



# TWO CONTRASTING VISIONS OF AGRICULTURE

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By Curtis W. Stofferahn, Ph.D.

[Curtis.stofferahn@email.und.edu](mailto:Curtis.stofferahn@email.und.edu)

In June, two events markedly contrasted the difference between two different visions of agriculture: precision agriculture and regenerative agriculture. The dedication of the [Grand Farm Innovation Shop](#) and Midwest Ag Summit Panel presented the precision agriculture side of the contrast, while the [Barnes County Historical Society's](#) and [Dakota Resource Council's](#) sponsorship of John Ikerd's presentation "50 Years That Changed it all: Food, Farming and Community" presented the regenerative agriculture side of the contrast. Not only did they present different visions of agriculture; they both represent distinctly different philosophical approaches to agriculture.

Precision agriculture mainly focuses on maximizing efficiency and productivity through the adoption of advanced technologies. This approach is congruent with monocropping, where the same crop is planted continually over large areas. It is based upon the collection of detailed data on soil conditions, plant health, and microclimatic variables and it uses that data for the precise application of water, fertilizers, and pesticides to increase productivity in these monocultures. Precision agriculture's technological and data-centric nature makes it particularly appropriate to use in large-scale, single-crop

farming environments requiring efficiencies of scale ([Mager, 2024](#)).

The precision agriculture viewpoint is based upon an economic determinism that sees the concentration of farms into fewer hands, the ever-increasing size of farms and the disappearance of middle-sized farms as a necessary (and desirable) consequence of an inevitable and inexorable drive toward the adoption of ever more technology in agriculture. This drive has desirable outcomes for increased production, but undesirable social and environmental outcomes. These assumptions of economic and technological determinism have become embedded in agricultural policy since the 1960s ([Hamilton, 2014](#)). They also imply that farmers must just adopt these technologies or be squeezed out (i.e. technological treadmill, [Cochrane, 1980](#)). This policy only accelerates the industrialization of agriculture with undesirable impacts on rural communities, the environment and rural residents ([Lobao and Stofferahn, 2008](#)).

All that technological adoption, and the resultant industrialization of agriculture, has done is to squeeze the middle category while concentrating agricultural resources in an expanding large-scale industrialized agriculture sector and subsidizing socially — and environmentally — undesirable and unsustainable farm production. This is the model of agriculture promoted by agricultural technologists as well as by agricultural economists. The late Hiram Drache, history professor at Concordia College, advocated large-scale corporate-style farming business ([Pates 2020](#)). Notably, his former student is Ron D. Offutt Jr., head of [R.D. Offutt Farms](#) of Fargo, a so-called family farm corporation. Taken to its logical conclusion, this form of agriculture would result in one corporate farm per county, utilizing labor displacing technology, employing hired labor and managed from corporate headquarters.

The sign listing all the contributors to Grand Farms tells you need to know about the promoters of industrialized agriculture. It is unsurprising that major cooperatives, major agribusiness corporations, and the state’s “largest family farm organization” are among them. Increasingly, we find that, because of isomorphic pressures, cooperatives begin to resemble corporations in the similarity of their business practices and interests ([Stofferahn and Ley, 2022](#)). Similarly, isomorphic pressures have resulted in both North

Dakota farm organizations resembling each other regarding the broad outlines of their federal agriculture policy interests (Knutson, 2022). Notably, both of North Dakota's major farm organizations supported the animal agriculture exemptions to the corporate farming law passed in the last legislative session. That the two major farm organizations begin to resemble each other in their policies is unsurprising as their membership base increasingly represents the operators of large-scale industrialized farms.

In contrast to Grand Farm's vision of the future of agriculture was that of regenerative agriculture presented by John Ikerd on June 13 at the 150th Anniversary Celebration of Barnes County. As a faculty member at three land grant universities, Ikerd taught from the dominant agricultural paradigm that advocates the industrialization of agriculture. He saw the consequences of that paradigm for rural communities and farmers in the farm crisis of the 1980s as prices collapsed and farmers lost their farms (and sometimes their lives) as lenders foreclosed on farmers with overextended credit.

His perspective derives from having lived through the evolution of agriculture from small, independent family farms, local food systems and vibrant rural communities to a corporately-controlled agriculture, a global food system and economic and socially desolate rural communities. This experience resulted in him becoming not only a fierce critic of industrialized agriculture, but also a persistent advocate of regenerative agriculture, local/regional food systems and the social and economic revival of rural communities (Ikerd, 2024).

Regenerative agriculture does not have a single, precise definition, but in the United States, it is usually defined as an integrated set of land management practices that utilizes plant photosynthesis to sequester carbon, restore soil health, increase crop resilience and restore the nutrient density of foods. Lists of practices typically include reduced reliance on tillage and the use of synthetic fertilizers and pesticides, as well as increased adoption of cover crops, the rotation of diverse crops and management-intensive grazing.

Regenerative agriculture concerns transcend that of the farm itself; it must meet the needs of consumers, farmers and civil society. And it must be socially responsible and economically viable as well as ecologically regenerative (Ikerd, 2021).

In his presentation, Ikerd discussed communities of place, interests, practices, circumstance, and action. He argued that farming communities in the 1940s-1950s had all these kinds of characteristics of community and he maintained that local food systems could have many of the same characteristics of the farming communities of the past and thereby offer a reasonable place to begin the renewal of rural communities. Communities formed around interest in local foods can expand to include communities committed to other social amenities that provide for a desirable quality of life. Despite where they begin, he saw the best hope for the future of rural America depends on the willingness and ability of people to come together to rebuild and renew their communities (Ikerd, 2024).

This approach to agriculture, as opposed to the deterministic approach of precision technology, is an agency-based approach. It requires people in communities connected to a particular place to share a commitment to sustainability and to recognize farming, food systems, and all the amenities that make for a desirable quality of life. This approach would be a transformative change whereby people understand the necessity for change, share a common vision for the future, realize that only collectively can they make that vision into reality and possess the collective courage to act even with real risk and uncertain outcomes. All of these comprise the basic reasons to form and join communities that would be necessary to restore the lost sense of caring and shared purpose (Ikerd, 2024).

Unfortunately, federal agricultural policy disproportionately serves industrial agriculture over regenerative agriculture. To learn more about how to change current production-oriented agricultural policy into an agricultural policy to advance regenerative agriculture, Sharna, Bryant, and Lee (2022) interviewed 113 farmers and ranchers across the country. Their report was grounded in the lived experiences of these regenerative farmers and it summarizes what they learned from those interviews. Their report provides on-farm and food system-wide policy recommendations to incentivize regenerative agriculture on the land and throughout the supply chain. In short, their report recommends that federal policy must invest in regenerative agriculture, diversify food systems infrastructure, support farmers and ranchers and fund regenerative research and

extension.

Dakota Resource Council, together with its national allies in the [National Family Farm Coalition](#) and allies in North Dakota, is working on policies that promote regenerative agriculture. It's evident in its pursuit of a federal farm bill that promotes the interests of family farm agriculture, state legislation that promotes soil health and opposition to the animal agriculture exemptions to the corporate farming law. It's also evident in its organizing efforts with citizens concerned about the concentrated animal feeding operations coming to their communities.

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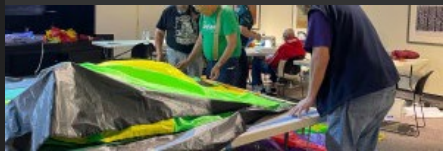


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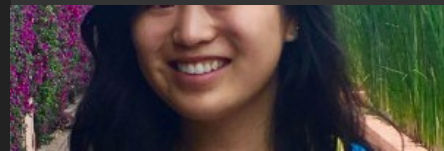
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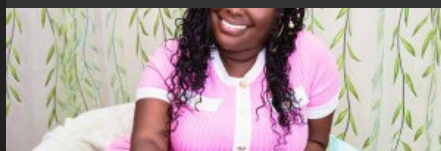
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