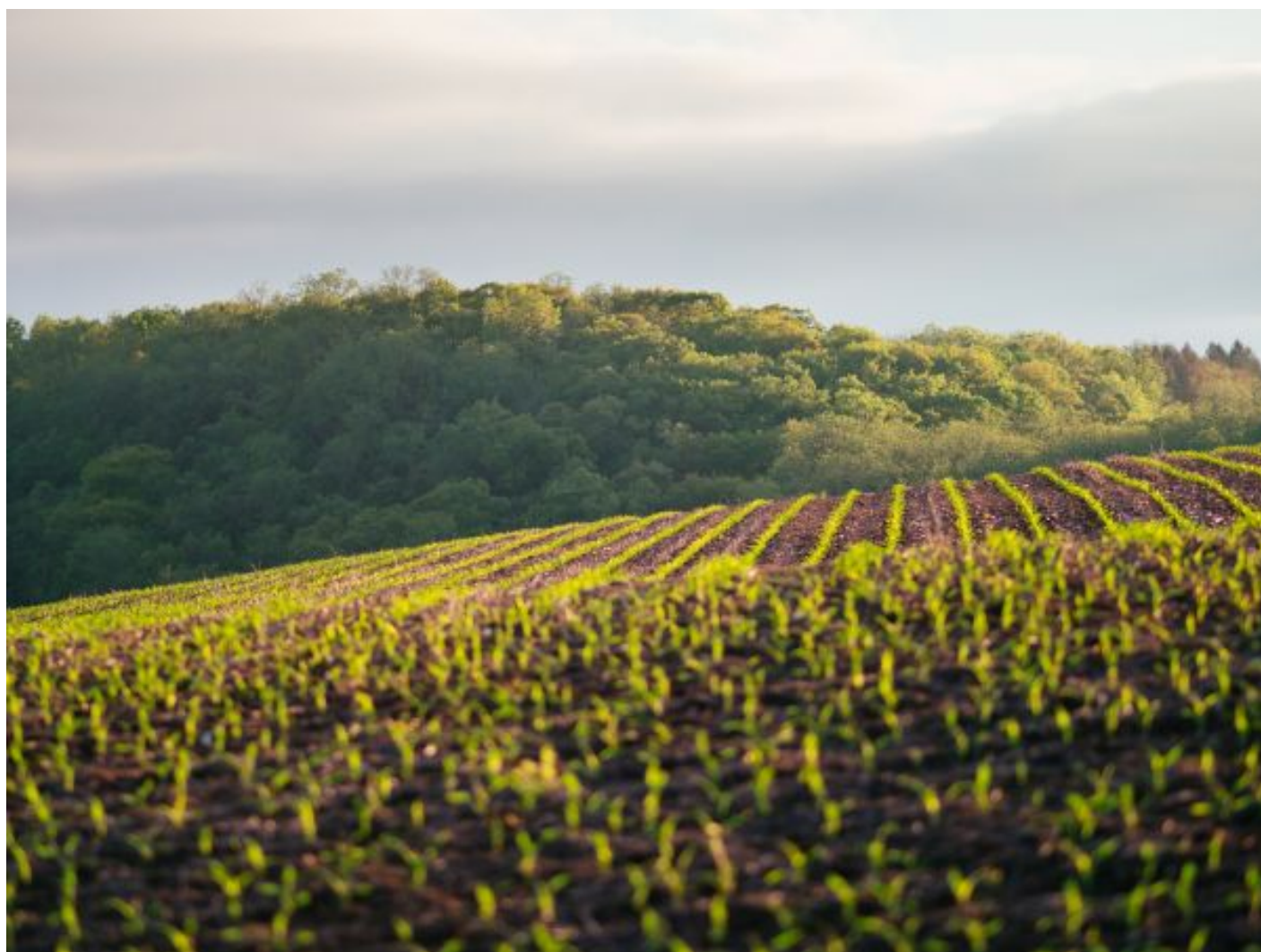


Fertility: Your Farmland's Asset

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For most landowners, the most valuable asset is their land. They are proud of their property, the crops grown on it, and the history of how it came to be. After family sentiment, farm quality is often gauged by its productivity of saleable crops. In the Midwest, that includes corn, soybeans and wheat. In the south, it may be cotton and citrus crops, whereas crops on the west coast include olives, almonds, and other high-value crops. While the nation's agriculture is diverse from one corner to the other, the essentials for growing a crop remain the same: land, water, and nutrients.

Land, water, nutrients. As simple as that sounds, landowners only have a great deal of influence over one of these, but all are vital to the productivity of the land. Soil or "land" can be difficult to control, and soil types on a farm cannot be changed. A landowner can seek farms to purchase with more favorable soil types or location, and over time can implement practices to preserve and improve the soil profile, but to change the actual soil type is unrealistic. Water also presents challenges. Landowners can install pivots, drill wells, or find ways to supplement water, but no one can control the weather which is vital to crop yield and development. The third requirement for crop production, however, is within the landowner's control. Fertility can improve the land and it requires annual monitoring to ensure everyone with an interest in the land is doing their part to ensure crops are getting what they need, and when they need it.

Each crop has a nutrient requirement and specific removal rate dependent on yield. Peoples Company's proprietary farm lease requires farm operators to supply annual fertilizer application maps, invoices, and the amount applied. Peoples Company Land Managers closely monitor crop yields, fertilizers applied, and the amount removed by each crop. By doing this, managers ensure crop removal rates are met with annual fertility applications and remain at optimal levels for the crops being grown.

Figure 1 below uses Iowa State University fertilizer removal rates and provides an example of the nutrients removed by corn and soybeans throughout the growing season. Figure 2 provides an example of fertilizer applications that replace the nutrients removed by the crop. Ideally annual fertilizer applications will surpass the crop removal rate to build soil fertility over time on each farm. Land Management clients receive an annual report that summarizes the crops grown on their property, nutrients removed, and fertilizers applied to support the crop. These removal rates are then used to make recommendations for future fertilizer applications for the following years crop.

Figure 1. – Crop Removal Rates Based off Crop & Yield.

2018 Crop Removal Rates	2018 Corn			2017 Soybeans		
Yield	180bu/ac			50bu/ac		
Fertilizer	N	P	K	N	P	K
ISU Crop Removal lbs/bu	1.2	0.32	0.22	+yield	0.72	1.2
Total lbs/a Removed	216	57.6	39.6	+50	36	60

Figure 2. – Fertilizer applications to replace nutrients removed by crop.

Fertilizer Applied for 2018 Crop	Corn	Soybeans

Crop	Product – Rate/Acre	N	P	K	N	P	K
Corn	200lbs NH3, 120lbs MAP, 85lbs Potash, 15gal 28%	220.7	62.4	51	--	--	--
Soybeans	75lbs MAP, 100lbs Potash	--	--	--	8.2	39	60
Total lbs/a Applied		220.7	62.4	51	8.2	39	60

Peoples Company Land Managers also encourage landowners to conduct soil sampling on their farm at least once every four years. Soil sampling provides real-time data on the available crop nutrients within the soil profile and soil pH levels that effect nutrient uptake within the plant. From the fertility maps, farm operators can create spread recommendations to apply fertilizer as needed based on the soil sampling results. This ensures areas of the farm with lower levels of nutrients receive a higher rate of fertilizer, and vice versa. This practice, called Variable Rate Technology (VRT), provides responsible applications of fertilizer by only applying what is needed on a specific part of a farm. This eliminates over fertilization and replaces the outdated method of blanket fertilizer applications which are less cost effective and can lead to pollution of local watersheds.

Correct nutrients at optimal levels support favorable yields, soil health, and overall farm appreciation, allowing the asset to reach its maximum potential and capture high-end returns. By utilizing a Peoples Company Land Manager, landowners can ensure their land is being properly cared for in a responsible manner, with fertility levels maintained and return on investment maximized. If nutrient levels are not maintained on an annual basis, rebuilding farm fertility can be timely and costly.

Soil fertility should not be overlooked. Maintaining fertility levels and documenting annual applications can be the difference between a good farm and a great farm. Would you buy a car with no maintenance records? The same can be applied to farmland, and if the farm can prove its self-worth through yield data, production history, and fertility, it suddenly has a transparent return and becomes worth a whole lot more.

To learn more about Peoples Company’s Land Management approach, or to speak with a land management professional, visit www.PeoplesCompany.com or call 515.222.1347.