

## Big Data Is For Landowners Also

Up to this point the information boom in agriculture has been targeted at operators and rightfully so. They are the ones that have the equipment, buy the seed and chemicals and thus are perceived to benefit the most from the information. There is also no shortage of tech providers that want to help operators implement the new technology. Helping the farmer is the main pitch and is truthful but building their own large database of many growers is a secondary goal that in aggregate is perceived to be more valuable than growers on an individual basis. It is a competitive and crowded market in the farm inputs arena. In addition to these ever changing products for farmers we have added Unmanned Aerial Vehicles (UAVs or drones) which opens up a whole new set of information from aerial photography to ultraviolet light imaging for diseases and crop health. This is referred to as “Big Data”. It is and will continue to be an intriguing and valuable tool for farmers to do a better job in managing their crops for higher yields.

The information mentioned above is integral for landowners as well. It allows them to not only monitor fertility and yields on the farm but this data combined with other sources can help keep a look out for issues they are concerned about. These issues include erosion, weak areas in fields that need attention or seeded down in a conservation program plus any oversight of the individual farm that is hard or impossible to observe from the road. We can tell you that drone videos and photos of farms at the right time have been enlightening and even shocking to landowners renting their land. We all expect and hope your land is doing well for both the tenant and landowner but this cannot be taken for granted. Water quality and conservation compliance issues should alert the landowner that they need to pay close attention or look for help in these areas.

We know that yield variation between fields and individual operators are more diverse than ever. The yield is the primary determinant in what a tenant can pay for cash rent or what the owner will have to sell in a crop-share lease. With all else being equal the better the yield the better off all will be. Yield potential is the main factor in determining what the land will be worth from a leasing or potential sale standpoint. The yield is determined by many factors including soils, drainage, fertility levels, weather, annual fertilization, crop inputs, timeliness and operator ability. The only factor that the owner can directly affect is drainage where they are normally expected to pay for internal drainage improvements. Soils and weather cannot be controlled by anyone and the operator is in charge of the rest. Having access to “Big Data” allows the owner to better oversee the operator controlled items and indirectly affect these areas by working with the tenant to solve any issues.

One of the big debates is who owns the data? Most of that depends on who pays for it and in most cases that is the tenant. It doesn't really matter who owns it since the owners should require copies of all data that is produced on their land. That is their right and most tenants do not have an issue with providing copies of the data. Some say that the owner doesn't need to have it in cash rent leases but if you want to make sure your farm is as productive as possible then this information is a must. Some operators are afraid the information will be used against them and they will be charged higher rents if the owner has access to the yield results. That may be the case in some instances but lack of information has always caused friction between tenants and landowners and is part of the reason there are not many crop-share leases in place today.

At Farmland Stewardship Solutions we strive for long term sustainable leases, which are primarily flexible cash rent leases. All of our leases are backed up by the data we can get from the tenant and we are getting better at this area every year. The data collection varies with some farms and operators but most recognize this record sharing is here to stay. It is clear that access to this information can and will lead to more open communication and longer term leases, which will be good for all.