The English Farmers Who Harvest Rhubarb by Candlelight

Yorkshire, England, is one of the few places in the world where rhubarb is harvested the old-fashioned way: by candlelight. Every November, after the first long frost, farmers transplant their crop into windowless heated sheds, plunging thousands of plants into total darkness. The stress triggers alarmingly rapid growth. Under the right conditions, rhubarb can grow more than an inch per day. That’s fast enough to hear it. Farmers have relied on this recipe of frost, darkness and warmth for more than 200 years. The combo tricks this bright-pink vegetable into growing sweeter, more tender stalks—a product called “forced rhubarb.” Yorkshire’s Rhubarb Triangle—a nine-square-mile patchwork of green fields and hedgerows in northern England—once produced about 90 percent of the world’s forced rhubarb. And now, like Parmesan or Champagne, Yorkshire Forced Rhubarb has a protected designation of origin from the European Union. Today, the Rhubarb Triangle attracts thousands of tourists and foodies each year. You’d never guess that, until very recently, the industry was at risk of dying out altogether. “The rhubarb forcing industry has shrunk back dramatically,” says Ben Asquith, the last in a long family of rhubarb growers in West Yorkshire. “Forty years ago we had over 70 families growing the crop.” Today, fewer than a dozen keep the tradition alive—but a rebound could be on the horizon. A sweet discovery According to legend, the method for forcing rhubarb was first discovered by accident. The year was 1817, and the setting was the Chelsea Physic Garden, a now-venerated London botanical yard that was founded in 1673 by the Worshipful Society of Apothecaries, a group dedicated to the propagation and study of medicinal plants. Rhubarb, which has been used in traditional Chinese medicine since at least 270 B.C.E, was among the society’s early collections. One day, a horticulturalist allegedly dropped a bucket over a rhubarb plant. A few weeks later, he discovered that the plant had responded to the darkness by growing blindingly fast, sending up dead-straight stalks in an unnerving shade of pink. Over time, growers discovered that these stalks were not only prettier than the traditional green-streaked maroon—they also tasted much better. The rapid growth stretched out the plant’s cells, making them more flexible and therefore more tender. Better yet, the plant fueled this growth by injecting stored sugars into the stalk, resulting in a much sweeter crop. By 1877, farmers in Yorkshire—a region of northern England that was already a rhubarb-growing epicenter—had taken up the practice in earnest. Growers scaled up the bucket method, building long, windowless sheds that could accommodate huge numbers of plants. Every winter, they would pull rhubarb plants from the wet fields, place them on the ground or in racks or replant them in the dirt floor in the heated sheds, and wait. Within days, the growth would begin. How it works Rhubarb isn’t the only plant that reacts this way. Other plants like sea kale, asparagus and endive can also be forced, according to Jeanne Osnas, an ecologist, affiliate faculty member at the University of Alaska Anchorage and co-author of The Botanist in the Kitchen blog. With all of these vegetables, the abnormally rapid growth starts when the plant receives a series of special cues. First, there’s the frost. “When the plant cools down or warms up, it affects the chemical environment inside the plant,” says Osnas. “This allows different processes to turn on or off. You can think of each of these processes as a cascading series of events—like a domino chain.” In this case, the frost kicks off a cascade of chemical reactions that primes the plant, telling it to keep an eye out for its next cue: the warmth and a change in the light. But, without eyes, how exactly does it sense that light?