



Weekly Outlook: EPA Renewable Fuel Standard Rallies Soybean Oil Prices

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From October 13 through November 25, the price of January 2017 soybean futures increased by 8.4 percent. The higher prices were led by soybean oil prices, with the January 2017 futures price up 9.4 percent during the same time period.

The latest support for soybean oil prices came on November 23rd, when the U.S. Environmental Protection Agency (EPA) released the Renewable Fuels Standard (RFS) for 2017 and the biomass-based diesel volume requirement for 2018. The renewable fuel requirement for 2017 was established at 19.28 billion gallons, compared to the proposed requirement of 18.8 billion gallons announced in May of this year and the 2016 standard of 18.11 billion gallons. The requirement for biomass-based biodiesel for 2018 was established at 2.1 billion gallons, equal to the proposed requirement, 200 million gallons larger than the 2016 requirement, and 100 million gallons larger than the 2017 requirement. The 2017 requirement for total advanced biofuels was set at 4.28 billion gallons, 670 million gallons larger than the 2016 requirement and 280 million gallons larger than the 2017 requirement. The implied conventional biofuels (ethanol) requirement for 2017 is 15.0 billion gallons, 200 million gallons larger than the proposed requirement and 500 million gallons larger than the 2016 requirement.

The larger advanced biofuels requirement for 2017 is expected to result in more biodiesel production than anticipated and may signal even higher requirements in the future. More biodiesel production means more demand for biodiesel feedstocks. The potential magnitude of those increases will be analyzed in an upcoming *farmdoc* daily article, but will be determined by how much of the total advanced and conventional biofuel requirements are met with biodiesel and how much of the total renewable fuel requirement will be met with the existing stock of biofuels credits in the form of outstanding Renewable Identification Numbers (RINs).

Each gallon of biodiesel production requires approximately 7.4 pounds of feedstock. For example, the U.S. Energy Information Administration (EIA) [Monthly Biodiesel Production Report](#), reported domestic biodiesel production of 142 million gallons in August 2016, with total feedstock consumption of 1.045 billion pounds. The primary feedstocks used in U.S production of biodiesel are vegetable oils (soybean oil, canola oil, and corn oil); animal fats (poultry, tallow, and white grease); and recycled feeds (yellow

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grease). Nearly 54 percent (561 million pounds) of the biodiesel feedstocks consumed in August was soybean oil. The USDA's November 9, 2016 report of [World Agricultural Supply and Demand Estimates](#) (WASDE) reported that 5.675 billion pounds of soybean oil were used domestically to produce biodiesel from methyl ester in the 2015-16 marketing year. Use during the current year was projected at 5.95 billion pounds. That projection accounts for 29 percent of projected domestic soybean oil consumption and 26 percent of total soybean oil consumption that includes exports.

The EPA's final rulemaking implies that domestic biodiesel production and feedstock consumption will exceed previous projections for the current marketing year and beyond. The magnitude of the increase in consumption of soybean oil will depend on the magnitude of increase in biodiesel production and the mix of feedstocks used. It is likely that soybean oil will garner a larger share of the feedstock increase due to a more limited supply of other feedstocks. Each 100 million gallon increase in biodiesel production might increase domestic soybean oil consumption by 444 million pounds if soybean oil captures 60 percent of the increase in the total feedstock consumption [(100 million gallons X 7.4 pounds) X 0.60].

The question becomes, how much room is there to expand soybean oil consumption during the current marketing year if the domestic soybean crush is at the projected level of 1.93 billion bushels? The USDA projects soybean oil production during the 2016-17 marketing year at 22.29 billion pounds, consumption at 22.6 billion pounds, and ending stocks at 1.658 billion pounds. Assuming that minimum year-ending stocks are five percent of consumption (1.13 billion pounds), then soybean oil consumption can expand by 528 million pounds without requiring an increase in the domestic crush.

The EPA announcement initially resulted in a surge in soybean oil and soybean prices. Increasing soybean oil consumption for biodiesel production this year and beyond may require the domestic soybean crush to be larger than previously thought, leading to some important longer term pricing questions. Historically, the domestic crush has been driven by soybean meal demand since meal is not easily stored. If the crush resulted in surplus oil supplies, they were stored. If a shortage of oil occurred, oil prices increased to reduce consumption. Since soybean meal is not easily stored, an oil-based crush driven by higher soybean oil prices that resulted in a "surplus" of soybean meal would be expected to result in lower soybean meal prices than would otherwise occur. The impact of higher soybean oil prices and lower soybean meal prices on the price of soybeans is difficult to anticipate. However, a "surplus" of soybean meal might be expected to result in lower soybean meal prices relative to feed grain prices. The soybean meal to corn price ratio that has ranged from 2.55 to 3.2 in recent years, for example, might decline back to the historical range of 2.0 to 2.5.

References

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