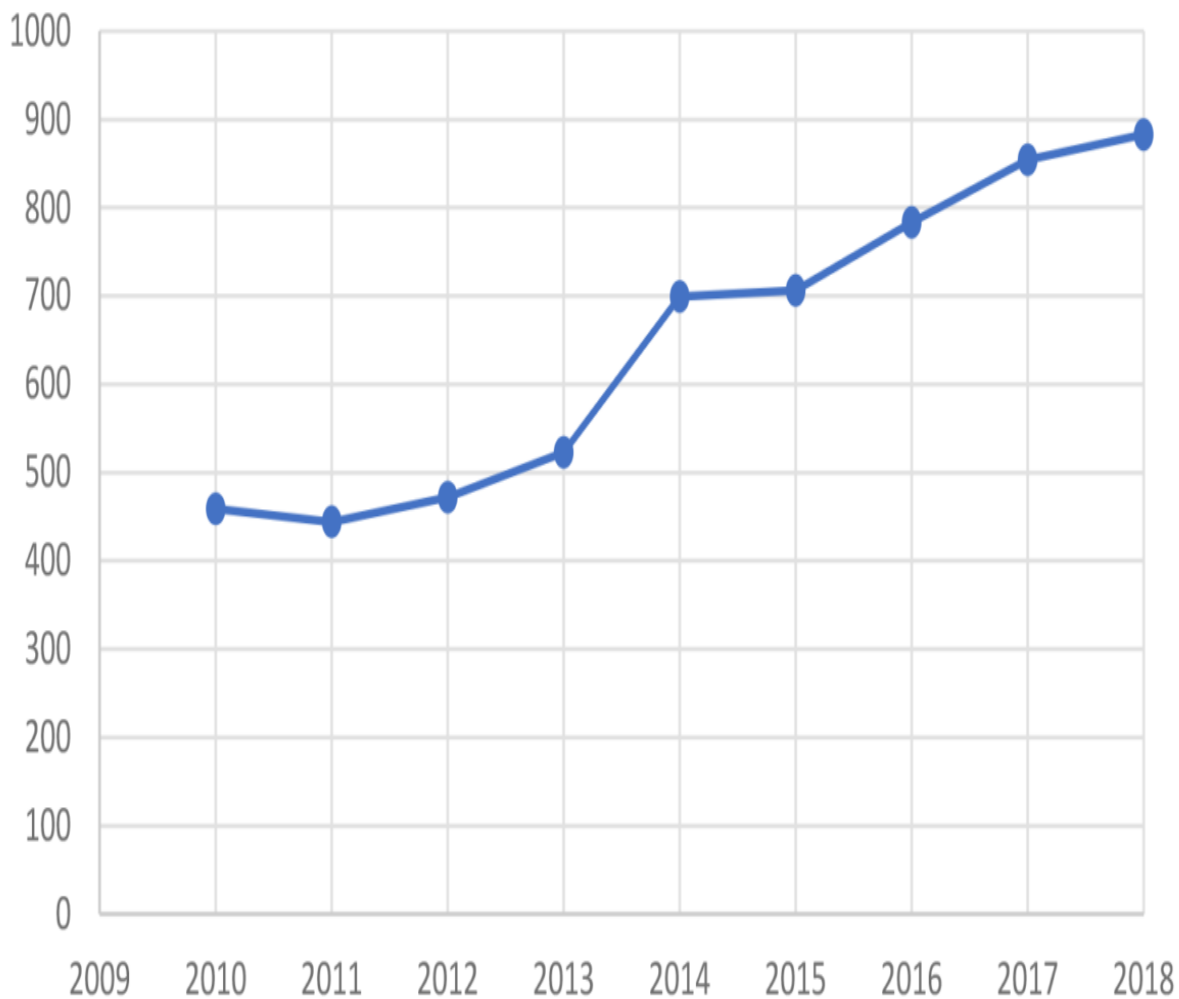


Global agricultural productivity more than tripled between 1960 and 2015.[1] Despite such impressive growth, given current trends, global hunger will remain a persistent problem for several decades to come.[2] In order to meet the food challenges of the future, global agricultural productivity must continue to accelerate. Increasing agricultural productivity must also be balanced by the need to ensure that future growth is economically and environmentally sustainable. Long-term, sustainable production cannot be accomplished if tradeoffs include excessive levels of water or soil depletion, waterway contamination, deforestation, or greenhouse gas emissions.

These challenges have not escaped the eyes of innovators. The number of patent applications filed among different Agtech sectors has continued to rise in recent years. The AgTech space spans a wide variety of different disciplines, but trends in a few key areas point in the same upward direction.

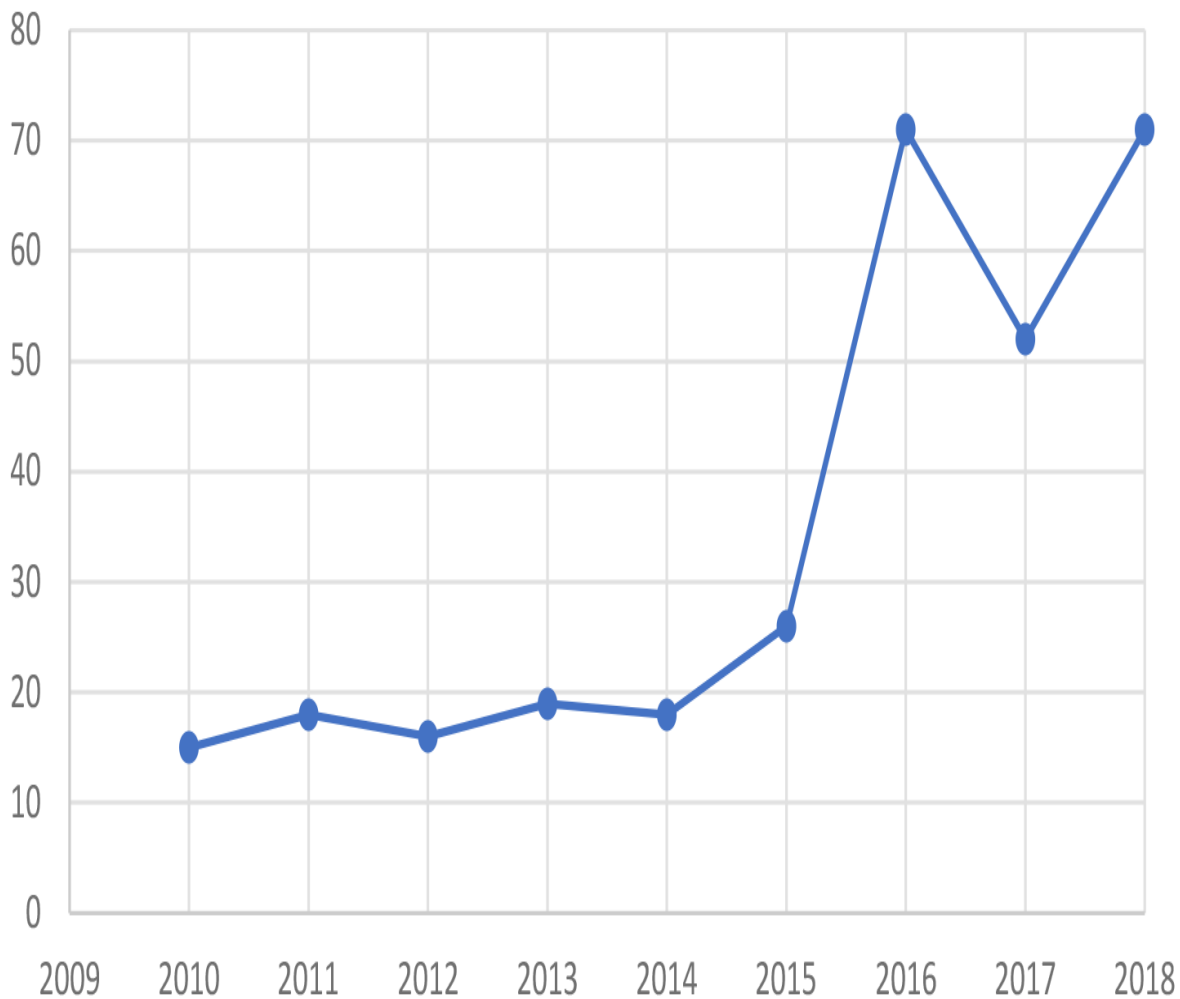
As a good indication of this upward trend, the number of patent application publications including “agriculture,” or related terms, in the title or abstract, has increased by about 92% since 2010:

## "Agriculture" Applications



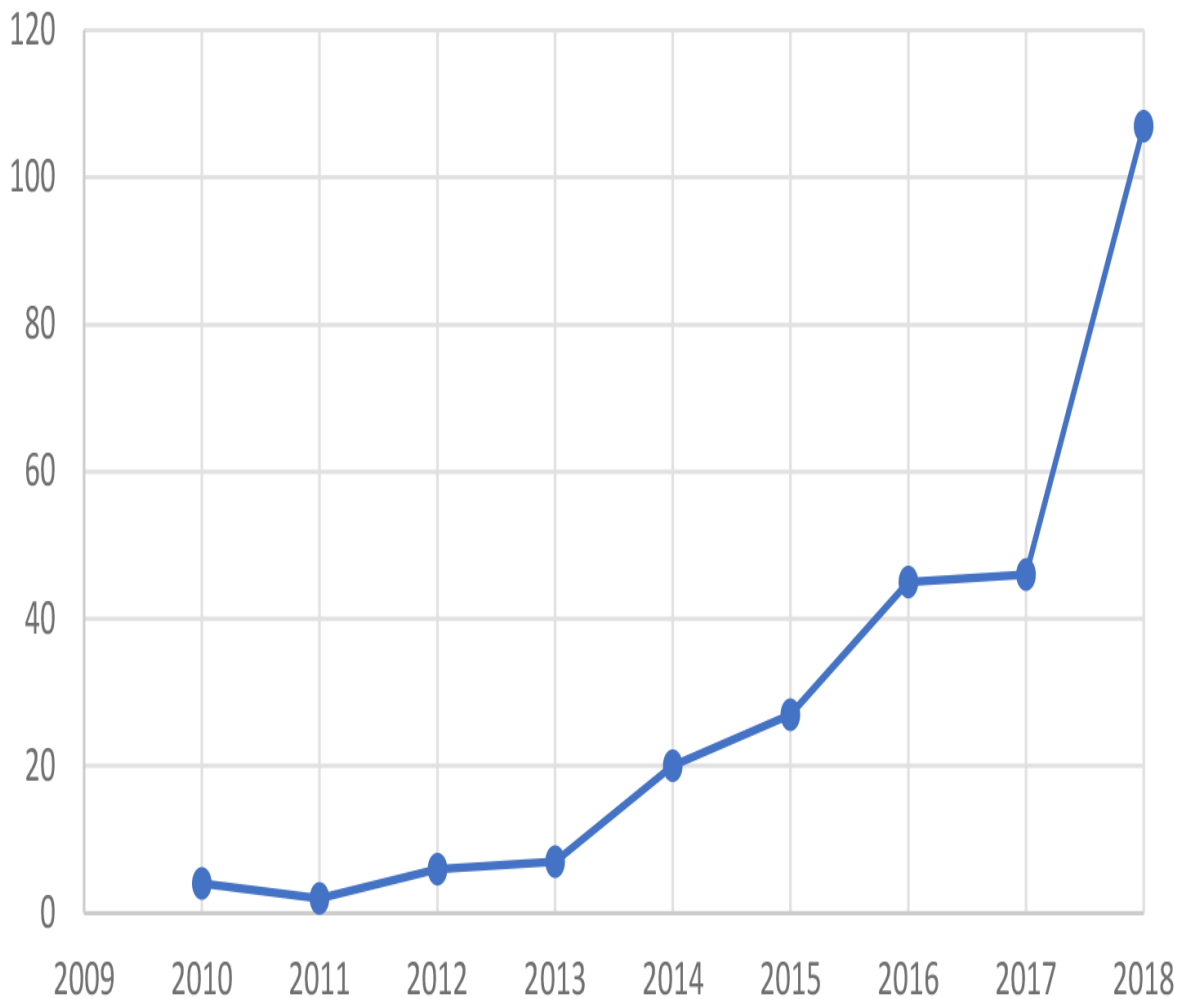
More specific sub-sectors within the Agtech umbrella have seen even greater increases over the same time period. For example, the number of patent application publications including some version of the term “precision agriculture” has increased by 373% since 2010:

## "Precision Ag" Applications



In another example, the number of patent application publications including some version of the term "soil microbiome" has increased by a whopping 3,433% since 2010:

## "Soil Microbiome" Applications



As a comparison, the increase in overall patent filings across the entire USPTO is about 20-30% over the same time period. The increases seen in the various Agtech industries has therefore greatly outpaced the baseline growth in patent filings. Given the challenges that lie ahead, it seems likely that these patenting trends will continue.

[1] USDA International Agriculture Productivity studies, data available at <https://www.ers.usda.gov/data-products/international-agricultural-productivity/>

[2] “The future of food and agriculture,” Food and Agriculture Organization of the United Nations, available at <http://www.fao.org/3/a-i6583e.pdf>