

# 2019 Kansas Sorghum Net Returns at RMA Projected Sorghum Prices

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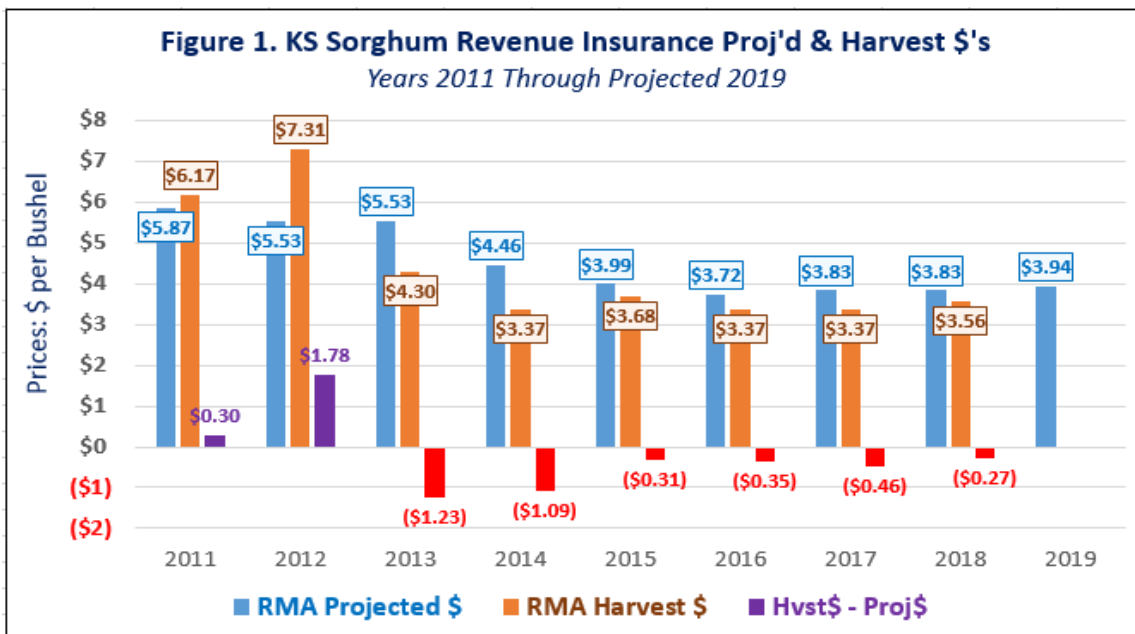
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## A. Release of the 2019 RMA Sorghum Projected Price of \$3.94 /bu

With the month of February completed, in early March 2019 the USDA Risk Management Agency (RMA) recently released it's 2019 **projected prices** corn, grain sorghum, soybeans, and hard red spring wheat. For grain sorghum, the RMA **projected price** for 2019 crop revenue insurance coverage is calculated as the average of 98.5% of 2019 DEC Corn futures closes during February 2019.

The RMA **projected price** for 2019 grain sorghum revenue insurance coverage is \$3.94 per bushel (/bu), up marginally from \$3.83 /bu in both 2017 and 2018, and from \$3.72 /bu in 2016 (**Figure 1**). In October 2019 the RMA will calculate the October 2019 average of closing prices for DEC 2019 Corn futures, and apply a similar adjustment factor to is (likely 95.8% again) which will be identified as the **harvest price** for RMA revenue calculations.

Following a series of average to large U.S. feedgrain crops over the 2013-2018 period, RMA **projected prices** have been *higher* than RMA **harvest prices** by a range of \$0.27-\$1.22 /bu over this same period. During years 2015-2018, October RMA harvest prices for adjusted DEC Corn futures have been below the previous February average for adjusted DEC Corn by \$0.27-\$0.46 /bu (**Figure 1**).



## **B. 2019 AVERAGE YIELD Non-Irrigated Sorghum Returns @ RMA Proj'd \$'s**

Concerning non-irrigated sorghum enterprises in Kansas, the net returns from RMA revenue insurance on **AVERAGE yield projections** will be examined.

**KSU Extension Crop Budget Estimates**: Cost of production estimates for year 2019 from **Kansas Farm Management Guides** are used in these RMA price versus cost of production comparisons. These Non-irrigated crop production budgets provide “low”, “average”, and “high” yield scenarios.

These **KSU Farm Management Guide Crop Budget** estimates for irrigated sorghum enterprises across the state can be found on the KSU AgManager.info website ([www.AgManager.info](http://www.AgManager.info)) at the following web address: <http://www.agmanager.info/farm-mgmt-guides/2019-farm-management-guides-non-irrigated-crops>

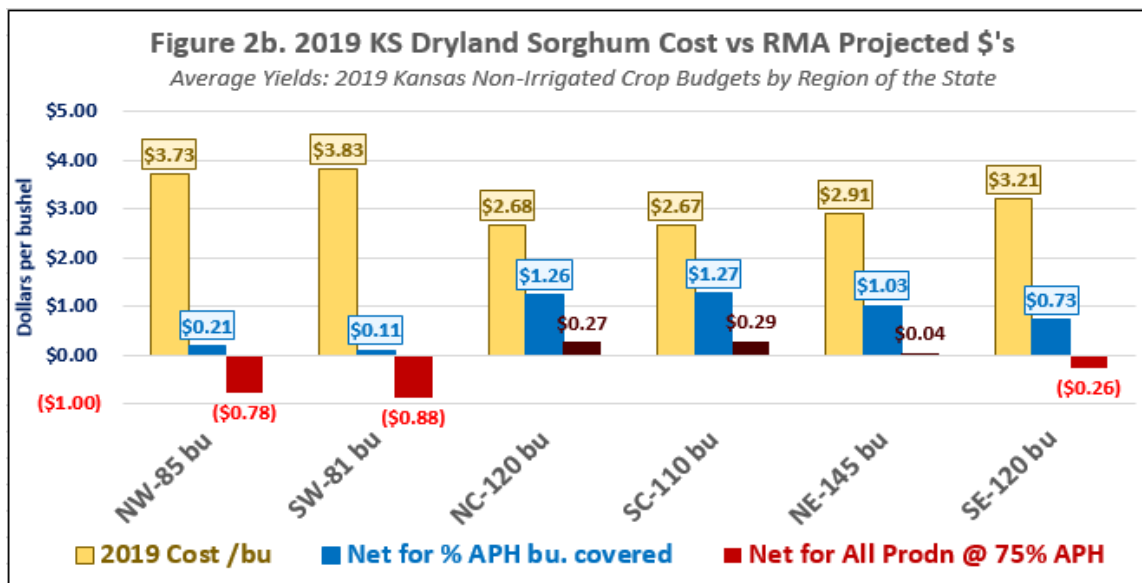
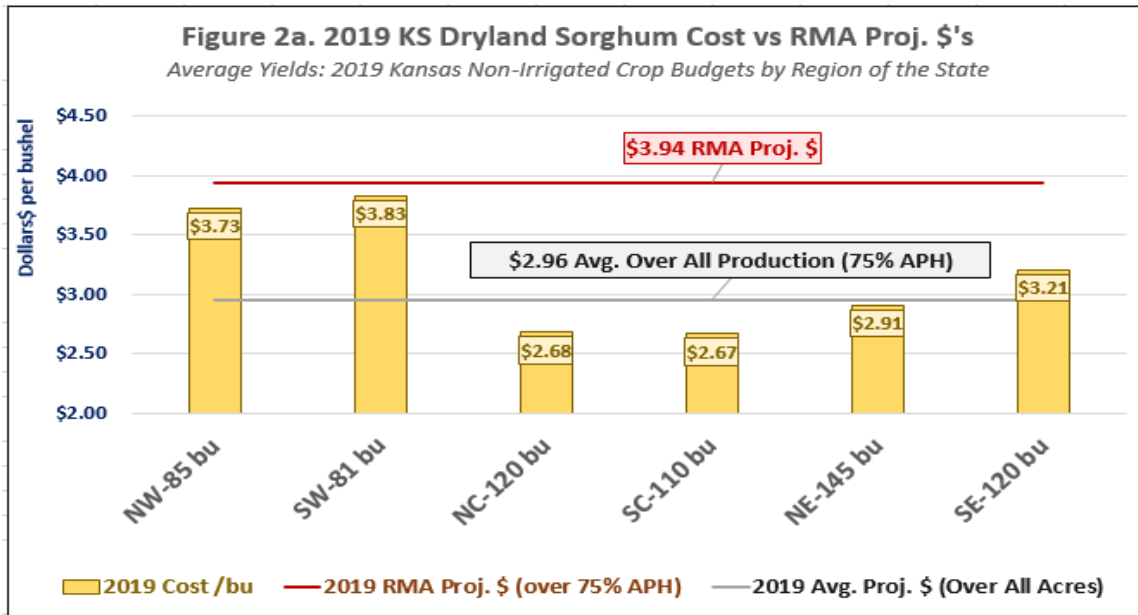
**A Brief Explanation of Percent (%) APH Coverage**: Note that in RMA terminology, “APH” stands for Actual Production History. Kansas farmers can select coverage levels on sorghum enterprises ranging from 50% of APH yields up to 85% of APH Yields. In this article, it is assumed that a **75% APH Coverage level** is selected for these Revenue Insurance coverage examples. When considering ALL bushels produced on non-irrigated sorghum enterprises in Kansas, the full \$3.94 price of 2019 RMA **projected price** coverage extends **ONLY** to the elected APH bushels – in this example equal to 75%.

**2019 RMA Price Coverage Results for ONLY APH Covered Bushels**: At **AVERAGE yield projections**, for the non-irrigated grain sorghum bushels that Kansas sorghum producers choose to provide crop insurance coverage for via their choice of % APH yield insurance level, the \$3.94 /bu RMA price almost covers full estimated production costs including machinery & land charges (**Figures 2a & 2b**).

**Defacto 2019 RMA Price Coverage Results for ALL Bushels of \$2.96 /bu (at 75% APH Coverage)**: When considering ALL bushels on a farm, if a producer chose to buy revenue insurance coverage for 75% of the APH yield, then the other 25% of their APH yield has **NO direct Revenue Insurance coverage**. However, by adjusting the RMA projected price by the selected percent APH coverage level, an *implicit* or “***defacto***” RMA projected sorghum price over ALL APH bushels can be calculated.

In this example, with 75% APH Revenue Insurance coverage, the 2019 \$4.00 RMA **projected price** on sorghum for the “APH covered” bushels provides a **\$2.96 /bu** “defacto” level of price coverage across ALL or 100% of the APH bushels (i.e., 75% x \$3.94 /bu plus 25% x \$0.00 /bu).

At this “defacto” ALL bushels coverage \$2.96 /bu **projected price** level of sorghum bushels for **AVERAGE yield projections**, net returns cover full costs by \$0.27-\$0.27 /bu in North Central & South Central Kansas, and by 0.04 /bu in Northeast Kansas. However, net returns fall short of covering full costs by \$0.26-\$0.88 /bu in Northwest, Southwest, and Southeast Kansas (**Figures 2a & 2b**).



### C. 2019 HIGH YIELD Non-Irrigated Sorghum Returns @ RMA Projected \$'s

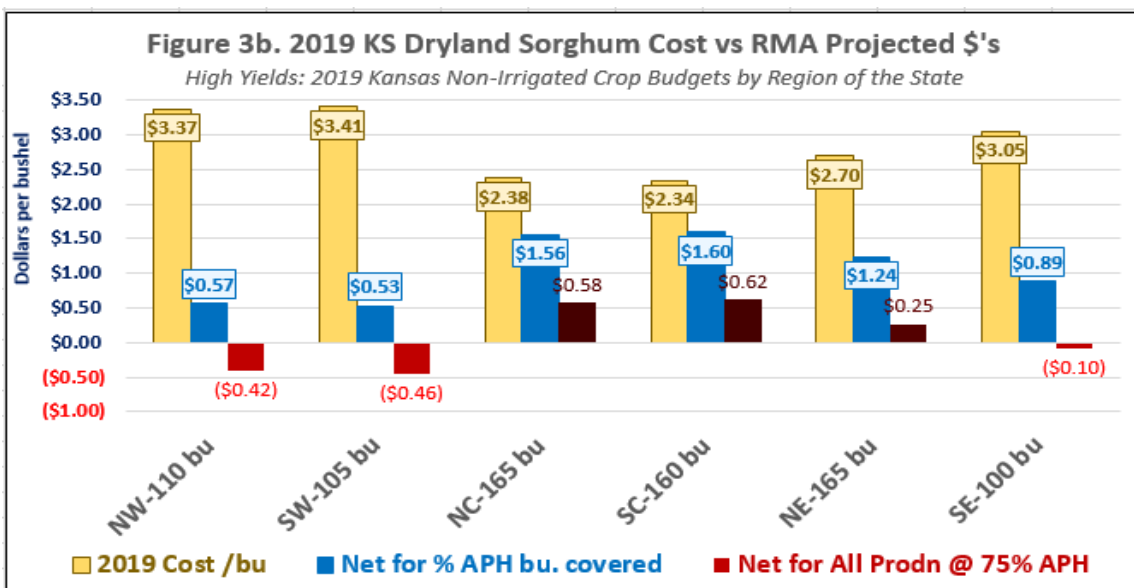
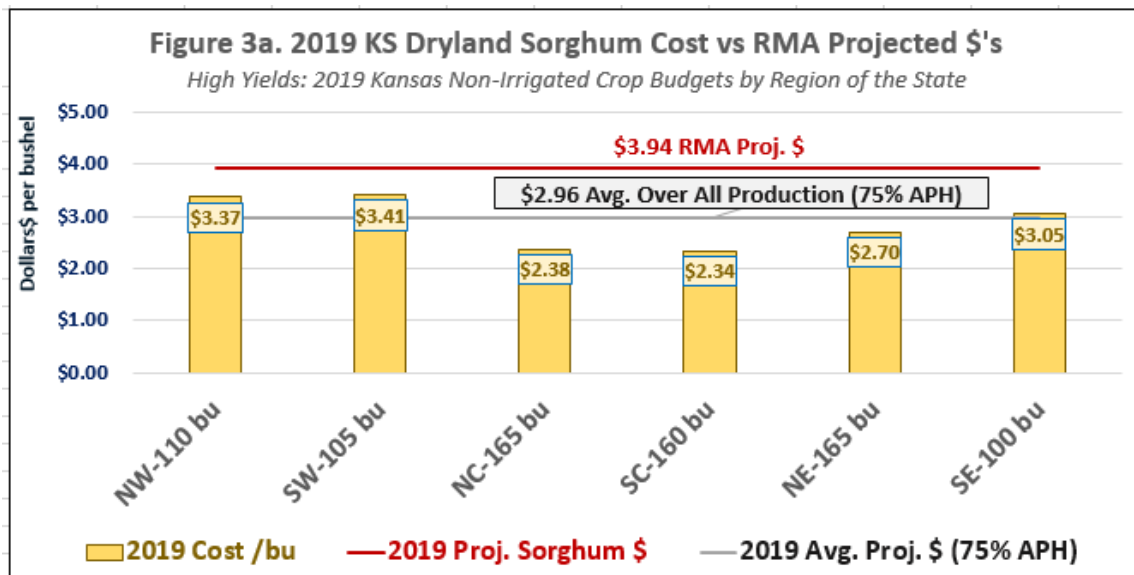
Again concerning non-irrigated grain sorghum enterprises in Kansas, the net returns from RMA revenue insurance on **HIGH yield projections** will be examined. These **KSU Farm Management Guide Crop Budget** estimates for non-irrigated sorghum enterprises across the state of Kansas can also be found on the KSU AgManager.info website ([www.AgManager.info](http://www.AgManager.info)) at the following web address:

<http://www.agmanager.info/farm-mgmt-guides/2019-farm-management-guides-non-irrigated-crops>

**2019 RMA Price Coverage Results for only APH Covered Bushels:** For the non-irrigated sorghum bushels directly covered by crop insurance via their choice of % APH yield level, under **HIGH yield scenarios** the \$3.94 RMA price uniformly covers full estimated production costs including machinery and land charges across the state (**Figures 3a & 3b**).

**Defacto 2019 RMA Price Coverage Results for All Bushels of \$2.96 /bu (at 75% APH Coverage):**

In this 75% APH yield coverage example with average yields, this “defacto” ALL bushels coverage level of \$2.96 /bu RMA **projected price** level, at **HIGH** non-irrigated yield levels, net returns cover full costs by \$0.58-\$0.62 /bu in North Central & South Central Kansas, and by 0.25 /bu in Northeast Kansas. However, net returns fall short of covering full costs by \$0.42-\$0.46 /bu in Northwest & Southwest Kansas, and by \$0.10 /bu in Southeast Kansas (**Figures 3a & 3b**).



## E. Final Thoughts

While the projected RMA price of \$3.94 /bu for grain sorghum in the U.S. in 2019 is a vitally important component of the overall set of tools used by Kansas farmers to manage revenue risks on sorghum enterprises, it is NOT the only tool.

If the U.S. average loan rate for U.S. grain sorghum of \$2.20 /bu in the latest farm bill was considered as a “price floor” for the remaining bushels NOT covered by RMA Revenue Insurance coverage, then instead of \$2.94 per bushel being the implied or “defacto” floor price across ALL bushels (i.e., both 75% APH bushels and the remaining 25% uncovered amount of production, then the implicit floor would be higher at **\$3.51 /bu**.

$$\begin{aligned} \text{New Defacto Floor}^{\$2019} &= (75\% \text{ APH Covered Bu.} \times \$3.94) + (25\% \text{ Non-covered Bu.} \times \$2.20 / \text{bu}) \\ &= \mathbf{\$3.51 /bu} \end{aligned}$$

This one calculation alone presents a moderately more positive perspective on sorghum enterprise profitability in Kansas. Other elements of this sorghum enterprise income risk management picture can be presented by including USDA payments for **ARC (Agricultural Risk Coverage)** and/or **PLC (Price Loss Coverage)**.

The final point is that these revenue coverage levels for irrigated and non-irrigated sorghum in Kansas are at best “covering costs” but not providing strong profitability as is needed by many farmers in the state who have been “grinding” through a period of breakeven at best revenues arguably since 2014. As a “safety net” these programs are protecting the “down side” as many argue they are designed to do. But these programs that were designed to be a “safety net” are not providing any large amounts of net returns over costs. Cost competition, efficiency, and “surviving to farm another year” are the norm now among the larger part of Kansas sorghum producers.