

Roundup Ready Soybean Seed Arbitration in Arkansas: A Case Study

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Abstract

Over the past few years, the number of seed arbitration cases in Arkansas has sharply increased due to complaints involving Roundup Ready® soybean cultivars. Soybean farmers have requested reimbursement for the losses resulting from failure of the Roundup Ready® soybean to germinate and produce adequate stands. This transgenic soybean is tolerant of the herbicide, Roundup, and costs about 20 % more when compared to non-Roundup Ready cultivars. Seed dealers blamed the extremely hot and dry weather conditions near planting time for stand failures. Farmers argued that other Roundup Ready® cultivars planted at the same time produced adequate stands. While the Arbitration Committee of the Arkansas State Plant Board attempted to settle these cases without the added inconvenience and cost of court, the vast majority of their judgments have been rejected. The case was used as a teaching tool in an upper level crop management course to familiarize students with the interview, reporting, and arbitration process. Additionally, students gained experience in collaboration efforts, as the project fostered both individual and team efforts.

Introduction

Thanks to the USDA Federal Seed Act and state guidelines, farmers can expect to purchase high quality seeds which perform according to their label. These federal and state guidelines were established to ensure the sale of high-quality agronomic seed. The question becomes whether or not failure to germinate is an absolute indication of quality, or do adverse environmental conditions relieve seed dealers from obligation? The Seed Arbitration Committee of the Arkansas State Plant Board has faced the difficult challenge of deciding whether seed dealers are responsible for the lack of stand establishment in several Roundup Ready soybean cultivars.

In addition to unpredictable weather, southern soybean farmers must battle weeds. This invasive category of plants can quickly gain competitive advantage over soybeans for water, nutrients, and sunlight. The non-selective herbicide, glyphosate developed by Monsanto and marketed under the name Roundup®, has revolutionized weed control.

Through genetic engineering, Monsanto created what appeared to be the ultimate soybean, Roundup Ready®, a new class of soybean cultivars which can tolerate the use of Roundup® sprayed postemergent.

Roundup Ready® soybean cultivars were approved by the Agriculture Department in 1994 and the EPA in 1995 (Chemical Week, 1995), and they became available to Mid-South farmers in the spring of 1996 (Conner, 1995). In the early stages of product development, Roundup Ready™ soybean yields were disappointing when compared to non-Roundup Ready cultivars in statewide cultivar trials (personal communication, D. Dombek, Director of Arkansas Soybean Variety Testing Program). Yields improved with time, but lower than expected performance continued to be a major concern (Holmberg, 1996).

In 1997, several field days were organized in Arkansas by Monsanto to showcase the performance of the Roundup Ready® soybean. These field days were held near Proctor and at the Hartz Seed Research Center in Stuttgart. In both places, growers showed optimism for the performance of the new biotech cultivars (Thompson, 1997). Proponents of Roundup Ready® technology claimed that any losses resulting from decreased yields were no greater than those incurred by using conventional herbicides, which are often less effective and more damaging to plant growth. For many farmers, especially those involved with large-scale production, the convenience of weed control with Roundup Ready® cultivars ultimately outweighed occasional yield declines (personal communication, D. Dombek and L. Ashlock, Arkansas Soybean Extension Specialist).

The primary objectives of the case study were to enhance student skills in researching background information, conducting interviews, and presenting formal reports. Additionally, students became familiarized with the seed arbitration process in Arkansas, and the difficulty in determination of liability when environmental conditions influence the situation. Finally, students were introduced to the controversy surrounding transgenic crops.

The Case

The summer of 1998, which brought record-setting high temperatures and very little rainfall, was devastating to farmers throughout the southern

United States. Many soybean farmers in Arkansas blamed more than just the weather on their Roundup Ready® crop failure. They accused seed dealers of distributing “bad seed” which failed to emerge and establish a stand. As a result, eleven cases were heard by the Arkansas State Plant Board Seed Arbitration Committee in November and December 1998, and only one case was settled by arbitration. The committee attempts to provide unbiased scientific evidence that can be used to make a non-binding, out of court decision. The majority of the rulings favored the producer.

Seed Arbitration Committee

Seed arbitration in Arkansas is conducted by a committee of five members and five alternates. One member is appointed by each of the following: the President of the Arkansas Seed Growers Association, President of the Arkansas Seed Dealers Association, President of the Arkansas Farm Bureau Federation, Director of the Arkansas Agricultural Experiment Station, and the Director of the University of Arkansas Cooperative Extension Service. The committee is formed to assist the seed purchaser and the seed dealer in determining the facts surrounding the complaint by the seed buyer against the seed dealer.

If a buyer believes that purchased agricultural seed has failed to “produce or perform as represented by the label attached to such seed”, he or she has 10 days after the defect is observed to make a sworn complaint to the seed dealer and to file a complaint with the Director of the State Plant Board. A filing fee of \$100 must be paid at the time each complaint is filed.

Immediately following a complaint, the Plant Board will send an inspector to observe and record initial information concerning the complaint. The committee has the authority to question the buyer on seed use and to examine the dealer's packaging, labeling, and selling of the seed. The committee may also hold informal hearings and request evaluations from authorities in allied disciplines. The committee may direct individual members to make investigations and give written reports to the committee summarizing their findings. After these investigations, the committee reports its findings and makes recommendations to the buyer and dealer. The buyer and dealer will then respond to the committee stating whether or not they agree with these findings. If an agreement is not met, the buyer may begin legal proceedings against the dealer. If this complaint goes to court, the buyer or dealer can use any information revealed during arbitration in the case.

The following is a summary of one of the arbitration hearings presented to the Arkansas State Plant Board Seed Arbitration Committee. Testimonies are given by Mr. Butch Calhoun, owner of the land that

was planted with Roundup Ready soybean, and Ted Lorts, Rodney Kegley and Walter Mayhew, representatives for Asgrow™ and Hartz™, the distributors of the Roundup Ready® Soybean.

Arbitration Hearing - November 18, 1998

Mr. Butch Calhoun, owner of the land, gave the presentation for his son, Jeff Calhoun. Two Roundup Ready® cultivars, Asgrow™ 5901 and Asgrow™ 6101, were both planted on May 30, 1998, under similar conditions with plenty of moisture in the soil. The A6101's planted by Jeff Calhoun failed to establish an adequate stand, while the A5901's had no problems. Mr. Calhoun complained that the inadequate performance of A6101 was due to seed quality and vigor at the time of planting. Mr. Calhoun stated that they contacted the local dealer on either the second or third of July. The Asgrow™ representatives did not come to the field until 2 weeks later, but by then it was too late to replant. Mr. Calhoun requested a settlement with Asgrow™ for \$2,600: 25 bushels per acre, \$6.27 per bushel for 17 acres. Asgrow™ subsequently sent a letter claiming no responsibility for the crop failure. The Calhoun's were very disappointed at the length of time it took for Asgrow to respond.

Representatives from Asgrow and Hartz seed companies, which are subsidiaries of Monsanto, offered their expert opinions. Ted Lorts, business manager in the southern U.S. for Asgrow and Hartz seed companies stated it was ultimately the farmer's decision to replant a field, and the Calhoun's should have replanted without waiting for an Asgrow representative.

Walter Mayhew, southern regional agronomist for Asgrow seed company, brought up several points regarding temperature and moisture. He pointed out that temperatures were warmer in May, June, and July in 1998 than in 120 years. Mayhew presented temperature data from three Arkansas experiment stations to show the unusually high temperatures. Mayhew noted that even though rainfall occurred during this period, evaporative losses exceeded precipitation. For these reasons Mayhew concluded moisture was probably insufficient for germination and crop establishment.

Mr. Calhoun argued that moisture was adequate, and this conclusion was based upon acceptable performance of the A5901 cultivar planted at the same time in an adjacent field. In a separate written report to the arbitration committee, Mayhew explained differences in stands between Asgrow cultivars 6101 and 5901 were probably a result of differences in soil characteristics between fields in addition to the lack of moisture and high temperatures. Mayhew also questioned the planting rate. The A5901 was planted first and the seeds of this cultivar are smaller than those of the A6101. Mayhew argued that the planter may not have been adequately

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adjusted to compensate for the larger seed size of A6101.

Rodney Kegley, an Asgrow agronomist, claimed the main point of the discussion was to address the Arkansas law 2-23-105, which regards seed germination, distribution, legal representation, and quality. Kegley explained that a buyer can be paid back by the company in case the seed fails to produce according to the seed bag claims. The seed tag information is valid for 9 months after the germination test. In May 1998 the seed tag showed a 91% germination rate, but in June, 1998, the same lot was found to have only a 67% germination rate when tested at Louisiana State University. Asgrow claims it is entitled to stand behind the original label for 9 months. Their justification is that product distribution can adversely affect germination rates, and it is assumed that the seed remains at that quality level if planted within the nine months. Mr. Kegley also referred to codes 2-23-101 and 102. These codes outline the definition of buyer and dealer, and states the buyer has the right to complain against the dealer in case of the poor performance of the product. Kegley then proposed that liability rested upon the Terra Seed Company of Des Arc, Arkansas, the local seed dealer who directly supplied the Calhoun's with their Asgrow seed.

Summaries of Interviews

In addition to the opinions expressed in the arbitration hearing, interviews were conducted to provide additional insight into the various opinions held by individuals in both the commercial and academic sectors.

Interview with Anonymous Hartz Seed Company Representative. Hartz Seed Company in Stuttgart, Arkansas, produces and markets Roundup Ready® soybeans for Arkansas growers. Typically, the seed company is responsible for guaranteeing that a quality product is sold to their customers. The state and federal government established guidelines requiring a minimum level of quality as indicated on the certified seed tag. Seed from Hartz, like many other seed companies, exceed the minimum seed tag requirements in an attempt to provide a quality product to their customers.

Hartz believes that a problem does not exist with Roundup Ready® technology per se, but that a problem stems from the grower's expectations of higher performance along with the increase in production cost of this new technology. Hartz certainly agrees that the mentality of "the more you pay for it the better it should perform" is common in human nature. Hartz contends that this heightened expectation in performance is a fundamental issue between Monsanto and the producers.

Many soybean crops had trouble getting established in 1998 due to the extreme weather conditions.

The appropriate time and location of planting was critical, especially it seemed for Roundup Ready soybeans. Hartz concedes that better education of the growers could have played a critical role in lessening the severity of this dispute and that, perhaps, this situation will open a forum for discussion in the future.

Interview with Don Dombek - U. of A.

Variety Testing. Mr. Don Dombek, head of the University of Arkansas Soybean Variety Testing Program, evaluates the performance of public and private cultivars under different environmental conditions and soils. While most of his research is state funded, a fee is charged to private seed companies entering their cultivars into trials. This not only supplements his research program, but also relieves him of choosing the cultivars to be tested. His first experiences with Roundup Ready® soybean in the mid eighties were extremely disappointing. At that time, trials involved both Roundup Ready® to non-Roundup Ready® cultivars, and in general, Roundup Ready® cultivars were at the bottom when comparing yields. In subsequent years, he was strongly encouraged by seed companies to evaluate Roundup Ready® cultivars in their own test, separate from non-Roundup Ready cultivars. The proponents of separate testing argued that in a production setting, yields were often decreased by spraying with conventional herbicides, a problem that should not occur in Roundup Ready® cultivars. As Dombek watched colleagues in nearby states agree to the this arrangement of separate tests for Roundup Ready lines, he contended his job was to provide third-party unbiased cultivar testing, without taking weed control into account.

One leading producer of Roundup Ready® soybean would not enter Roundup Ready cultivars in trials with non-Roundup Ready cultivars. The producer claimed "production system testing" was needed, as opposed to Dombek's standard trials. Production system testing involves specialized management designed for specific types of cultivars. Seed companies were not the only ones who opposed Dombek's decision to not test Roundup Ready cultivars separate from traditional cultivars. Dombek even had offers from individuals to pay the fee to have Roundup Ready® cultivars tested. However, seed must be entered into his trials by the owner only, not an outside party. Many soybean growers were willing to pay the technology fees and risk decreased yields for the convenience of Roundup Ready® soybeans. According to Dombek, Roundup Ready® soybean yields in recent years have improved, and their yields approach or surpass the average.

Decision of Seed Arbitration Committee

Although Asgrow rejected the decision, the Arbitration committee ruled in favor of Jeff Calhoun. It was the board's recommendation that Asgrow provide Jeff Calhoun with his choice of 80 bags of Asgrow Roundup Ready Soybean seed or the cash equivalent in the amount of \$2,080. The Calhoun's decided not to pursue a court case, and eventually reached a compromise with Asgrow. Both parties agreed not to discuss the details of the compromise with outside parties (personal communication, Butch Calhoun).

Teaching Notes

After preparation of this case, students meet the following objectives:

1. Have a better understanding on how to conduct, interpret, and report an interview. Students should become aware of biases and opposing opinions often encountered when interviewing different parties. Students should be aware that perception of the situation changes depending on the how the person is affected by or involved with the case. It is important to accurately report interview events, and recognize that opinions instead of concrete facts, are often given in interviews. Anonymity is also a consideration, and it should be determined if the parties being interviewed give permission for their names to be used, or should fictitious names be used.

2. Understand the importance of a seed arbitration board and its role in state agriculture. The Seed Arbitration Board is an unbiased committee of agricultural leaders that draw upon the expertise of university and private industry in reaching a decision. The committee is an important tool in state agriculture, and it attempts to settle complaints, thus preventing a court case. Because the decision is not binding, both parties must accept the decision of the board in order for a settlement to occur. Parties can proceed to court if a settlement is not obtained. Often one of the parties involved decides that further legal proceedings are not merited, and cases are prevented from going to court. This could prevent the loss of time and money to both producers and companies.

3. Recognize the difficulty in deciding the outcome of a case in which outside, uncontrollable factors (seed storage, planting time, weather) are involved. Students should understand that it is often difficult to determine liability, especially when environmental conditions affect the situation.

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5. Be familiar with some of the controversy regarding transgenic crops. The issue of genetic engineering is extremely controversial. This case provides an opportunity to acquaint students with some of the issues.

Implementation of the Case

This case was used in an undergraduate/graduate Advanced Crop Science class composed primarily of junior, senior and graduate students majoring in Crop Management. The class was divided into three groups, each with a team leader. A case manager was appointed to coordinate the group leaders. In the preliminary stages, each class member was required to conduct a literature search of news articles related to the case. In order to assist the students in their search, a class period was devoted to learning how to conduct popular literature searches using common library databases. Students were also encouraged to obtain information from the Internet.

The Seed Arbitration Board provided text from two arbitration hearings and other supporting documents. As the case progressed, teams were assigned different areas of the case. Team leaders periodically met with their groups as well as with other group leaders and the team manager. Students were also involved in interviewing concerned parties and summarizing seed arbitration hearings. Upon completion of the study, team members were evaluated by their group leaders for their efforts and involvement. The case was also evaluated by the instructor, and these two scores were used to obtain the final score for each individual.

The study of this case should not be limited to agronomic classes, and it is a potential learning tool in a wide array of disciplines including political science, journalism, and business. The case provides insight into state legislative processes and commercial practices, and encourages thought and discussion of ethical and economic issues in agronomy and industry in general. The case provides insight into diverse viewpoints of large industries and self-sufficient businesses.

Other suggested uses for the case could include:

1. Conduct a mock seed arbitration board hearing using facts provided in this case as well as hypothetical situations created by the class.

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2. Assign groups to conduct further research regarding the outcome of this seed arbitration case. If a court ruling has already taken place, discuss this in class, focusing on whether or not the students agreed with the decision. This could also be accomplished with other seed arbitration cases as well.

Discussion Questions

1. Are the farmers familiar with the necessary conditions and requirements for using Roundup Ready soybean varieties? If not, how could this affect the case. Is it the responsibility of the seed companies to provide the education and planting advice?

2. Do you think the case provided fair representation of both sides? Explain. What could have been done differently?

3. Are the seed companies ultimately responsible for the success or failure of seed they distribute? When does their liability begin and end? Is the seed company justified in standing behind the original seed label? Should the local seed dealer share in the liability for poor seed quality, or was this “passing the buck”?

4. How might the trend toward vertical integration of the seed industry affect production practices and company liabilities?

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