

Name _____ Per _____ Score _____

Science Article of the Week-Bugs

Directions:

Step 1: Read the article.

C

Step 2: Read the article again. This time, use the text codes to annotate (mark) the article. You must have 10 markings. Use each code at least once and two of them twice. Highlight with a highlighter the area you are coding. You must also make a comment next to each code.

Step 3: Answer the following questions about the article:

1. Why is the article important to you and your family?

2. List one observation or fact in the article.

3. List one of the author's inferences in the article.

Text Code	Explanations
✓	When you read something that makes you say, "Yeah, I knew that" or "I predicted that" or "I saw that coming."
X	When you run across something that contradicts what you know or expect.
?	When you have a question, need clarification, or are unsure.
!	When you discover something new, surprising, exciting, or fun that makes you say cool, whoa, yuck, no way, awesome.
★	When you read something that seems important, vital, key, memorable or powerful.
👁️	When the ready really makes you see or visualize something.
🔗	When you have a connection between the text and your life, the world or other things you read. "That reminds me of..."
ZZZ	This is a boring part. I'm falling asleep.

Farmer faces historic drought in Utah and, worse, an insect infestation

By Los Angeles Times, adapted by Newsela staff

Word Count **859**

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SYRACUSE, Utah — For decades, farmer Neal Briggs has looked east to the mighty Wasatch mountain range for a hint about how his crops would fare. Each spring, he has picked out snowy peaks along this western edge of the Rockies. From these he could predict the amount of water that would fill streams and flow into his fields of wheat and alfalfa. Now, as water remains low in Utah and a historic drought lingers, Briggs looks to the mountains and sees mostly bare rock. Down in his fields he sees another problem: an infestation of insects.

“Survival now depends on how clean a farmer has kept his nose,” said Briggs, 59, who cultivates 300 acres half an hour northwest of Salt Lake City, meaning that owing money could spell doom. “A farmer who’s heavily in debt probably won’t make it.”

Warm Winter Woes

This year, the state suffered its warmest and least-snowy winter since the late 1800s, when Utah was still a territory, and not yet a state. The snowpack at the lowest elevation on Utah’s mountains has melted, and most of the higher altitudes will be quick to follow.

“This is one of those years farmers will tell their grandkids about,” said Utah state hydrologist Randall Julander. “About just how dry it was and how bad it was.”

Drought now grips 40 percent of the West, with no end in sight: globally, 9 of the 10 warmest years recorded since 1880 have occurred since 2000, officials say. Utah’s farm economy is much smaller than California’s. Utah’s agricultural sales for 2013 reached \$1.8 billion, well below California’s \$46.4 billion. Officials in Utah have begun to ration water, and Briggs and other farmers worry about more cutbacks this summer. Streams and reservoirs are running between 10 percent and 40 percent of normal. A 1-to-100 scale that state officials use to rank their volume shows a low of 3 and an average of 25. “Twenty-five is bad,” Julander said. “Three is a picture of a dead cow with a couple of buzzards on it.”

Fields Awash With Red Polka Dots

Briggs sees another troubling outcome from Utah’s weird winter: an infestation of killer aphids. Russian wheat and pea aphids normally freeze in the winter, but because of the warm weather they survived and began an assault on farmland in spring. Briggs didn’t even know the speck-like insects were ravaging his fields until he spotted tens of thousands of predator ladybugs drawn to his fields to feast on them — making the fields a sea of green awash with red polka dots.

“I thought, ‘Maybe we’ll get by,’” he recalled, sitting in the kitchen of his farmhouse. “You know, let nature do what nature does.”

A week later, he stood in his fields and nearly wept: Even the vast numbers of ladybugs — each can eat 2,000 aphids in its short lifetime — couldn’t hold off the pests. The aphids were spreading, eating through both his wheat and alfalfa crops, and injecting a toxin that kills the plants. Utah State University farm expert James Barnhill sprayed Briggs’ alfalfa crop with an insecticide that killed the aphids, but spared the ladybugs. Now most of the farmers are back in control of their alfalfa crops. The aphids, however, are still damaging wheat.

Keeping Their Eyes On The Sky

Briggs, a father of six who farms with two of his sons, has watched the water levels in streams get lower each spring. Even so, he stays hopeful. “We farmers are the eternal optimists,” said Briggs. “Even if we have a bad year, we figure the next year will be a good one. Even if we have five bad years in a row, we’re still looking for that next good year.”

On drives through the Syracuse community of 25,000, he has seen homeowners, businesses and golf courses watering their lawns even when it rains, so there’s enough blame to go around. So far, Briggs has seen little suggestion in this farm-friendly state that farmers are wasting Utah’s water: “I hope it never comes to that.”

Meanwhile, Utah keeps its eyes toward the sky. The head of the Utah Farm Bureau, Randy Parker, believes this year will be even worse than last if they’re not “blessed by Mother Nature.” The right balance of moisture and summer temperatures is badly needed in Utah.

"Yeah! Woo-Hoo!"

In May, a show-stopping rainstorm raged for two days straight. It dumped 2 inches of rain on land that averages only 17 inches a year. Briggs recalls rushing out to check his backyard water gauge and texting his son, Aaron, with each significant rise. “Yeah!” came his son’s response. “Woo-hoo!”

Farming has always been a gamble. If it’s not the drought one year, it’s plummeting prices or soaring taxes the next. Through it all, Briggs says, he prefers the lifestyle of the farm and says his children have been his most rewarding crop. Inside their kitchen, Briggs, his wife, Caroline, and Aaron talk about the future. They don’t expect the runoff from the Wasatch mountains to ever be the same again. “Despite any drought, we’re farmers and we’ll continue to farm,” Caroline said. “It’s our life.”