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Fairness Perceptions and Expectations in Agriculture: Lessons from the Case of Dicamba

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Fairness Perceptions and Expectations in Agriculture: Lessons from the Case of Dicamba

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Introduction

A sustainable and equitable food and agricultural system cannot exist unless market participants perceive they are participating in a fair marketplace. A marketplace perceived as fair is necessary to ensure that those with a capacity to participate as either buyers or sellers are able and willing to do so. If markets are perceived as unfair, or if market participants frequently raise claims of unfairness about market conditions or other participants, then future market participation is discouraged or diminished, which in turn creates adverse effects on market prices, quantity, quality and overall market efficiency. In order to determine if unfairness claims have merit and to improve the overall fairness and efficiency of markets, a better understanding is needed of why and how claims of unfairness arise and whether such claims are reasonable.

We utilize a framework for assessing unfairness claims that links fairness to expectations by focusing on the problem of dicamba use. Because dicamba use is controversial, we ask: (1) Are farmers making claims of unfairness about dicamba? (2) Is there a connection between fairness and expectations, especially regarding dicamba use? (3) What are farmer expectations about dicamba?

Framework

Hendrickson, et al. (2018) show that unfairness claims arise when expectations are violated, so assessments of unfairness claims require first and foremost an evaluation of the reasonableness of expectations. Because claims of unfairness are made when expectations are violated, assessing claims of unfairness require that we understand how, where and why people create expectations.

Def: "Fairness is the perception that rules, practices or outcomes are consistent with one's expectations" (Hendrickson, et al., 2018: 44).

Def: An expectation is the strong belief that something will or should happen.

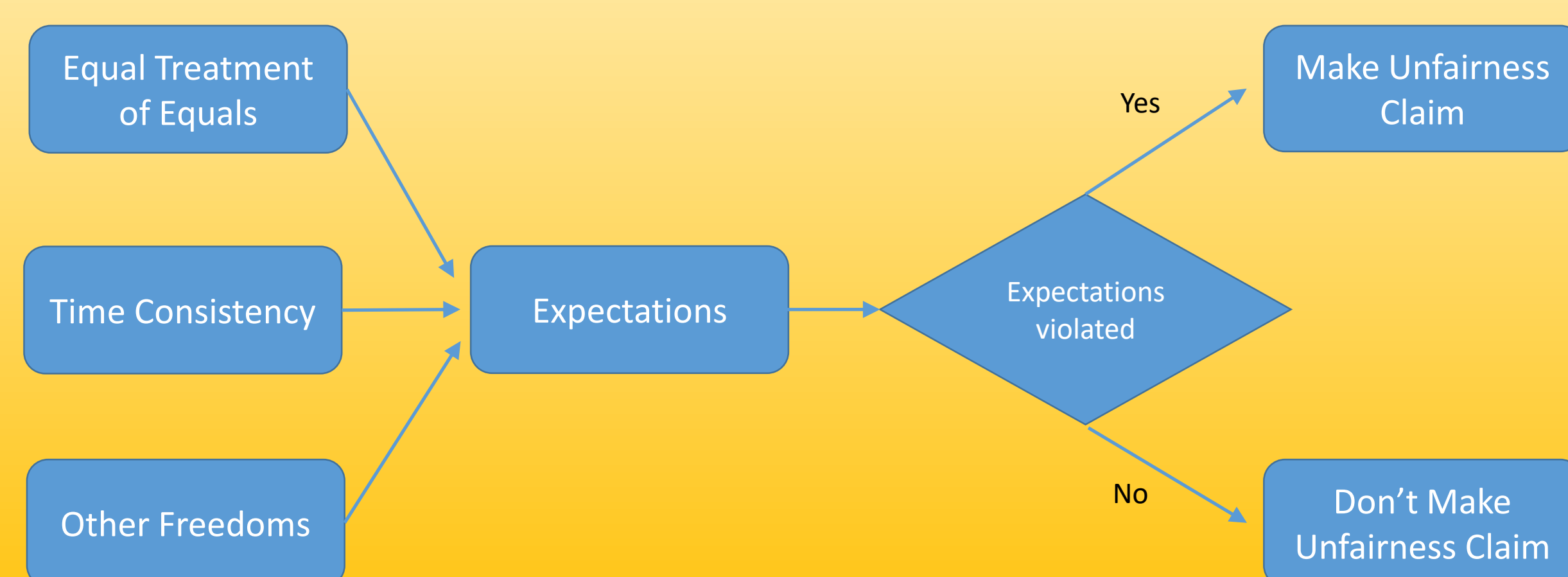
People form expectations for many reasons, but important ones include the following:

- Equal treatment of equals: "I should be treated the same as those I am equal to."
- Time consistency: "If I did it in the past then I should continue it in the future."
- Freedoms derived from engaging in economic exchange: "I should be able to negotiate and dictate terms, profit from exchange, know and be informed, and make ethical decisions."

A person who perceives their expectations have been violated experiences a strong emotional reaction that results in claim of unfairness. In other words, unfairness is both a cognitive assessment and an emotional reaction (Sanfey, et al., 2003). Because harm also produces negative emotions, situations in which harm occurs increase the likelihood that individuals raise unfairness claims.

Figure 1 shows the relationship between expectations and unfairness claims, which suggests unfairness claims can be traced back to expectations.

Figure 1. Expectations and Unfairness Claims



The Case of Dicamba

Dicamba is an older herbicide that had been used as a pre-plant treatment for weeds, primarily in corn production. It was rarely used during hot and humid conditions because of the risk of off-target effects. But as waterhemp and other weeds became resistant to glyphosate and other herbicides, row-crop farmers showed renewed interest in using dicamba as a pre- and post-emergent herbicide. In 2015, Xtend (dicamba resistant) soybeans and cotton were approved for the 2016 planting season, but a new formulation of dicamba intended for use with these crops, XtendiMax, was not approved until 2017. Still, some farmers used older versions of dicamba that was volatile and could easily drift. Off-target movement of dicamba damaging non-resistant crops and other plants became a major problem, as illustrated in Figure 2.

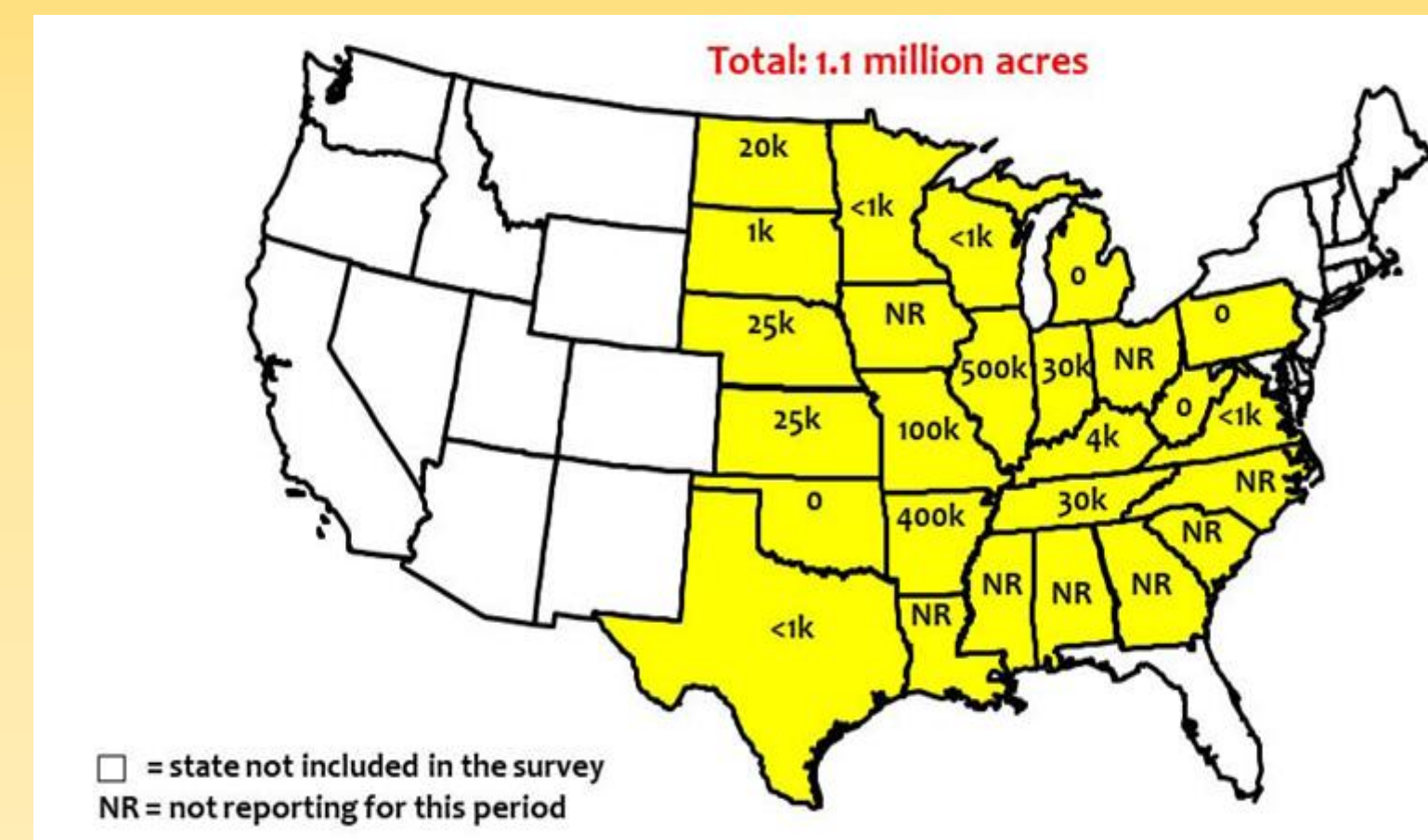


Figure 2. Estimates of Dicamba-injured Soybeans in 2018 in the US

Source: University of Missouri Extension, <https://ipm.missouri.edu/IPC/M/2018/7/July-15-Dicamba-injury-update-different-year-same-questions>

Given the controversy regarding dicamba and the harm the herbicide causes, we might anticipate that farmers will be vocal about unfairness from crop damage or other concerns relating to the use of dicamba. Thus, the case of dicamba creates an ideal environment for exploring the relationship between expectations and unfairness claims.

Methods

In summer 2019, 10 exploratory interviews were conducted with Missouri farmers about dicamba use. These farmers were recruited through snowball sampling, starting from contacts with the lead researchers. Farmers were recruited in heavy row-crop areas of northeastern and central Missouri. Seven interviews were conducted with farmers who had row-crops, and two were conducted with farmers raising vegetables and fruits for alternative markets. One interview was not included in the analysis since he was no longer an active farmer. All were men, ranging in age from mid-thirties to mid-seventies. Interviews were conducted and transcribed by graduate students hired by the lead authors. Using Nvivo, two of the authors first coded the data using iterative open coding as described by Tracy (2020). Coding was cross-checked for agreement. Thematic coding using the fairness framework was then conducted by one of the authors, with codes reviewed and discussed by the project team.

Results

Are farmers making claims of unfairness? In general, no. Most farmers expressed concerns about dicamba related crop injuries, but only one farmer described this as an issue of unfairness.

In the case where unfairness is mentioned, can we map to violations of expectation? Yes. As stated by this Farmer, who is in his mid 60s and grows organic vegetables: "why is it our responsibility to protect ourself (sic) from them? ... Because ... their stuff is drifting over on us. ... it affects our ability to farm the way we want to. Uh, and then we look at Missouri's Right to Farm law, ... and I think, well, are they actually kind of violating that by cutting down on our ability to farm with the way we want to. So, you know, some of that to me, ... if you get right down to it, yeah, it's kind of unfair."

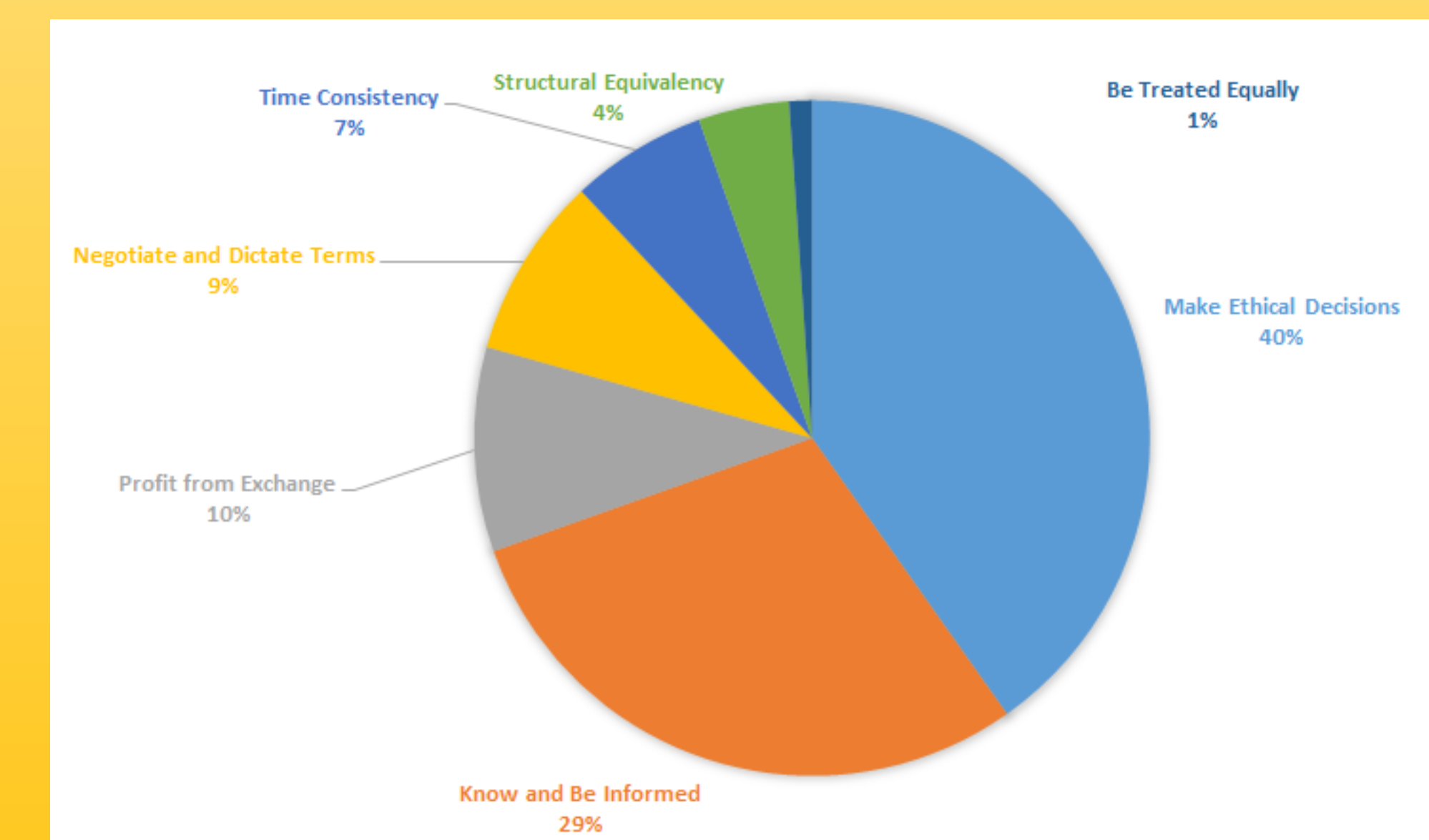
From this quote we can discern that the farmer had expectations regarding the neighbor's behavior—he should buffer, fence or protect other farmers from dicamba drift and not interfere with the ability of other farmers to farm their properties.

Results, continued

Why are farmers not talking about unfairness? The theoretical framework suggests that people make unfairness claims when they perceive their expectations have been violated. However, if farmer expectations about dicamba use have not been violated, then while they may still recognize the ethical problem of harm, they are not moved to claim the issue is unfair. If farmers perceive that those using dicamba are doing it as required or labelled, then while harm might be a moral issue, it is not perceived as a problem of unfairness since expectations (e.g., "farmers should apply chemicals correctly") are not violated.

This idea is illustrated in the following quote from another Farmer: "With dicamba, you can do everything right and it can still move around and damage the neighbor's orchard or the garden of the lady down the road. An incidence here, ... a man I know north of me, sprayed dicamba and it went as far as two and a half miles cupping leaves and it was the only dicamba sprayed the area, so it came from there, ... morally, can you spray a product that you have no control over once it leaves the boom tip and you have to rely on Mother Nature to keep it where it's at and you damage someone else's crop?"

Figure 3. Sources of expectations noted by farmers



What are farmer expectations about dicamba use, and on what bases are these expectations founded? Figure 3 shows the distribution of sources of expectations expressed by farmers in our study. The two most important ones are (1) Making ethical decisions and (2) Knowing and being informed. Farmers want to do the right thing. They also want to know that if they are applying chemicals correctly, others would not be harmed.

Conclusion

Dicamba use is an important challenge in agriculture. It causes harm and is a source of controversy. We find that farmers, like everyone else, have expectations regarding the behavior of other farmers, chemical companies, consumers, and so forth. We also show that claims of unfairness regarding dicamba use arise when expectations are violated. However, farmers can perceive that expectations have not been violated even while recognizing that dicamba use is an ethical issue.

What our study reveals is the importance of understanding expectations that farmers have in order to assess fairness in the agrifood marketplace. A better understanding of how expectations are formed, where they are violated, and how claims of unfairness arise is necessary to see how perceptions of fairness may discourage or diminish farmer participation in the marketplace with its attendant effects.

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