



## Stewardship for Sustainable Soils

“ The land will go on for much longer than I’ll be here, and it’s a much bigger story outside of myself, so I feel a responsibility to share that bigger story of what’s happening with other people as a part of our stewardship. ”

**Justin Knopf, Kansas  
Hard Red Winter Wheat Farmer**

As a 5th generation farmer and father of three working alongside his own father and brother, Justin Knopf recognizes his responsibility as a steward of the land for the next generation both on and off the farm. On the 4,000 acre farm in central Kansas, the Knopf family grows hard red winter wheat, alfalfa, grain sorghum, soybeans and corn on the same land the family originally homesteaded in the 1860’s. Justin is passionate about being involved in the industry and says outreach is an important part of agricultural sustainability. “What I do impacts consumers, so it’s important to take time and energy to be transparent with them and share the bigger story of what’s happening in our landscape,” he says. “I’ve been given a gift to be able to work with the land and that comes with responsibility.”



### AGRONOMIC ADVANCES

Justin strives to maximize his production per unit of resources by utilizing the tools, research and continued education opportunities available to farmers.



### ECONOMICS

The Knopf family practices making economically sustainable decisions for their farm. If a farmer goes broke, he says, then his efforts to be environmentally sustainable are not going to impact the environment long term.



### THRIVING COMMUNITIES

There is also a human element to sustainability. Justin recognizes the value of family and community, and spends time focusing on the health and happiness of his young family, their small town and the neighbors that farm alongside them.

# Cover Crops

Justin is always learning new farm management skills and how he can apply the latest technology. After attending a no-tillage farming conference, he learned that an evolving no-till system includes having a crop growing and living in the soil at all times. After experimenting with cover crops in his rotation, the results show this boosted biological diversity in his soil and at times allowed him to reduce pesticide use where cover crops are grown.



## 4,000 Acres of No-Till

There is no irrigation or tillage on the entire 4,000 acre Knopf family farm. Since the family transitioned to no-till farming in the early 2000s, Justin says he has seen a physical change in their soil. The soils are darker, richer and have more organic matter than before. These rejuvenated soils are more productive and resilient, making it easier to grow crops without increased inputs or extra water, and are less likely to erode.

# Superior Soils

Quality soils are crucial for crops to reach their full potential, but abuse can quickly lead to nutrient loss, erosion and reduced productivity. Farmers on the Plains witnessed the cost of over-plowing their soil in the Dust Bowl of the 1930s and since then have fought hard to protect their most precious resource. The Knopf family has invested in soil health through cover crops, no-till farming and crop rotations. The changes have not only improved the soil health, but also increased soil moisture, contributed to better crop fertility, helped reduce inputs like fertilizer and fuel and ultimately increased yields. But these changes didn't happen easily or overnight. Adding these new management practices required a financial investment, continued education and dedication from Justin and his family.

U.S. Wheat Associates (USW) is the industry's market development organization working in more than 100 countries. Its activities are made possible by producer checkoff dollars managed by 19 state wheat commissions and through cost-share funding provided by USDA's Foreign Agricultural Service.

