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Insuring Diversified Fruit and Vegetable Farms

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Per capita consumption of all fruits and vegetables in the United States is only occurring at 45% and 68%, respectively, of recommended levels (Wells and Buzby, 2008). While aligning U.S. food consumption with dietary recommendations may require a suite of policy changes, one way farm policy could contribute is to facilitate greater fruit and vegetable production for local sales. This could increase fruit and vegetable consumption because evidence suggests shoppers consume more fruits and vegetables from farmers markets than they otherwise would from supermarkets, perhaps due to an interactive shopping experience or because the produce is fresher and/or of higher-quality (Herman, et al. 2008). Increasing the supply of fruits and vegetables in local markets can also complement targeted policy interventions designed to influence demand.

Local food sales amount to \$5 billion annually with 65% coming from vegetable, fruit, and nut farms (Low and Vogel, 2011). Farmers that sell in local markets operate smaller farms, are less dependent on off-farm income, are more likely to have farming as their primary occupation, and have similar profitability metrics relative to farmers that do not sell locally (Low and Vogel, 2011). However, local food sales are still modest relative to total agricultural product sales, and the lack of access to risk management is one possible deterrent to their expansion. While the USDA has developed effective crop-specific insurance policies for select fruits and vegetables in certain regions, there are many fruit and vegetable farms without an accessible crop insurance policy, particularly those producing an array of such crops.

Establishing an effective “safety net” for farmers is receiving considerable attention in current Farm Bill

deliberations (Collins and Bulut, 2011). Federal crop insurance is administered and subsidized by the U.S. Department of Agriculture (USDA), in part, because private markets do not offer crop insurance at scale. Crop insurance provides an indemnity payment to farmers when a significant single-year revenue decline occurs, which can arise from a weather-related shock such as a flood or drought. Crop insurance also facilitates access to credit since its purchase allows farmers to use the insured value of the crop as collateral for an operating loan.

Fostering effective whole-farm revenue insurance on a national basis for farmers growing fruits and vegetables incentivizes their production in regions where there are not crop-specific policies. Whole-farm revenue insurance is cheaper than multiple crop-specific policies when the premium incorporates the reduced risk associated with diversified practices, which reduces taxpayer insurance subsidies (Hart, Hayes, and Babcock, 2006). Diversification is a way farmers can mitigate risk on their own. A price decline, pest outbreak, or weather event impacting a single crop could devastate a farm's revenue for that year if it was their only crop, whereas the same event on a diversified farm could reduce the revenue of some crops but spare others.

Developing insurance policies for farms that produce multiple fruits and vegetables, and sometimes livestock, presents challenges. These farming practices are not as widespread, in part, because they are not as extensively subsidized, and as a consequence data on yields and market prices the USDA needs to calculate actuarially sound insurance premiums are less available. The lack of insurance presents a challenge to increasing production from these farms. When controlling for other factors, farmers are less likely to grow

crops that cannot be insured whereas insurance policies are less likely to be developed for crops that are not planted on a widespread basis.

Whole-Farm Revenue Insurance

Adjusted Gross Revenue Insurance (AGR)

Two conceptually identical insurance policies are designed for diversified fruit and vegetable farms: Adjusted Gross Revenue and Adjusted Gross Revenue-Lite insurance. We refer to these policies collectively as AGR hereafter. AGR is the only policy available to integrated farms that covers both crop and livestock production and can provide risk management for fruit and vegetable farms in regions where there are not crop-specific policies. Further, in contrast to most crop-specific policies, AGR does not assess a 5% premium surcharge to organic farmers and allows organic production to be insured at its market value.

However, AGR constituted just 0.05% of all federal crop insurance policies sold in 2011 despite these attributes, and farmers have only purchased 964 policies per year on average since 2003 (USDA Risk Management Agency, 2012). Three factors contribute to low levels of purchases. First, as a pilot program, AGR is only offered in select geographic regions, and even in regions where it is available it may not be extensively marketed. Second, AGR has larger deductibles and copayments than other crop insurance policies, which makes the policy less effective at compensating a farmer for a loss when one occurs.

Third, farmers and insurance agents incur greater transaction costs with AGR relative to non-perishable commodity crop policies. Grain and oilseed crop insurance policies often use futures contract settlement prices as an index to value the farm's production (Babcock, 2011). Without an equivalent data source on market

prices for fruits and vegetables, AGR requires farmers to submit tax records to document revenue. This requirement leads to numerous administrative hurdles due to discrepancies between tax and insurance accounting requirements, documentation and verification challenges, delays in indemnity payments, and adjustments that are required if the farm size or composition of commodities changes between years (Dismukes and Coble, 2006; USDA, 2010).

AGR requires farmers to report prices and quantities on a commodity-by-commodity basis. The administrative challenges become increasingly greater as farmers seek to insure additional crops, and as a consequence, farmers that purchased AGR only insured three commodities on average in 2011 (USDA, 2011). This requirement to report prices also implies that farmers engaged in Community Supported Agriculture (CSA) arrangements cannot purchase AGR, as a typical marketing arrangement for CSAs involves purchases of a "share" of a farm's harvest at the beginning of the growing season without specifying per-unit prices or quantities of the produce ultimately delivered.

Ways to Improve AGR

The USDA could make AGR more accessible to farmers if it offered the policy nationally and increased coverage levels so that standards for moral hazard are equitable across crop insurance policies. The USDA could also provide a suite of options for farmers to value their crops to reduce AGR's transaction costs. In addition to submitting tax records, farmers should also be allowed to use contract prices (for example, Murphy, 2010) or pricing indices to value their crops. In these latter two cases, farmers would need to report yields so that their revenue could be determined. Moral hazard can be attenuated by clearly defining events under which farmers are eligible for indemnity payments,

so that farmers do not significantly increase the production of crops for which there is no demand in order to collect an insurance payment for unsold produce.

Since exchange-traded futures contracts don't exist for markets that these farmers sell into, establishing pricing indices that can be independently verified and not manipulated requires the use of data from sources other than commodity exchanges. Two USDA agencies—the National Agricultural Statistics Service and Agricultural Marketing Service—currently both collect national and regional data on fruit and vegetable prices, including some for organic fruits and vegetables. The USDA should evaluate the extent to which these data could be used to develop fruit and vegetable pricing indices to use in AGR. These index values could also be used in the development of a whole-farm revenue group insurance policy (Chalise, Coble, and Barnett, 2011).

Ongoing efforts at developing crop-specific pricing indices for organic fresh fruits and vegetables could also be used in AGR for organic farmers. State expert committees could confirm or augment resulting index values. For regions in which there is inadequate data to establish actuarially sound premiums, the USDA could initially implement AGR with administratively determined premiums, and over time the USDA can use data acquired from farmers purchasing the policy to calculate premiums more accurately. Precedent for using administratively determined premiums that are not actuarially sound exists in other countries, such as Canada's whole-farm income insurance program (Turvey, 2011), and with other USDA risk management programs, such as the Noninsured Crop Disaster Assistance Program.

AGR is at a crossroads. It is currently a "niche product" (USDA, 2010) due to the limitations described above. If improved, it has the

potential to serve the class of farmers employing diversified practices, particularly those selling fruits and vegetables in local markets. Because greater consumption of these foods can contribute to improving public health, policymakers could prioritize ways to increase AGR's accessibility.

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