

Commentary on “A very small number of crops are dominating globally. That's bad news for sustainable agriculture”

Wade Williams
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Agriculture in much of the world today is highly efficient and has reached the highest rates of production in history. However, there are several problems with the current methods used to grow food in modern agriculture, and the consequences of monoculture practices are becoming clear as research uncovers the drawbacks. In today's changing world, the practice of monoculture is a huge risk to the global food supply.

Advocates of monoculture argue that crops that have been modified or crossed to become best suited for the land are more resilient to climate changes with less of an impact to yield. It is also argued that the method of monoculture maximizes the efficiency of the farming process. Andrew McGuire states that “monocultures are better suited for annual cereal crop agriculture, the source of a majority of our food energy” (McGuire).

However, I believe that the practice of monoculture represents a huge risk to the global food supply. It seems to me that common sense dictates that relying on just a handful of certain genotypes of crops for most of the food supply for the world is a huge gamble. One blight that affects corn or soy could lead to the entire crop being wiped out due to each plant being the same genotype and having no resistance to the blight. This would have devastating consequences to the global food supply, as well as the global economy. One example of the consequences of not farming a diversity of crop species is exemplified now in the coffee industry.

In a *Nature* article, author Emiliano Rodríguez Mega states that the multibillion-dollar coffee industry that's dominated by two varieties — arabica (*Coffea arabica*) and robusta (*Coffea canephora*) beans. And now the industry is facing a high risk of extinction for 60% of all coffee species (Mega). Due to the heavy reliance of the two species, many other species of coffee have begun to disappear due to lack of conservation.

Another argument about the consequences of monoculture in industrial agriculture today is that it affects more than just the environment. People are also affected, as explained by Rafter Ferguson. He says that industrial agriculture “doesn't produce enough nutritious food or distribute it equitably” . Relying on a handful of large scale corporate farms to provide most of the world's food is just as high risk as planting enormous tracts of land with one type of crop.

Lastly, in the article “Diet and Food Production Must Radically Change to Save Planet” featured in *ScienceDaily*, the author Tamara Lucas states that “strategies to refocus agriculture from producing high volumes of crops to producing varied nutrient-rich crops are needed”(Lucas). We need to increase the number of small and medium farms that incorporate more varied crops. Lucas states that “currently, small and medium farms supply more than 50% of the essential nutrients in the global food supply”.

Ultimately, the solution is that we must encourage more and more people to seek independent and local food production, to decrease the demand for large scale monoculture-based agriculture. I plan to ensure that my farm operation will include a wide diversity of not just genotypes of a certain crop but also a diversity of many different crops together. Building up a farm that can be resilient to the changing climate just makes sense to me. Having a crop failure is never a good thing, and the best way to ensure that a crop failure is not catastrophic is to plant a diversity of genotypes and crops that are best suited for the climate. Otherwise, the next crop failure will truly be a global disaster.

Bibliography

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