Viewpoint: Organic farmer's New York Times opinion piece perpetuates 'fantasy' of small growers feeding the world

The New York Times has come under no small amount of criticism in recent years for agriculture coverage seen by some some critics as either wrong or too heavily biased toward organic and anti-GMO points of view. Recently, the newspaper struck (out) again, with an opinion piece by farmer Dan Barber, who wrote that:

> The seeds in my palm optimized the farm for large-scale machinery and chemical regimens; they reduced the need for labor; they elbowed out the competition (formally known as biodiversity). In other words, seeds are a blueprint for how we eat.
> We should be alarmed by the current architects.
> Just 50 years ago, some 1,000 small and family-owned seed companies were producing and distributing seeds in the United States; by 2009, there were fewer than 100. Thanks to a series of mergers and acquisitions over the last few years, four multinational agrochemical firms — Corteva, ChemChina, Bayer and BASF — now control over 60 percent of global seed sales.

Who is Barber? According to the newspaper, he "is the chef and co-owner of the Blue Hill and Blue Hill at Stone Barns restaurants in New York and the co-founder of Row 7 Seed Company."

Chef and Farmer Dan Barber. Image: Washington Post

Left out of his biographical information is the fact that Barber also is an organic farmer, philosophically opposed to conventional agriculture and genetic modification of food. Blue Hill and Blue Hill at Stone Farms restaurants, both in New York, espouse a locally sourced, largely organic menu, costing between $95 and $278 per diner. According to Barber's Row 7 website:

> But it's worth asking: why not GMO? We believe that the most flavorful and resilient plant varieties are best created by working with the full genetic heritage of a crop. We utilize time-proven techniques of cross-pollination and selection complemented by modern technology, but we draw a clear line at genetic engineering. It doesn't advance the changes we seek in the food system, and it's never produced anything truly delicious.

He's also not a fan of patents:

> Utility patents on seeds are a dead end for evolution, which is why we'll never file one. Utility-patented plant varieties cannot be saved for seed or replanted by growers, they cannot be cross-pollinated to be adapted to where you live, and they cannot be used freely for research. Put simply, they impede our rights and inhibit the improvement of our food.

Barber's perspective on GM and patented seeds follow the party line of the organic industry.

Genetic modification—The safety of GM product is only in dispute among organic industry activists—nearly all scientists, non-Green party European government officials, and even farmers (including a few organic ones) tout the technology's advantages and safety. In addition, regulatory restrictions have made the development and commercialization of GM products affordable to only the largest corporations, since costs now include years of review, and more than $100 million for each new trait.

Patents—Patents are one valuable way to create an incentive to invent something—if somebody else just steals your results, then the point of invention is largely lost. Asexually reproducing plants have been granted patent protection since 1930 (sexually reproducing ones since the mid-1980s). Saving seeds has been observed as a dead end for users of F1 hybrid seeds, because subsequent generations do not have the same concentrations of desired hybrid traits. Some organic producers are also patented. And a new, online law organization based in San Francisco called UpCounsel.com, has a number of recommendations for patenting organic seeds, including using utility patents.

And then there's the "Big Ag" seed takeover. Barber repeats a familiar strain among Democratic party presidential candidates, that "Big Ag" has stifled innovation and mergers like Monsanto-Bayer are bad for agriculture.

But the impact of mergers on specific markets is complicated and doesn't lend itself well to simple, emotional campaign messaging, experts say. Data from 2017 show that Monsanto was not even the largest American corn seed manufacturer. DuPont Pioneer held 34.7 percent of the market; Monsanto sold 33 percent; Bayer was not a significant player. The merger hasn't changed the total sales or market shares much.

A previous GLP article covered the work of USDA economist James McDonald who noted in an analysis of the recent mergers in the agricultural industry, market concentration does not easily equate to market power.

> In the 1960s and 1970s, antitrust agencies focused heavily on concentration as a sufficient indicator of market power. Policy has since changed sharply. While concentration still matters, it alone is no longer considered to be a sufficient indicator of market power. Other factors, such as the ease of rival entry and the ease with buyers can switch their purchases among sellers, now matter as well.

That means, if we believe that four companies control 60 percent of seeds, that 40 percent is actually very important, and may end up upturning the other 60. McDonald also discussed how mergers can unravel. A

series of mergers in the 1990s had the aim of “vertically integrated life science,” in which biotechnology advances would be developed for pharmaceuticals, seed genetics, and agricultural chemicals and a lot of small seed companies and biotechs were bought by bigger pharmaceutical and chemical firms. These mergers eventually fell apart, and the agriculture business separated from pharmaceuticals, where they largely remain today.

In addition, farmers have expressed some concerns about consolidation, but largely say they have choices. Even a local company that’s been sold may change the ownership chain, but not necessarily the availability of popular and local seeds and materials.

As for Barber’s organic industry, it too is undergoing consolidation. According to a report in April by Ecovia Intelligence:

> The industry has traditionally been fragmented with many operators involved in production and distribution. Rationalisation is occurring with large companies looking to take significant positions. Apart from large food companies and retailers, recent years has seen the entry of unconventional operators; Whole Foods Market was bought by the online retail giant Amazon for USD 13.7 billion in June 2017. In Europe, the healthcare company Midsona has purchased leading organic food enterprises in Scandinavia (Urtekram, Internatural) and Germany (Davert).

Much of this movement, Ecovia says, comes from the fact that organic companies are getting more competitive with each other for market share. It’s difficult to say, however, whether a disruptive innovation could upend the titans of organic agribusiness. But neither conventional nor organic ag hold a patent, so to speak, on the fantasy of small local growers supplying food to the world.

Andrew Porterfield is a writer and editor, and has worked with numerous academic institutions, companies and non-profits in the life sciences. BIO. Follow him on Twitter @AMPorterfield