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Hancock Farmland Research Brief

The Risk of Catastrophic Loss on Farmland Can Be Mitigated by Active Management and Portfolio Diversification

In 2017, farmland properties in Texas, Florida, and California experienced significant casualty loss from hurricanes and fires. In Texas and Florida, Hurricane Harvey and Hurricane Irma were accompanied by high winds, torrential downpours, and catastrophic flooding during harvest season. In California, unusually severe fires in Napa and Sonoma counties destroyed numerous acres of farmland. This research brief examines the impacts of these catastrophic event on a global farmland portfolio and discusses strategies to mitigate the risk of casualty losses.

Hurricane Harvey, Hurricane Irma and Row Crop Risk for Institutional Investors

Hurricane Harvey and Hurricane Irma hit Texas and Florida in a span of two weeks in early September. These two hurricanes resulted in substantial damage to crops in the coastal regions of these states reducing production. High water levels seeped into storage facilities, damaging on-farm storage facilities and hurting the quality of stored crops.

Coastal Florida and Texas are primarily row crop and vegetable farming regions and most of the properties owned by institutional investors in these states are leased to tenants. On leased properties, the tenant farms the land and controls all of the economics of the farm. The tenant pays the landowner a lease rate to operate the farm. As a result, the tenant is the party most affected by the natural event that damages the crop. USDA provides insurance for farmers that apply for coverage on up to 80% of the crop if the crop is affected by a natural disaster and the tenant is responsible for all insurance losses. However, the landowner does have some risk in the event of a natural disaster, primarily lease payment risk. If the loss from the catastrophic event is so high that the tenant cannot pay the full terms of the lease, then the landowner suffers and on-farm returns suffer.

The Fires in Napa and Sonoma and Permanent Crop Risk for Institutional Investors

The October fires in Napa and Sonoma Counties were catastrophic to the region's wine grape industry. Approximately 150,000 acres of land in Napa and Sonoma were damaged or wiped out by the fires and in some areas, the fires are still burning. Napa and Sonoma are primarily wine grape growing regions, and at the time of the fires, 30% of the wine grape crop was not yet harvested.

Wine grapes are eligible for USDA crop insurance with up to 80% coverage for the current crop affected by a catastrophic event, but the vines are not insured. Although vines do not tend to burn, especially on well managed properties that prune leaves and mow their vineyards throughout the year, the vines can be affected by fire and output can be reduced in the future. Fire related reductions in future grape output would not be covered by catastrophic loss insurance.

Permanent crop properties can either be leased or owned and operated by the landowner, with the own and operate model being much more prevalent in the permanent crop space than in the row crop space due to reduced availability of good tenants. If an institutional investor leases the permanent crop property, then its exposure to

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catastrophic risk mimics the row crop model explained above. If an institutional investor owns and directly operates the damaged property, they are exposed to the crop risk as well. In this case, it is prudent for the institutional investor to have either applied for catastrophic risk insurance from an insurance broker (this coverage is subsidized by the USDA), the USDA or develop risk mitigation strategies that can alleviate some of the losses incurred by the catastrophic event.

Catastrophic Loss Risk Mitigation Strategies- Leased

There are several ways that institutional investors can mitigate the risk of catastrophic loss from natural events. These include, but are not limited to:

- Active farmland management
- Geographic diversification
- Tenant diversification

Active Farmland Management

One way to prevent extreme catastrophic loss from natural events is active farmland management. Pruning trees and vines, mowing the ground between rows, and clearing debris from the fields not only improves yields, but also assists in limiting how quickly a fire will spread. Developing frost protection systems can also limit the impact of frost on a tree or vine. Active management and stewardship of the land is essential to improve the value and quality of the land and increase yields, but it also mitigates against catastrophic events.

Geographic Diversification

Geographic diversification within a portfolio limits exposure to a certain area. For instance, hail storms in Washington are generally local events, but they can create significant risks to a portfolio. If a pure apple portfolio owns apple orchards in several locations across the state, one property could be affected by the hail storm while the rest will likely experience less impact. More to the point, owning a portfolio of properties spread over multiple geographic regions and crop types limits the risk of a natural event across the entire farmland portfolio.

Tenant Diversification

There are several ways that institutional investors can mitigate the risk of catastrophic loss from natural events. As the primary risk for institutional investors in the leased model is tenant payment risk, institutional investors can mitigate this risk by ensuring that one tenant does not rent too much of a client’s portfolio. For example, if one tenant farms 50% of a client’s portfolio and that tenant cannot meet the lease payment requirements due to a catastrophic event, then the client will suffer significant declines in returns. However, if a client’s farmland portfolio is rented to five different tenants, then non-payment by one tenant will lead to less severe losses.

Impacts of Catastrophic Loss

When one thinks of catastrophic loss to a property, they generally think the worst, but in some cases, this is not necessarily true. Take Australian macadamia nuts for example. A cyclone hits Queensland and damages a significant number of macadamia trees on a client’s property leading to significant yield loss. The natural reaction for the client is that their returns will decline significantly as a result. In reality, due to the fact that Australia is the leading supplier of a niche commodity with increasing demand globally, there is a supply shortage and prices increase to a level that returns actually improve over the previous year as happened during Cyclone Debbie in early 2017.

The same circumstances are not likely to happen to the row crop market as a result of Hurricane Harvey due to the fact that the hurricane hit such a small area of total US row crop production in South Texas. It could happen in Florida in 2017, the number two US producer of fresh vegetables and number one producer of sugarcane, and it is likely to happen in California, a producer of 90% of US wine grapes.

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