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Insurance Impacts in the Presence of High Subsidy – High Coverage Products: A Case Study of STAX

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Crop insurance with high subsidy (now 80%) - high coverage area add-up insurance, specifically ECO (Enhanced Coverage Option) and SCO (Supplemental Coverage Option), has the potential to notably impact crop decisions and crop safety net performance. This article provides perspective on potential impacts by examining upland cotton net returns and planted acres since STAX (Stacked Income Protection Plan) area add-up insurance was first offered in 2015. STAX has always had an 80% subsidy. Since 2015, crop insurance with STAX has offset most market losses from planting cotton, likely impacting acres planted to upland cotton. Cost to the Federal government has been non-trivial.

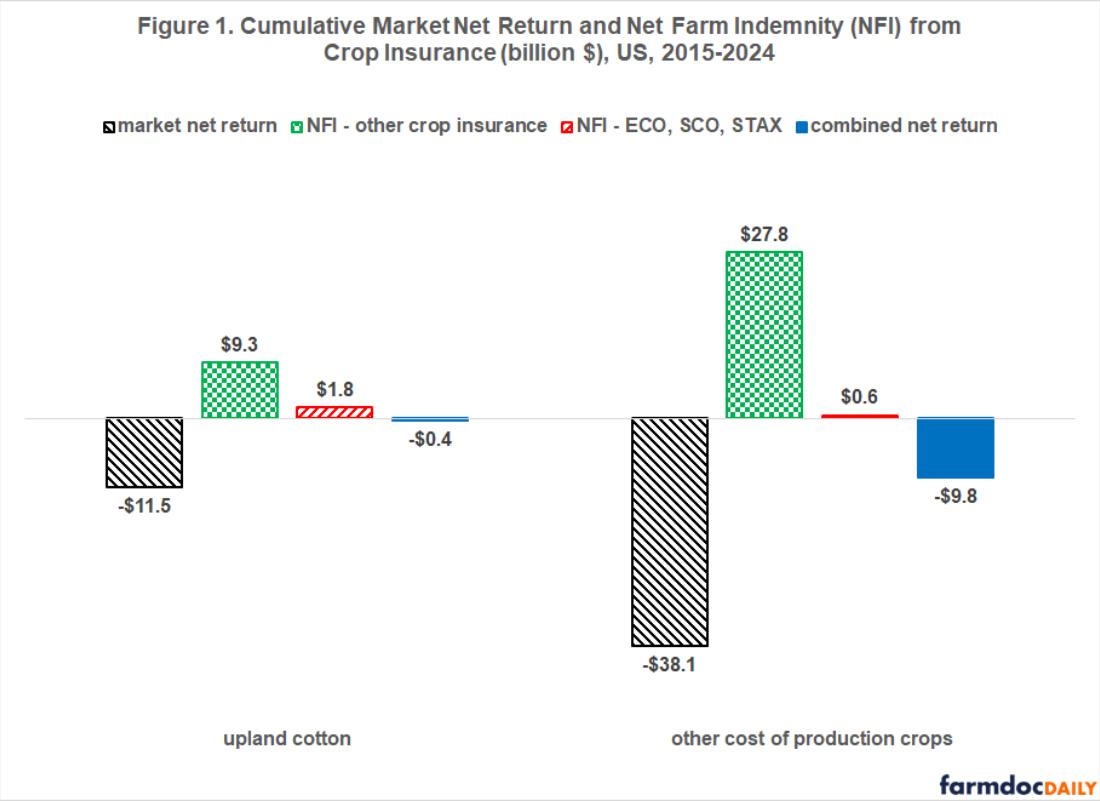
STAX Cotton Insurance

Over the 2015-2024 crops, STAX was bought for 29% of acres insured in individual farm cotton insurance. STAX was available as stand-alone insurance, but 99.5% of its acres were in STAX area add-up. Like ECO and SCO, payments by STAX area add-up insurance are triggered by county-level outcomes. STAX area add-up coverage starts at 90%, with a 70% coverage floor. STAX has RP (Revenue Protection) and RPHPE (Revenue Protection with Harvest Price Exclusion) versions, but 99.8% of acres are in STAX RP. STAX RP and RPHPE can be used with YP (Yield Protection) individual farm insurance. Over the study period, upland cotton farmers could not buy STAX and be in commodity programs (Agricultural Risk Coverage or Price Loss Coverage). Starting with the 2026 crop, ECO and SCO will allow upland cotton farmers to buy area-add up insurance and be in commodity programs.

For more information on STAX, see the STAX Fact Sheet from USDA, RMA (US Department of Agriculture, Risk Management Agency). For additional *farmdoc daily* articles on STAX, see the articles posted on June 13, 2024 and December 17, 2025.

Market Net Returns and Crop Insurance Net Farm Indemnities

US upland cotton had cumulative market losses at harvest of negative $11.5 billion for the 2015-2024 crops (see Figure 1). Crop insurance indemnities net of farmer-paid premiums across all policy types covered 97% of this loss. The other eight crops for which USDA, ERS (Economic Research Service) computes an economic cost of production (COP) also had large cumulative market losses of negative $38.1 billion during 2015-2024. Net farm indemnities (NFI) covered 74% of their losses. Use of the COP data in this study is discussed in the data note at the end of this article.



ECO, ESO, and STAX area add-up insurance accounted for 16% of cumulative NFI paid to upland cotton over 2015-2024. STAX accounted for 95% of ECO, ESO, and STAX NFI. ECO and ESO accounted for slightly more than 1% of NFI paid to the other eight COP crops. STAX is an upland cotton only program. The NFI in Figure 1 are computed using data from USDA, RMA *Summary of Business*. Note that Figure 1 contains no NFI paid by extra-long staple cotton insurance products.

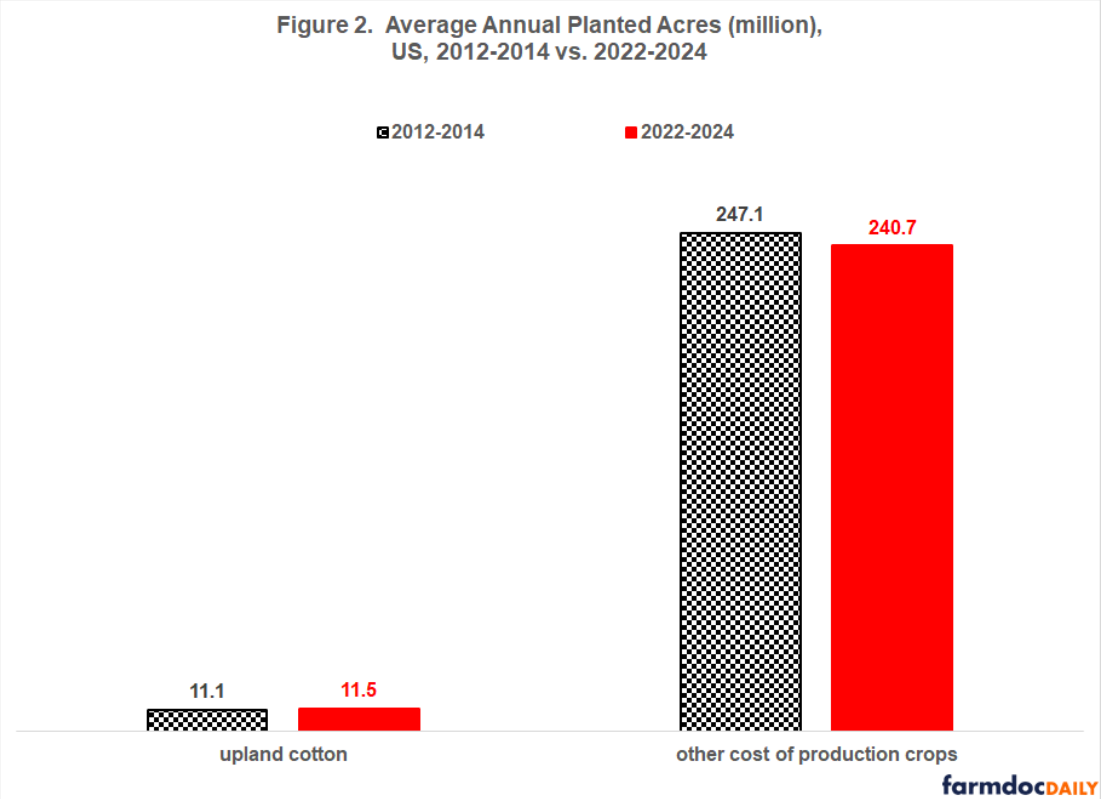
Planted Acres

Farmers will rationally plant more acres to a crop only if it has a higher net return than other uses of the land. Planted acre are thus the ultimate indicator of a crop's profitability.

Over 2015-2024, the market signal in the absence of insurance indemnities was to reduce upland cotton acres relative to acres of the other COP crops. Cumulative market losses relative to cumulative total economic cost of production was negative 13% for upland cotton vs. negative 3% for the other COP crops.

However, because crop insurance is tied to planted acres, the sum of market net returns and NFI in Figure 1 suggest planted acres should have increased for cotton relative to the other COP crops. This happened. Compared to 2012-2014, the three years before STAX and SCO were first offered; planted acres in 2022-2024, the three years at the end of the study period, were 4.3% higher for upland cotton but

2.6% lower for the other COP crops. In short, changes in planted acres align better with market net returns plus crop insurance net farm indemnities than with market net returns alone.



Policy Discussion

STAX high coverage – high subsidy area add-up insurance played an important role in the safety net for upland cotton, foreshadowing a similar role for high subsidy – high coverage ECO and SCO area add-up insurance in the US field crop sector.

STAX federal premium subsidies totaled $1.3 billion over 2015-2024, with only 29% of insured cotton acres in STAX. Moreover, ECO's coverage is 95% while STAX's coverage is 90%. Federal cost of area add-up insurance just for cotton is likely to be much higher during the next 10 years.

The addition of STAX allowed crop insurance to offset most of upland cotton's market losses relative to cost of production over the 2015-2024 period. Crop insurance was thus a likely factor in the increase in upland cotton acres since 2015 despite the US cotton market signaling the need for fewer acres. An implication is that high subsidy - high coverage insurance likely impacts crop planting decisions.

Higher insurance cost is only part of the higher public cost story. More planted acres due to high subsidy – high coverage insurance mean more production, thus lower prices. Moreover, if the market wants fewer acres, prices will have to be even lower to offset crop insurance indemnities tied to planted acres. Lower prices mean higher commodity program payments, especially by PLC (Price Loss Coverage) and more pressure for *ad hoc* payments. An increasing commodity and *ad hoc* program cost treadmill tied to high subsidy - high coverage insurance exists. A related policy question is how much of the acreage decoupling of commodity programs is undermined by high subsidy - high coverage insurance.

In assessing the impacts of crop insurance, a multiple year perspective is paramount. Insurance reduces losses in low return years. But, because premiums are subsidized, farm-paid premiums are not high enough to correspondingly reduce profits in high return years. Crop insurance will even make high payments in high return years, such as happened in 2012. Losses are thus truncated more than profits, resulting in higher multiple year profits. Each increase in premium subsidies exacerbates this multiple year impact.

Potentially enormous implications loom for the US crop sector and US budget. A rethink of the 2025 safety net changes is possible. What is clear, even at present, is that it is critical that crop insurance be rated fairly and accurately. Any mis-rating will further exacerbate all the above impacts.

To summarize in a simple implication, market returns alone understate crop profitability in the post 2025 farm bill world of high subsidy - high coverage insurance.

Data Note

USDA, ERS Economic Cost Data (For in-depth discussion of the cost of production data, see "Documentation: USDA Cost of Production Data.")

USDA, ERS calculates an economic cost per acre planted to barley, corn, cotton, oats, peanuts, rice, sorghum, soybeans, and wheat. A cost is assigned to all inputs except management needed to plant, harvest, and put the crop in condition for storage. Unpaid labor and farmer-owned land are assigned an opportunity cost. Quantity of an input is based on periodic surveys of farmers. Input price is updated annually using USDA, NASS (National Agricultural Statistics Service) data.

USDA, ERS also calculates gross and net return to production per planted acre. Gross return includes income from a crop's primary product, such as grain and cotton lint, and secondary product(s), such as straw and cottonseed. Price of a product is for a crop's harvest period. Gross return does not include crop safety payments and storage returns. Cost does not include crop insurance premiums and storage costs. USDA, ERS thus calculates a market net return at harvest to economic cost of production per planted acre.

For each of the 1975-2024 crop years, net return and economic cost per planted acre for a crop and year are multiplied by acres planted to the crop in that year to generate total US net return and total US economic cost for a crop in a year. Only upland cotton planted acres were used for cotton. Total net return and economic cost for the other eight COP crops for a year are summed to calculate aggregate net return and economic cost for the eight crops as a group for the year. Planted acres are from USDA, NASS *QuickStats*.

References

Schnitkey, G., J. Coppess, N. Paulson, C. Zulauf and B. Sherrick. "Cotton STAX and Modified Supplemental Coverage Option: Concerns with Moving Crop Insurance from Risk Management to Income Support." *farmdoc daily* (14):111, Department of Agricultural and Consumer Economics, University of Illinois at Urbana-Champaign, June 13, 2024.

US Department of Agriculture, Economic Research Service. March 2026. *Cost of Production*. https://www.ers.usda.gov/data-products/commodity-costs-and-returns/

US Department of Agriculture, Economic Research Service. March 2026. Documentation: USDA Cost of Production Data. https://www.ers.U.S.da.gov/data-products/commodity-costs-and-returns/documentation/

US Department of Agriculture, National Agricultural Statistics Service. March 2026. *QuickStats*. http://quickstats.nass.U.S.da.gov/

US Department of Agriculture, Risk Management Agency. March 2026. *Summary of Business.* http://www.rma.usda.gov

US Department of Agriculture, Risk Management Agency. Revised January 2024. Stacked Income Protection Plan (STAX) for Upland Cotton. Fact Sheet. https://www.rma.usda.gov/sites/default/files/2024-02/STAX-Upland-Cotton-Fact-Sheet.pdf

Zulauf, C. "Area Add-Up Insurance Performance: Insights from Cotton STAX." *farmdoc daily* (15):232, Department of Agricultural and Consumer Economics, University of Illinois at Urbana-Champaign, December 17, 2025.