octane rating of 100).

In recent years the choices have been 91 premium, 89 "super" with 10% ethanol, and 87 regular. Starting now there are many choices for fuel stations, yet of greatest interest to the public will be the low cost option which will change from the 89 "super" with 10% ethanol to the 87 with 10% ethanol.

Don't let the numbers confuse you, octane rating is not energy, and mileage per gallon will not change between the old 89 "super" and the new 87 with 10% ethanol.

Just to make things even more confusing we are nearing the time when we switch to winter fuel which is more volatile and has lower BTU per gallon than summer fuel (more short HC chains thus lighter fuel).

Below are some potential options for fuel stations and generally how they could be priced assuming premium fuel is highest cost and ethanol trades at a discount to gasoline. Note the list below generally goes from lowest cost to highest.

- 87 with 10% ethanol
- 89 with 10% ethanol (mix of "sub octane, premium and ethanol)
- 87 (made from "sub octane" and premium)

- 93 with 10% ethanol (premium with ethanol)
- 91 (premium)

This new “sub octane” will shake things up for a while as fuel stations figure out how to label, price, and market these new blends.

Things to know

1. Octane rating is not energy and a car should get the same mileage with 87 as 89 or even 91.

2. Cars with high compression engines are the only cars that need high octane fuel. Read your gas cap and your manual (most cars list a minimum octane such as 85). High compression engines are more efficient, due to the compression ratio. Not the fuel.