

Office of Regulatory Management
Economic Review Form

Agency name	Board of Agriculture and Consumer Services
Virginia Administrative Code (VAC) Chapter citation(s)	2 VAC 5-390
VAC Chapter title(s)	Rules and Regulations for the Enforcement of the Virginia Seed Law
Action title	Amendments to Establish a Minimum Germination Rate for Cotton Seed
Date this document prepared	July 8, 2025
Regulatory Stage (including Issuance of Guidance Documents)	Final

Cost Benefit Analysis

Complete Tables 1a and 1b for all regulatory actions. You do not need to complete Table 1c if the regulatory action is required by state statute or federal statute or regulation and leaves no discretion in its implementation.

Table 1a should provide analysis for the regulatory approach you are taking. Table 1b should provide analysis for the approach of leaving the current regulations intact (i.e., no further change is implemented). Table 1c should provide analysis for at least one alternative approach. You should not limit yourself to one alternative, however, and can add additional charts as needed.

Report both direct and indirect costs and benefits that can be monetized in Boxes 1 and 2. Report direct and indirect costs and benefits that cannot be monetized in Box 4. See the ORM Regulatory Economic Analysis Manual for additional guidance.

Table 1a: Costs and Benefits of the Proposed Changes (Primary Option)

<p>(1) Direct & Indirect Costs & Benefits (Monetized)</p>	<p>The proposed amendments establish a minimum germination rate of 60 percent for cotton seed sold in Virginia. In addition, the amendments to the regulation allow cotton seed that does not meet the labeled germination rate for that seed to be relabeled and sold with the correct germination rate, as determined by germination tests conducted by VDACS’s Seed Laboratory, provided such germination rate is 60 percent or higher.</p> <p>Direct Costs: Cotton seed companies attempting to sell cotton seed in Virginia that does not meet the proposed 60 percent minimum cotton seed germination rate may incur associated production and shipping costs because such seed will be placed under stop sale. VDACS does not have reliable data on which to base an estimate on the cost to companies selling cotton seed with germination rates below 60 percent. Aside from these incidental costs associated with noncompliant seed, VDACS does not anticipate that cotton seed companies will incur any additional input or production costs as a result of attempting to comply with the minimum 60 percent germination rate for their product.</p> <p>Indirect Costs: VDACS is unaware of any indirect costs associated with the proposed amendments to the regulation.</p> <p>Direct Benefits: Over the past several years, Virginia’s cotton growers have reported that planted cotton seed has had low germination rates. Low germination can negatively impact plant density and lead to a reduction in the yield of harvested cotton. The establishment of a 60 percent minimum germination rate ensures that cotton seed meets or exceeds a minimum germination standard so that proper plant population density in the field can be achieved and maximum production realized. Without an established minimum cotton seed germination rate, cotton seed with substandard germination rates can be sold in the Commonwealth, thereby negatively impacting Virginia’s cotton producers. VDACS does not have reliable data on which to base an estimate on the direct costs incurred by Virginia’s farmers due to cotton seed with low germination or the direct benefits they will experience from the proposed minimum germination rate.</p> <p>Indirect Benefits: Cotton seed that meets or exceeds the minimum germination rate of 60 percent will ensure that cotton seed planted by Virginia farmers meets</p>
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	<p>minimum standards, resulting in increased profits for cotton producers. Increased profits for Virginia farmers will likely contribute to improving the economy of rural areas of Virginia. VDACS does not have reliable data with which to assess the economic impact of establishing a minimum germination rate.</p> <p>A minimum germination rate of 60 percent will provide an indirect benefit to cotton seed companies as it aligns Virginia’s minimum germination rate with regulations in southeastern U.S. cotton producing states. In most of these states, the minimum germination rate for cotton seed is 60 to 70 percent. Aligning a minimum germination rate with that of other states will provide an indirect benefit to cotton seed companies as it ensures consistency among states, thereby ensuring that cotton seed companies can more easily distribute cotton seed to multiple states throughout the cotton growing area of the southeastern U.S.</p>	
(2) Present Monetized Values	Direct & Indirect Costs	Direct & Indirect Benefits
	(a) VDACS does not have reliable data on which to base an estimate of the direct costs	(b) VDACS does not have reliable data on which to base an estimate of the direct or indirect benefits associated with a minimum germination rate for cotton seed that will be experienced by Virginia’s farmers.
(3) Net Monetized Benefit	Unknown	
(4) Other Costs & Benefits (Non-Monetized)	None	
(5) Information Sources		

Table 1b: Costs and Benefits under the Status Quo (No change to the regulation)

(1) Direct & Indirect Costs & Benefits (Monetized)	<p>Direct Costs:</p> <p>No change to the regulation will allow the continued sale of cotton seed with lower germination rates. Over the past several years, Virginia’s cotton growers have reported that planted cotton seed has had low germination rates. Low germination can negatively impact plant density and lead to a reduction in the yield of harvested cotton. Without an established minimum cotton seed germination rate, cotton seed with substandard germination can be sold in the Commonwealth, thereby negatively impacting Virginia’s cotton producers. VDACS does not have reliable data on which to base an estimate of the direct costs to Virginia’s farmers from cotton seed with low germination.</p>
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	<p>Indirect Costs: Allowing the sale of cotton seed for which there is no minimum germination rate could result in cotton producers experiencing lower profits due to decreased cotton yield, while many inputs such as fertilizer and insecticide costs remain unchanged or increased. Reduced germination may also result in an increase in weed populations where cotton plant density is low, thereby further reducing yield and potentially increasing input costs. VDACS does not have reliable data on which to base an estimate on the indirect costs to Virginia’s farmers from planting cotton seed with low germination.</p> <p>Direct Benefits: VDACS is unaware of any direct benefits associated with no change to the regulation.</p> <p>Indirect Benefits: VDACS is unaware of any indirect benefits associated with no change to the regulation.</p>	
(2) Present Monetized Values	Direct & Indirect Costs	Direct & Indirect Benefits
	VDACS does not have reliable data on which to base an estimate of the direct and indirect costs to Virginia’s farmers from planting cotton seed with low germination.	(b) None
(3) Net Monetized Benefit	Unknown	
(4) Other Costs & Benefits (Non-Monetized)	None	
(5) Information Sources		

Table 1c: Costs and Benefits under Alternative Approach(es)

(1) Direct & Indirect Costs & Benefits (Monetized)	<p>Alternative: Require that cotton seed sold in Virginia meet or exceed a germination rate of 50 percent.</p> <p>Direct Costs: Over the past several years, Virginia’s cotton growers have reported that planted cotton seed has had low germination rates. Low germination can</p>
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	<p>negatively impact plant density and lead to a reduction in the yield of harvested cotton. A minimum germination rate of 50 percent would negatively impact Virginia’s cotton producers.</p> <p>Cotton seed companies may incur costs associated with attempting to sell cotton seed with a 50 percent minimum germination rate, as this germination rate will not align with minimum germination rates established in neighboring cotton producing states.</p> <p>VDACS does not have reliable data on which to base an estimate of the direct costs to Virginia’s farmers or cotton seed companies distributing cotton seed in Virginia associated with a minimum germination rate of 50 percent.</p> <p>Indirect Costs: Virginia’s minimum cotton seed germination rate will not align with neighboring cotton producing states, potentially increasing costs for cotton seed companies associated with transporting and selling cotton seed to states with differing regulatory requirements.</p> <p>Direct Benefits: Cotton seed companies will be allowed to sell substandard cotton seed, potentially increasing profits for the cotton seed company.</p> <p>There are no direct benefits to Virginia’s cotton growers, as a 50 percent germination rate for cotton seed will result in decreased yield.</p> <p>Indirect Benefits: There are no known indirect benefits of allowing the sale of cotton seed with a minimum germination rate of 50 percent</p>	
(2) Present Monetized Values	Direct & Indirect Costs	Direct & Indirect Benefits
	(a) VDACS does not have reliable data on which to base an estimate of the direct and indirect costs associated with this alternative.	(b) VDACS does not have reliable data on which to base an estimate of the direct benefit associated with this alternative.
(3) Net Monetized Benefit	Unknown	
(4) Other Costs & Benefits (Non-Monetized)	None	

(5) Information Sources	
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Impact on Local Partners

Use this chart to describe impacts on local partners. See Part 8 of the ORM Cost Impact Analysis Guidance for additional guidance.

Table 2: Impact on Local Partners

(1) Direct & Indirect Costs & Benefits (Monetized)	There is no impact on local partners.	
(2) Present Monetized Values	Direct & Indirect Costs	Direct & Indirect Benefits
	(a) 0	(b) 0
(3) Other Costs & Benefits (Non-Monetized)	None	
(4) Assistance	N/A	
(5) Information Sources		

Impacts on Families

Use this chart to describe impacts on families. See Part 8 of the ORM Cost Impact Analysis Guidance for additional guidance.

Table 3: Impact on Families

(1) Direct & Indirect Costs & Benefits (Monetized)	There is no impact on families.	
(2) Present Monetized Values	Direct & Indirect Costs	Direct & Indirect Benefits

	(a) 0	(b) 0
(3) Other Costs & Benefits (Non-Monetized)	None	
(4) Information Sources		

Impacts on Small Businesses

Use this chart to describe impacts on small businesses. See Part 8 of the ORM Cost Impact Analysis Guidance for additional guidance.

Table 4: Impact on Small Businesses

<p>(1) Direct & Indirect Costs & Benefits (Monetized)</p>	<p>As most cotton producers in Virginia are small businesses, it is anticipated that the costs and benefits to small businesses will be those described in Table 1a.</p> <p>VDACS does not believe that the entities distributing cotton seed in Virginia are small businesses.</p> <p>Direct Costs: There are no direct costs to small businesses related to the proposed amendments to the regulation.</p> <p>Indirect Costs: There are no indirect costs to small businesses related to the proposed amendments to the regulation.</p> <p>Direct Benefits: Cotton seed sold in Virginia is planted and harvested by Virginia’s cotton producers, most of whom are small businesses. Over the past several years, Virginia’s cotton growers have reported that planted cotton seed has had low germination rates. Low germination can negatively impact plant density and lead to a reduction in the yield of harvested cotton. The establishment of a minimum germination rate ensures that cotton seed meets or exceeds a minimum germination standard so that proper plant population density in the field can be achieved and maximum production realized. Without an established minimum cotton seed germination rate, cotton seed with substandard germination rates can be sold in the Commonwealth, thereby negatively impacting Virginia’s cotton producers. VDACS does not have reliable data on which to base an estimate on benefits to Virginia’s farmers for ensuring cotton seed with low germination is not sold.</p>
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	<p>Indirect Benefits: Cotton seed with a germination rate below 60 percent will likely result in decreased yield and profit for Virginia’s cotton producers. Reduced germination may also result in an increase in weed populations where cotton plant density is low, thereby further reducing yield and potentially increasing input costs. Increased profits from high yielding cotton can result in increased spending to enhance the economy of rural areas of Virginia. VDACS does not have reliable data on which to base the economic impact of establishing a minimum germination rate.</p>	
(2) Present Monetized Values	Direct & Indirect Costs	Direct & Indirect Benefits
	(a) 0	(b) VDACS does not have reliable data on which to base an estimate of the direct or indirect benefits associated with a minimum germination rate for cotton seed that will be experienced by Virginia’s farmers.
(3) Other Costs & Benefits (Non-Monetized)	None	
(4) Alternatives	None	
(5) Information Sources		

Changes to Number of Regulatory Requirements

Table 5: Regulatory Reduction

For each individual action, please fill out the appropriate chart to reflect any change in regulatory requirements, costs, regulatory stringency, or the overall length of any guidance documents.

Change in Regulatory Requirements

VAC Section(s) Involved*	Authority of Change	Initial Count	Additions	Subtractions	Total Net Change in Requirements
2 VAC 5-390-10	(M/A):	0	0	0	0
	(D/A): § 3.2-4001	4	1	0	+1
	(M/R):	0	0	0	0
	(D/R):	0	0	0	0
2 VAC 5-390-190	(M/A):	0	0	0	0
	(D/A):	0	0	0	0
	(M/R):	0	0	0	0
	(D/R): § 3.2-4001	0	1	0	+1
				Grand Total of Changes in Requirements:	(M/A):0 (D/A):+1 (M/R):0 (D/R):+1

Key:

Please use the following coding if change is mandatory or discretionary and whether it affects externally regulated parties or only the agency itself:

(M/A): Mandatory requirements mandated by federal and/or state statute affecting the agency itself

(D/A): Discretionary requirements affecting agency itself

(M/R): Mandatory requirements mandated by federal and/or state statute affecting external parties, including other agencies

(D/R): Discretionary requirements affecting external parties, including other agencies

Cost Reductions or Increases (if applicable)

VAC Section(s) Involved*	Description of Regulatory Requirement	Initial Cost	New Cost	Overall Cost Savings/Increases
N/A	N/A	N/A	N/A	N/A

Other Decreases or Increases in Regulatory Stringency (if applicable)

VAC Section(s) Involved*	Description of Regulatory Change	Overview of How It Reduces or Increases Regulatory Burden

N/A	N/A	N/A

Length of Guidance Documents (only applicable if guidance document is being revised)

Title of Guidance Document	Original Word Count	New Word Count	Net Change in Word Count
N/A	N/A	N/A	N/A

*If the agency is modifying a guidance document that has regulatory requirements, it should report any change in requirements in the appropriate chart(s).