Adjusted Gross Revenue Lite (AGR-Lite): A Crop Insurance Option for Vegetable Producers in North Carolina

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Overview: What is AGR-Lite?

Adjusted Gross Revenue-Lite (AGR-Lite) is a federally-subsidized whole-farm revenue protection insurance plan. The plan is a whole farm revenue insurance that covers revenue losses from most farm-raised crop commodities, animal commodities and unprocessed (unaltered) animal products such as milk and wool. However, it does not cover timber, forest and forest products, and other processed agricultural products. The plan protects against low revenue due to losses in production and declines in product quality and market price. Specifically, the plan provides protection against low revenue due to production losses attributable to unavoidable natural disasters and market fluctuations that impact farm revenue in the insurance year.

The underlying AGR-Lite concept has three main elements: (1) it uses a producer’s five-year historical farm average adjusted gross revenue, as derived from Internal Revenue Service (IRS) income tax returns (Schedule F or equivalent) and an Annual Farm Report as the base to provide a revenue guarantee for the insurance period; (2) it uses one insurance product to provide insurance coverage for multiple agricultural commodities; and (3) it uses revenue as the common denominator for all agricultural commodities that are insurable.

AGR-Lite is offered in all North Carolina counties. AGR-Lite provides farm-specific revenue insurance that can cover most commodities produced on North Carolina farms and ranches, including several commodities that are not insurable with other federally-subsidized insurance plans – like most vegetable crops in North Carolina. Some examples of common vegetable crops that can be covered under AGR-Lite are: potatoes, snap beans, peas, carrots, onion, beets, garlic celery, cabbage, broccoli, cauliflower, melons, squash, pumpkins, tomatoes, peppers, eggplants, asparagus, and many others.

Revenue history and insurance coverage are based on an individual producer’s yields, product quality and marketing history. As AGR-Lite is based on individual farm history, revenue calculations will recognize local market prices that may be different and possibly higher than national average prices, high value varieties that bring a premium to the average market price and products produced in a way that they may bring a premium (for example through certified organic production). AGR-Lite provides individual revenue protection based on producers’ own yield, quality, cost and price histories.

AGR-Lite protects against loss of revenue due to any unavoidable natural occurrences or due to market fluctuations that cause a loss of revenue during the insurance year. The plan provides protection against loss of revenue due to most unavoidable natural occurrences, including but not limited to adverse weather, fire, insects, disease, wildlife, earthquakes, volcanic eruption, or
failure of irrigation supply that causes production losses. No insurance payments will be made for losses that occur due to negligence, mismanagement, failure to use good farming practices, theft, or mysterious disappearance. Additionally there will be no indemnification if losses occur due to a lack of labor, crop abandonment, or bypassing of acreage.

On the marketing side, no AGR-Lite insurance payments will be made to producers due to their inability to market commodities because of quarantines, boycotts, or failure of buyers to make payments for commodities to producers. Losses due to an operator’s failure to obtain a price for any commodity that is reflective of the local market value will not be indemnified. Procedurally, if a producer fails to provide adequate records when seeking indemnification for revenue losses, payments for losses will not be made.

AGR-Lite may be used as a stand-alone insurance plan. It may also be used as an umbrella plan over other Risk Management Agency (RMA) insurance plans, such as multiple peril insurance plans for crops based on each individual’s actual production history and group plans that address production or revenue risks, and livestock insurance plans that address price risk. When used as an umbrella plan, AGR-Lite premiums are reduced because other RMA insurance plans have the primary liability for crop specific and/or livestock specific losses. But even if AGR-Lite is used as a stand-alone policy (i.e. not in conjunction with other insurance plans), producers will receive a government subsidy that will allow them to only pay for the proportion of the full premium. Currently, the Government will pay a portion of the premium for the AGR-Lite policy that equals 48 percent, 55 percent, and 59 percent of the total premiums for the 80, 75, and 65 percent coverage levels, respectively.

The revenue covered by AGR-Lite is based on the gross revenue (not net revenue) of the farm operation, which is then “adjusted” to exclude certain income categories. The Adjusted Gross Revenue is derived from historical IRS income tax returns using Schedule F or its equivalent. Excluded from revenue reported for income tax purposes to derive allowable income for specifying Adjusted Gross Revenue are: (1) cooperative distributions not tied to the commodities insured, (2) agricultural program payments, (3) crop insurance indemnities and federal disaster program payments, (4) custom hire income and (5) income attributable to post-harvest value added activities (e.g., cost and value of post production sorting, packaging, etc.). These exclusions are the reason why the insurance plan is called “Adjusted” Gross Revenue (AGR-Lite). On the other hand, the “Lite” portion comes from the liability (or maximum indemnity) limitation of $1 million (as compared to the full Adjusted Gross Revenue (AGR) insurance policy with a higher liability limit).

How Does AGR-Lite Work?

To be eligible for AGR-Lite coverage, a producer must satisfy the following criteria:

- Be a U.S. citizen or permanent resident;
- File a calendar year or fiscal year tax return;
- Have a liability (maximum liability) of no more than $1 million (less than $2,051,282 in approved adjusted gross income);
• Have had the same tax entity for seven years (filed 5 consecutive years of Schedule F tax forms, plus previous year and insurance year) unless a change in the tax entity is reviewed and approved by the insurance provider;
• Have no more than 50 percent of total revenue from commodities purchased for resale; and
• Have no more than 83.35 percent of total revenue from the sale of potatoes.

Seven consecutive years of tax forms for the same tax entity are required because producers are required to provide five consecutive years of information on Schedule F (or comparable tax form) revenues and expenditures to determine the gross revenue liability to be covered for their farm. The other two years is the “previous” year (i.e. year previous to current year, which is not typically used to calculate average gross revenue) and the current insurance year for which the AGR-Lite policy applies. For example, if one is applying for AGR-Lite for the first time in 2010, one must have filed tax forms for the same tax entity since 2004.

Once it has been established that a producer is eligible for AGR-Lite, the grower can initially apply for coverage under this policy prior to the sales closing date of the current insurance year (March 15 every year). Insurance year is defined here as the calendar year in which the sales closing date occurs. AGR-Lite coverage is continuous from year to year, which means that the policy will be renewed every year until the producer terminates it in writing. But one cannot cancel during the initial insurance year. After one year of coverage, cancellations must be submitted in writing by January 31st. Although annual application is required, information about farm income and expenses are still submitted annually (by January 31st).

Although not discussed in detail here, the initial application process will require growers to submit the following: a formal application form, historical revenue and expense information (from tax forms), a revenue and expense plan for the insurance year, commodity profile reports, and inventory/receivables report. Please see Johnson, Hewlett, and Griffith (2008) and/or Barnaby (2008) and/or Sharp, Hewlett, and Tranel (2009) if you are interested in the details about how to complete these forms. The important thing to remember here is that detailed records (tax forms and income/expense reports) are needed for the AGR-Lite policy every year.

Using the information from the application materials (and/or the yearly income and expense reports), one can now establish the AGR-Lite insurance coverage and we describe below how AGR-Lite works using these information. The AGR-Lite “process” essentially proceeds in six major steps: (1) determine the 5-year average farm revenue, (2) project the insurance year expected farm revenue, (3) determine the approved adjusted gross revenue (AGR), (4) decide what percent of the AGR to guarantee (i.e. decide the coverage level and payment rate, (5) harvest crop to determine actual farm revenue, (6) file tax forms for insurance year (for possible claim calculation), and (7) calculate indemnity (= revenue guarantee – (actual revenue × payment rate) if there is a loss (i.e. actual revenue < revenue guarantee).

The first step in the AGR-Lite process is to determine the 5-year average farm revenue using the annual historical IRS tax form information submitted. The second step of projecting the current insurance year expected farm revenue is based on the revenue and expense plan information
provided. The approved AGR is then calculated as the third step of the process. Approved AGR is the amount of revenue on which the calculated insurance is based. It is calculated by comparing the expected farm revenue from the current year to the 5-year average farm revenue from the tax information. The lesser of the two values becomes the approved AGR. Note that there are more complicated methods for calculating approved AGR that involve indexing or factoring up or down. These more complicated methods are typically used when the expected farm revenue is significantly different than the average 5-year revenue or other qualifying criteria (i.e. increasing operation size, etc.). Please see Johnson, Hewlett, and Griffith (2008) and/or Barnaby (2008a, 2008b) and/or Sharp, Hewlett, and Tranel (2009) if you are interested in the details of these more complicated methods.

Once the approved AGR has been determined, the producer chooses the coverage level and payment rate to be able to determine the revenue insurance guarantee and the indemnity payment in the event of a loss (i.e. when actual revenue is less than the revenue insurance guarantee). See Table 1 below.

Table 1. AGR Coverage Levels and Payment Rates

<table>
<thead>
<tr>
<th>Coverage Level</th>
<th>Payment Rate</th>
<th>Minimum No. of Commodities</th>
<th>Maximum Annual Approved AGR</th>
<th>Government Subsidy Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>65%</td>
<td>75%</td>
<td>1</td>
<td>$2,051,282</td>
<td>59%</td>
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<tr>
<td></td>
<td>90%</td>
<td>1</td>
<td>$1,709,401</td>
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<td>3*</td>
<td>$1,666,666</td>
<td>48%</td>
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<tr>
<td></td>
<td>90%</td>
<td>3*</td>
<td>$1,388,888</td>
<td></td>
</tr>
</tbody>
</table>

* Each of the three commodities must contribute a minimum level of revenue. Minimum level of revenue = (1/no. of commodities) \times \frac{1}{3} \times \text{total expected revenue for insurance year}.

Producers can select their coverage levels according to the number of commodities they produce. The coverage level determines when indemnity payments begins (i.e. also called the loss inception point or trigger level) and the payment rate determines how much the producer will be paid for each dollar of loss under the coverage level. The coverage level is important because it determines the trigger level or loss inception point for which indemnity payments begins (i.e.e when actual revenue falls below this point then there will be an indemnity payment. The trigger level is calculated as follows: trigger level = approved AGR \times coverage level). The payment rate, together with the coverage level, then determines the AGR-Lite liability or the total value of insurance coverage (AGR-Lite Liability = approved AGR \times coverage level \times payment rate). The AGR-Lite liability is also the maximum indemnity that the producer will receive if he/she has zero gross revenues.

Once the coverage level and payment rate are selected, premiums that the producer need to pay can be calculated as well. The premiums are payable at the time coverage begins, but will not be billed earlier than December 1st. The amount of premiums for AGR-Lite is essentially based on the amount of liability or insurance coverage. As with other insurance products offered by
RMA, a total premium amount, a subsidy amount, and a producer premium are identified for each AGR-Lite insurance contract. The producer premium is the amount the producer actually pays. The subsidy amount is paid by the federal government and is based on the subsidy rate that depends on the coverage level choice, as shown in Table 1. The total premium, subsidy amount, and producer premium are calculated as follows:

- Total Premium = AGR-Lite Liability × AGR-Lite Premium Rate
- Subsidy Amount = Total Premium × Subsidy Rate
- Producer Premium = Total Premium – Subsidy Amount

The AGR-Lite Premium Rate are established by RMA and vary by coverage level, payment rate, number and type of commodities (i.e. diversification factors), and by geographic location. These AGR-Lite rates are determined by using actuarial calculations based on projections of utilization and costs for defined risks. In general, the more crops covered by the policy, the lower the premium rates. The more diversified your farm, the more the liability is dispersed over the different commodities produced. Therefore, diversified farming operations typically have lower risk and lower premium rates. But note that the AGR-Lite policy also classifies the different crops in to risk categories and, thus, some individual crops are put in higher risk categories (which mean that these crops tend to have higher premium rates). Also, as mentioned in the previous section, premiums are reduced when AGR-Lite is used as an umbrella policy in conjunction with other insurance plans offered by the RMA. For more detailed information about AGR-Lite premiums and premium rates (for specific crops and regions), please go to the RMA website (http://www.rma.usda.gov) and access the RMA online premium calculator.

After the coverage level and payment rates has been determined (and premiums paid), the next two steps in the AGR-Lite process occurs at harvest when actual revenue is realized and then tax forms for the current year are prepared/submitted (Steps 5 and 6). When it is discovered that the actual revenue is likely to be below the trigger level (usually after preparing the tax forms for the insurance year), the insurance agent should be notified within 72 hours. If the producer intends to file a claim then producer must notify the insurance agent within 15 days after filing their taxes and the claim must be filed within 60 days after the original tax filing date. Note that when the AGR-Lite claim is initiated the producer must provide all required documentation in order for RMA to verify that there is indeed a loss. For more details of the required documentation that needs to be submitted, please see Johnson, Hewlett, and Griffith (2008) and/or Barnaby (2008a, 2008b) and/or Sharp, Hewlett, and Tranel (2009).

When a claim is verified as an actual revenue loss due to a covered peril, an indemnity payment can be calculated by subtracting the actual revenue from the trigger level (= approved AGR × coverage level) and multiplying it by the payment rate:

- Indemnity Payment = (Trigger level – Actual Revenue) × payment rate.

Note that in some cases the approved AGR used to calculate the trigger level (and ultimately the indemnity payment above) will be adjusted (i.e. called the adjusted approved AGR). The circumstances which will cause an adjustment to be made are the following:
• Allowable expenses for the insurance year fall below 70% of approved expenses. (The approved AGR will be reduced by 1% for each 1% actual allowable expenses below 70%).
• Inventory is significantly higher or lower at the end of the insurance year that it was at the beginning.
• Accounts receivable is significantly higher or lower at the end of the insurance year that it was at the beginning.
• Any changes in accounts payable or prepaid expenses.

Please see Johnson, Hewlett, and Griffith (2008) and/or Barnaby (2008a, 2008b) for more details about these adjustments.

A simple example at this point would help us understand the AGR-Lite process better. Suppose that Farmer Joe wants to apply for AGR-Lite for the first time in 2010 (and he satisfies all eligibility criteria) Assume that the following are the annual AGR for farmer Joe from 2004-2008: 2004 - $105,000; 2005 - $110,000; 2006 - $135,000; 2007 - $155,000; 2008 - $145,000. Thus, his 5-year historical AGR is $130,000. Now suppose that his expected farm revenue for the insurance year (2010) based on his farm plan is $135,000. Given the rules in the AGR-Lite policy and assuming Farmer Joe’s AGR does not qualify for the more complicated approved AGR method, like indexing, the approved AGR will then be $130,000 (i.e. the lesser of the 5-year average and the expected revenue). Now, let’s say that Farmer Joe chose the 75% coverage level and 90% payment rate. This means that his trigger level is $97,500 (= $130,000 × 0.75) and his AGR-Lite liability is $87,750 (= $130,000 × 0.75 × 0.9).

Farmer Joe’s premium can now be calculated based on the AGR-Lite liability above. Suppose that the AGR premium rate for Farmer Joe’s vegetable crop, coverage level, payment rate, and geographic location is 0.092 (based on the RMA’s actuarial calculation). Then, the total premium would be $87,750 × 0.092 = $8,073 and the subsidy amount would be $8,073 × 0.55 = $4,440. The producer premium that Farmer Joe has to pay would then $8,073-$4,440 = $3,633.

Assume that during the course of the season a severe drought occurs and Farmer Joe discovers that his actual revenue is below the trigger level. Eventually, he informs his insurance agent and they determined that his actual revenue is $80,000. They also determine that Farmer Joe does not satisfy the conditions for which the approved AGR would need to be adjusted. Thus, after the loss was verified and properly documented, Farmer Joe receives and indemnity of $15,750 (= ($97,500-$80,000) × 0.90).

**Would AGR-Lite Fit My Vegetable Operation? Things to Consider**

The AGR-Lite insurance policy makes a lot of sense for producers of commodities that are otherwise uninsurable using the “traditional” insurance policies that have been offered in the past (i.e. the yield-based Actual Production History (APH) insurance, the revenue insurance policies – Crop Revenue Coverage (CRC) and Revenue Assurance (RA)). This is especially true for a number of fruit and vegetable commodities produced in North Carolina. For example, there are
no available APH or CRC/RA policies for eggplants, tomatoes, and strawberries. If you are a large producer of these crops the only way to insure through an RMA-offered insurance policy is by using AGR-Lite.

Another situation where AGR-Lite may have an advantage over other traditionally offered crop insurance products is when a producer is in a market where he receives price premiums. For example, growers of organic produce or direct marketers of produce that usually get price premiums on their products would be better protected under an AGR-Lite policy. This is because AGR-Lite coverage is based on revenues that are calculated from actual market prices received by the grower. Most of the other traditional insurance products (e.g. APH, CRC/RA) use national level prices to determine the value of insurance coverage (or indemnity payments). Hence, the AGR-Lite policy allows for recognition of the actual market prices received by the producers and local market conditions. With this characteristic, AGR-Lite may also be a good option for protecting against declines in market prices due to outbreak of foodborne illnesses (i.e. 2006 Spinach recall case).

Having AGR-Lite coverage will also allow the vegetable production operation to satisfy the Farm Service Agency (FSA) requirements for participation in the Supplemental Revenue (SURE) disaster assistance program. The SURE program is a standing disaster relief program established under the provisions of the 2008 Farm Bill. Please see this URL for more information on SURE: http://www4.ncsu.edu/~rmrejesu/ncsu_crop_insurance_educ_materials.htm.

One major limitation to the usefulness of the AGR-Lite policy is that it would not be applicable for beginning vegetable farmers with no production history and no historical of tax records for the farming entity. Since the AGR-Lite policy requires multiple years of tax records for the farming (and tax ) entity, this essentially precludes beginning vegetable farmers as potential buyers of this policy.

If one is a beginning farmer of a crop that is not insurable through the other traditional RMA-offered insurance policies (i.e. APH, CRC, RA), then the only other “insurance-type” risk management tool available is the Noninsured Crop Disaster Program (NAP) offered by the Farm Service Agency (FSA). NAP is a “crop insurance” product for crops that are not currently covered under the traditional federal crop insurance program administered by the Risk Management Agency (RMA). But it is similar to the RMA’s catastrophic (CAT) policy where payments are made to producers when they experience yield losses greater than 50% of their average yield. For each dollar of loss (below the 50% historical yield level), 55% of that dollar would be paid back to the grower. This is like having a coverage level of 50% and payment rate of 55%. Note that NAP policies for the vegetable operation would also satisfy the requirement for participation in the new SURE disaster assistance program. For more information about NAP please see the following website: http://www.fsa.usda.gov/Internet/FSA_File/napr09.pdf.

Notwithstanding the inherent limitation of AGR-Lite for beginning vegetable farmers, it is still important for beginning vegetable farmers to think about how this insurance policy may fit their business plans and to start keeping accurate records of revenues and expenses (as well as inventories, etc.). Having a good record-keeping system is essential if one is interested in having
a more comprehensive whole-farm insurance coverage through AGR-Lite in the future. Lastly, contact an insurance agent to determine if there are other crop insurance options that can fit your operation.

References


Barnaby, G.A. 2008a. “Details on data that farmers will need to apply for AGR-Lite!” Kansas AGR-Lite Workshop Powerpoint presentation (see: http://www.agmanager.info/crops/insurance/risk_mgt/default.asp)


QUESTIONS OR COMMENTS? Please contact Rod M. Rejesus, Department of Agricultural and Resource Economics, N.C. State University, Raleigh, NC 27695-8109; Telephone No.: (919)513-4605; Email:

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