Midwest and elsewhere readied their tractors, equipment, and seeds for planting in an unusually early spring. With less snowmelt, the soil was drier than usual, and a long-term drought in the southern states of New Mexico, Texas, and Louisiana expanded to cover much of the rest of the country. By June, the drought covered 56% of the continental United States, when a heat wave hit and promised to dry the soil even further.

The drought had a significant impact on agriculture and continued to worsen into July and August—critical times for crop development. By September, the USDA had designated more than 2,000 counties as disaster areas, with more than 80% of farmland impacted by the drought, more extensive than any drought recorded since the 1950s.

If you drove through the Corn Belt in July, you may have thought you were in Hawaii gazing at plantations of spiny pineapples instead of Minnesota or Iowa corn. Instead of being greeted by walls of the usual tall, green plants, you would have surveyed short, browning plants with curled leaves—symptoms of the persistent lack of water.

Last winter, the United States emerged from the fourth-warmest winter on record. Farmers across the...