![American Farmland Trust logo]

Farms Under Threat: The State of the States
Constructing the Conversion Threat and Policy Response Rubric
June 12, 2020

*This document is a companion piece to the **Farms Under Threat: The State of the States** report, available* [*here*](#)*.*

American Farmland Trust created a conceptual graphic (the *Conversion Threat and Policy Response Rubric)* to compare the degree of conversion threat that each state faced (high, medium, or low) and the strength of its policy response (high, medium, or low). We did this by grouping the states into the nine possible combinations of conversion threats and policy responses based on their Threat Score and Policy Response Score. The resulting graphic provides an indication of whether states' policy responses are proportionate to the threats they face. It is important to note that the rubric provides a relative comparison among states, not an absolute determination of threat and response.

Step I. First, AFT directly plotted the policy and conversion scores (Fig. 1). We grouped the top two quartiles (top 50 percent) of the <u>Threat Scores</u> into a "high" threat category and separated the bottom two quartiles into "medium" and "low." We then grouped the bottom two quartiles (bottom 50 percent) of the <u>Policy Response Scores</u> into the "low" policy response category and separated the top two quartiles into "medium" and "high." This grouping scheme is designed to provide the most helpful guidance to states based on the expert opinions of the AFT staff who conducted the analysis.
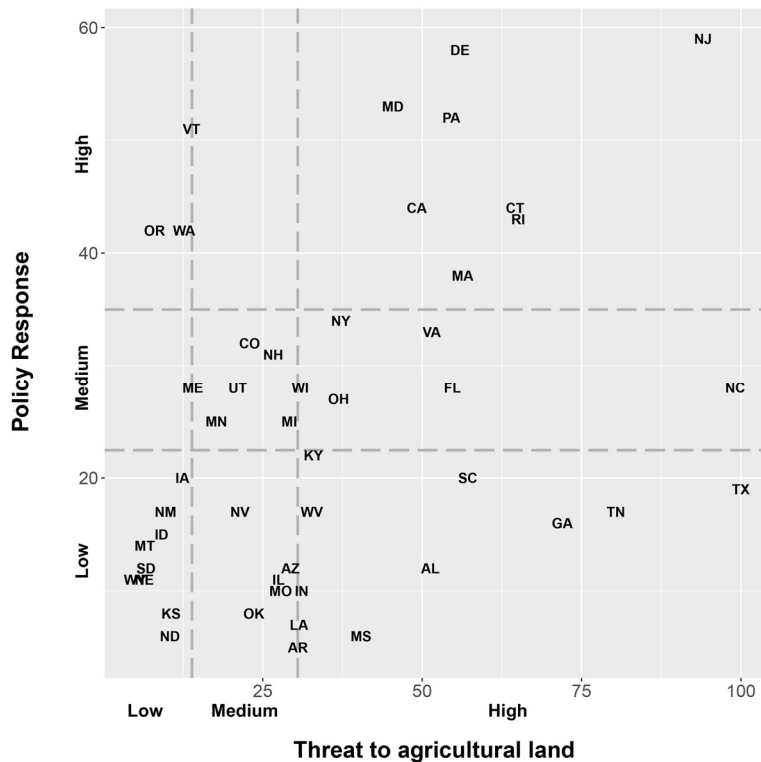

Figure 1. Raw distribution of threat score and policy response scores, prior to rescaling. The dotted lines indicate where the high, medium, and low groups are divided.

Step II. Next, we re-scaled each of the three groups to fit approximately one third of the 100 point horizontal and vertical scales (Fig. 2). This evened the spacing within each threat/response group, reducing overlap, improving readability, and also preserving each state's relationship to the other states. As a result, the distance between states for the "low" policy score grouping (the bottom two quartiles) and the "high" threat score grouping (the top two quartiles) are compressed. This process neatly divided states and decreased any overlap with the dividing lines.

We also adjusted the rubric to keep states with threat scores that differed by less than one point in the same threat/response group. Our goal was to avoid implying that states with almost identical threat scores were experiencing significantly different levels of threat. For example, Vermont was placed in the medium threat category along with Maine (score difference of 0.2) and Arkansas was placed in the high threat category along with Louisiana (score difference of 0.1). No adjustment to policy response groups was required, since no states with nearly identical policy response scores were placed in different policy response groups based on the raw scores.
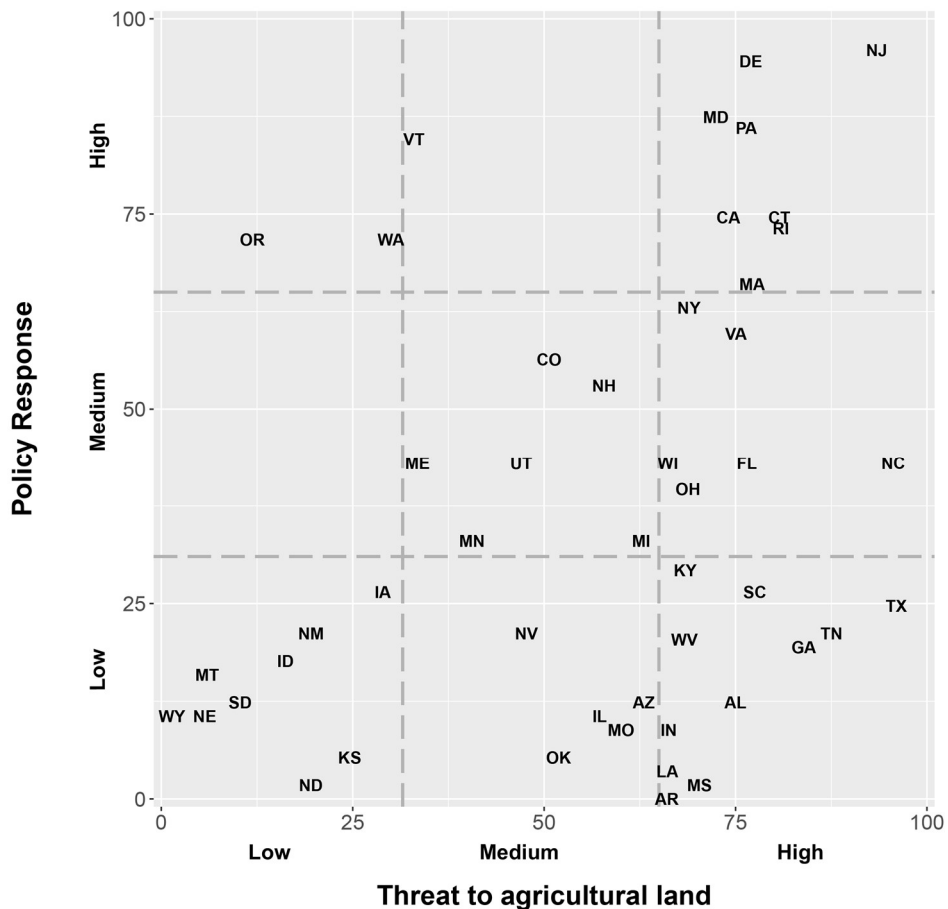

Figure 2. Rescaled distribution of threat score and policy response scores. The dotted lines indicate where the high, medium, and low groups are divided.

Step III. Finally, we further adjusted the position of the state labels to remove overlaps and improve readability. We also added a stoplight-style color scheme to provide a quick visual indication of where each state stands. States where policy actions are proportional to threats (or higher) are shown in

shades of green. States where the threat is higher than the policy response are shown in red and orange.

The final rubric, which is used in our report, website, and highlight summaries, is shown in Figure 3. As noted above, the figure is conceptual but still represents the empirical relationships identified in the analyses for *Farms Under Threat: The State of the States*.
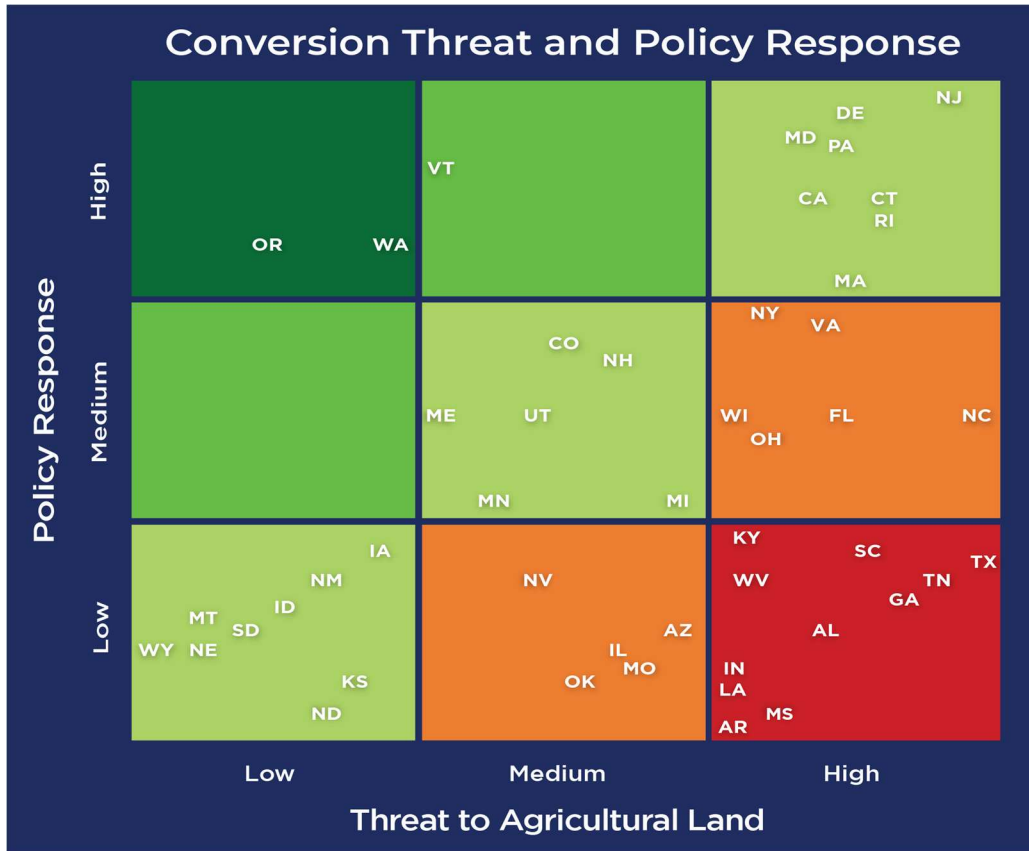

Figure 3. Extent of threat to agricultural land and level of state policy response. States where policy actions are proportional to threats are shown in shades of green. States where the threat is higher than the policy response are shown in red and orange. Alaska and Hawaii are not represented because there was insufficient data to include them in the spatial analysis.