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Abstract
Farmers have a number of tools to use in managing agricultural risk. This summary examines the relationship between one of those tools—crop insurance—and extreme weather. The paper focuses on how non-operating landowners (NOLs) might consider the relationship between crop insurance and conservation practices on their farms.

Disciplines
Agribusiness | Agricultural and Resource Economics | Agriculture | Agriculture Law | Finance | Insurance Law

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Crop Insurance Considerations for Non-Operating Land Owners in the Face of Extreme Weather

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www.sustainablefarmlease.org
Farmers have a number of tools to use in managing agricultural risk. This summary examines the relationship between one of those tools—crop insurance—and extreme climatic events.

First, the Agricultural Act of 2014, commonly known as the 2014 Farm Bill, introduced several institutional risk management tools that can be used by producers. One program is called Agricultural Risk Coverage, or ARC.\(^1\) ARC takes two forms, County ARC and Individual ARC.\(^2\) For County ARC, farmers receive payments when the revenue of a covered crop is less than the county guarantee for that crop.\(^3\) With Individual ARC, farmers receive payments when the sum of all revenues from the crops covered by the program on their farm turns out to be less than the ARC guarantees for each of those crops.\(^4\) Another tool is called Price Loss Coverage, or PLC.\(^5\) If farmers choose to use PLC, they receive payments when the price they receive for a covered commodity is below a reference price created by federal statute.\(^6\) ARC or PLC can be used in addition to crop insurance, but ARC and PLC cannot necessarily be used together.\(^7\) Producers “must make a one-time, unanimous election of: (1) PLC/County ARC…or (2) Individual ARC.”\(^8\) If the producer chooses the first option, they must also make an ultimate decision about which of their base acres will be enrolled in PLC and which will be in County ARC.\(^9\)

\(^2\) *Id.*
\(^3\) *Id.*
\(^4\) *Id.*
\(^5\) *Id.*
\(^6\) *Id.*
\(^7\) *Id.*
\(^8\) *Id.*
\(^9\) *Id.*
There are also a few tools available to assist farmers in special circumstances. Congress approves disaster payments from time to time when emergencies arise that cause especially low yields. Additionally, there are specific disaster programs for loss of livestock forage due to drought or fire, livestock deaths due to weather or wild animal attacks, for losses of livestock, honeybees, and farm-raised fish and for fruit trees damaged by natural disasters. There are also programs to help dairy farmers, non-insured farmers, and cotton and sugar producers. The 2014 Farm Bill eliminated the Direct and Counter-Cyclical Payment program.

Another risk management tool that continues to be available to producers is crop insurance. There are a multitude of different plans offered both by the federal government and by private insurers. The USDA’s Risk Management Agency offers insurance policies for over 100 crops. Insurance plans offered by the government include: Actual Production History (APH), Actual Revenue History (ARH), Adjusted Gross Revenue (AGR), Area Risk Protection Insurance (ARPI), Group Risk Plan (GRP), Group Risk Income Protection (GRIP), Livestock policies, Rainfall Index (RI), Revenue Protection, and Yield Protection, to name a few. For an explanation of each of these types of insurance, visit http://www.rma.usda.gov/policies/.

Collectively, these policies offered through the Federal Crop Insurance Corporation (FCIC) are

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12 Id.
14 Id.
often referred to as Multi-Peril Crop Insurance (MPCI).\textsuperscript{15} Certain private insurance companies are authorized by FCIC sell the federal MPCI plans to producers.\textsuperscript{16} MPCI policies are purchased before any crops are planted.\textsuperscript{17} Private insurance companies also offer other policies that are not available through FCIC, including crop-hail policies, which cover losses due to hail and can be purchased after planting has taken place.\textsuperscript{18} There are many different crop insurance options for producers to choose from offered both by the federal government and private insurers. The types of policies available could depend on what is being raised and what part of the country the producer is raising their product in.

While it seems as though the actual crop producers are those most likely to participate in crop insurance, there are some instances where it makes sense for landlords to participate as well. The USDA lists the different crop insurance plans that are made available through the federal government on its website, and most every description of a plan mentions producers without any mention of landowners.\textsuperscript{19} Although the USDA fails to mention landowners in regard to crop insurance, this does not mean that certain landowners are not eligible. Depending on the type of lease that exists between a landlord and tenant, it might make a lot of sense for landowners to share in the costs and benefits of crop insurance.

There are several different types of farm leases that can occur between a landlord and tenant, including a fixed cash lease, flexible cash lease, crop-share lease, and a custom farming

\textsuperscript{16} Id.
\textsuperscript{17} How it Works, NATIONAL CROP INSURANCE SERVICES, http://www.cropinsuranceinamerica.org/about-crop-insurance/how-it-works/ (last visited Sept. 22 2014).
\textsuperscript{18} Id.
In a fixed cash lease, the tenant pays the landlord an agreed-upon amount per acre. A flexible cash lease or flex-lease is similar to a fixed cash lease, but the amount the tenant pays in rent is dependent on the crop yields and the price of crops. In a crop-share lease, the landowner and tenant split the crops in an agreed-upon percentage instead of the tenant paying rent to the landowner. Finally, in a custom farming contract, the tenant provides all of the labor and uses their equipment in return for a fixed payment per acre from the landowner. The landowner receives all the crop income.

If the landowner shares the risk in the crop, then they qualify for crop insurance. As a result, landowners with flex-leases and crop share leases could obtain crop insurance, but landowner with a fixed-cash lease could not, since the rent they collect is not dependent on the crop. An article from Iowa State Extension suggests that landowners should incorporate crop insurance payments into the gross revenue that is used to calculate rent in a flex-lease while also sharing in the cost of crop insurance by deducting the premiums from the gross revenue.

According to the University of Maryland Extension, in the case of a fixed cash lease, the tenant should obtain insurance and receive the benefits, while with a crop share lease, the landlord and tenant would “split the cost” (and benefits) of “crop insurance coverage based on the percentage

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21 *Id.*
22 *Id.*
23 *Id.*
24 *Id.*
25 *Id.*
of crop owned by each party.”28 For a custom farming contract, the University of Maryland Extension suggests that the landowner insure the entire crop.29 In conclusion, while landowners may not necessarily be the targeted audience for federal crop insurance, it makes sense for landowners who share in the production risk to obtain crop insurance, or to share in the costs and benefits of crop insurance through their lease agreement.

While crop insurance is an important tool for producers and some landowners, research shows that crop insurance can be detrimental to long-term productivity and sustainability of land since it encourages risk-taking. According to the Natural Resources Defense Council (NRDC), the Risk Management Agency (RMA), which runs the Federal Crop Insurance Program (FCIP), uses a formula that “attracts high-risk producers,” and “structure of …[FCIP] incentivizes production choices that damage natural resources and increase risk of crop loss.”30 FCIP rates are based on loss cost ratemaking, which “relies only on historical data…[and] depends on a constant relationship between yield and indemnities in order to remain actuarially fair; if either insured value or risk of loss…changes more quickly than the other, loss cost ratemaking will set inaccurate premiums.”31 Therefore, the formula “attracts high-risk farmers and discourages low-risk farmers.”32 NRDC says that FCIP “encourage[s] farmers to make riskier choices, such as planting crops on fields that are not well suited to agricultural production, because farmers who do so pay disproportionately lower premium rates compared with farmers who make risk-reducing management decisions,” which, as a result, leads to increased erosion and chemical

29 Id. at 13.
31 Id. at 7.
32 Id. at 7 (citing Cory G. Walters, et al., Crop Insurance, Land Allocation, and the Environment, J. of Agric. & Resource Econ. 37/2:301-320 (2012)).
inputs.\textsuperscript{33} The Environmental Working Group also reports that there is a strong link between counties in the United States that are “hotspots” for converting wetlands and highly erodible soils to cropland and the counties with the “highest average payouts from crop insurance.”\textsuperscript{34}

What is more, several studies point to the fact that crop insurance does not benefit more sustainable, diversified farms—on the contrary, it hinders these farms. For example, in North Carolina, farming has shifted from commodity crops like tobacco to diversified farms that raise fruits, vegetables, livestock and Christmas trees.\textsuperscript{35} Since these diversified crops are less predictable than commodity crops, they are harder for the federal government to create risk programs for.\textsuperscript{36} In 2005, only 28\% of farm income in North Carolina came from crops that fell under the FCIP.\textsuperscript{37} The Institute for Agriculture and Trade Policy agrees with this assertion, saying: “[t]he majority of crop and revenue insurance policies, however, are skewed in favor of less diverse farming systems because they make it difficult to insure a mixture of crops or integrated crop and livestock operations.”\textsuperscript{38} Additionally, crop insurance, up until 2014, may


\textsuperscript{34} Craig Cox, \textit{Going, Going Gone!}, ENVIRONMENTAL WORKING GROUP (JULY 23, 2013), http://www.ewg.org/research/going-going-gone.


\textsuperscript{36} Id. at 8.

\textsuperscript{37} Id. at 29.

have dissuaded producers from adopting more environmentally-friendly organic farming,
because organic farmers were “required to pay an arbitrary five percent premium surcharge on
any policy,” and if they had a loss, they were “reimbursed at conventional prices, which are
typically lower than organic prices.”

Diversification of farming practices has been found to benefit sustainability and long-term productivity, but, as the above groups show, crop insurance hinders farmers’ ability to diversify. If crop insurance encourages tenant-farmers to take more risks, which in turn increase wetland and soil loss, and discourages them from taking a more diversified or sustainable approach to farming, their use of the land in the short term may compromise the long-term productivity of the owner’s land.

While one might think that the agricultural sector could learn about climate change mitigation and green incentives from the non-agricultural insurance industry, it turns out the insurance industry has done some, but not much, to address the climate change problem. Groups like Risk Management Solutions have developed computer modeling for insurance companies that predicts outcomes of natural disasters. Another step was made when Farmers Insurance Co. sued the City of Chicago for the claims it paid when the area flooded and the City’s sanitation system failed, or in other words, for Chicago’s failure to address the effects of climate change.

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39 Id.
companies have broken ties with and have stopped financially supporting climate deniers like the Heartland Institute.\footnote{Ken Silverstein, \textit{Rift Widening Between Energy and Insurance Industries Over Climate Change}, \textsc{Forbes} (May 18, 2014), http://www.forbes.com/sites/kensilverstein/2014/05/18/rift-widening-between-energy-and-insurance-industries-over-climate-change/}

In California, New York, and Washington, state insurance commissioners require insurance companies to publically disclose how they are combatting climate change.\footnote{Ben Schiller, \textit{Insurance Companies Face Increased Risks from Warming}, \textsc{Yale Environment 360} (Apr. 23, 2012), http://e360.yale.edu/feature/insurance_companies_face_increased_risks_from_warming/2519/}

Insurance companies formed ClimateWise in 2007 “in order to reduce economic risk associated with climate change,” and insurance and reinsurance companies have testified to Congress about the risks the industry will face due to climate change, and incentives Congress can approve to combat the problem.\footnote{Jules Boykoff, \textit{Why the Insurance Industry Gets Climate Change}, \textsc{The Guardian} ([June 28, 2011), http://www.theguardian.com/commentisfree/cifamerica/2011/jun/28/climate-change-climate-change-scepticism; Mark Drajem, \textit{Insurance Industry, Republicans Split on Climate Change}, \textsc{Bloomberg} (July 18, 2013), http://www.bloomberg.com/news/2013-07-18/insurance-industry-republicans-split-on-climate-change.html.}

The Hartford insurance company has started its own “green” practices, such as allowing employees to work remotely to cut down on driving, having areas to charge electric vehicles at its buildings, and providing a discount to policyholders driving hybrid and electric cars.\footnote{Arthur Murry, \textit{Climate Change and the Insurance Industry} \textsc{Triple Pundit} (Nov. 29, 2013), http://www.triplepundit.com/2013/11/climate-change-insurance-industry/?doing_wp_cron=1411250260.4017651081085205078125.}

Some home insurers provide customers discounts for having LEED certified roofs, and some car insurers provide discounts for using alternative fuels or even offer pay-as-you-drive policies.\footnote{Id.} Finally, insurers have left areas like Florida when state regulators would

\url{http://www.forbes.com/sites/kensilverstein/2014/05/18/rift-widening-between-energy-and-insurance-industries-over-climate-change/}
not allow them to raise prices to deal with “risks created by a rapidly growing population in harm’s way.”

Many, however, would argue that the insurance industry’s response to climate change has not gone far enough or that it has been largely symbolic. In the U.S., some feel that the insurance industry has not done enough to advocate for carbon taxes. Merely 23 of 184 insurance companies surveyed had a “comprehensive strategy to deal with climate change.” European insurance companies have lobbied their governments to mitigate climate change, while American companies have mainly concentrated on how to adapt to climate change. Furthermore, U.S. companies focus mainly on hurricanes, when billions of dollars of losses result from tornadoes, thunderstorms, and hail. Finally, many large U.S. insurers have a shortage of “in-house scientific expertise.” As a result, while the crop insurance industry might have a few tricks to learn from the larger insurance industry, there still seems to be a lack of motivation on the part of U.S. insurance companies to fight climate change.

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53 Id.
There have been recent changes in crop insurance to incentivize sustainability. The 2014 Farm Bill connects crop insurance to conservation compliance.\(^{54}\) As a result, producers can only obtain premium subsidies from crop insurance if they comply with conservation requirements for both wetlands and highly erodible land.\(^{55}\) The Farm Bill also forces producers farming in areas of Iowa, Minnesota, Montana, Nebraska, North Dakota, and South Dakota to pay more for crop insurance if they convert native sod to cropland.\(^{56}\) In relation to organic crops, the Farm Bill changed the value of crop insurance “to reflect the generally higher prices of organic crops.”\(^{57}\) Additionally, the Farm Bill requires the USDA to research how to insure livestock producers and producers of non-traditional crops, as well as to research how to provide higher coverage through whole-farm revenue insurance.\(^{58}\)

Some feel that the crop insurance additions to the Farm Bill do not adequately address the problem of climate change and extreme climatic events. The National Sustainable Agriculture Coalition (NSAC), for example, had hoped that the “Sodsaver provision” of the Farm Bill would cover the entire country instead of just Iowa, Minnesota, Montana, Nebraska, and the Dakotas.\(^{59}\) NSAC found problematic that the Farm Bill “grandfathers in producers” who converted wetlands before the bill was passed.\(^{60}\) NSAC also felt that the Farm Bill did not do enough to fund


\(^{56}\) Id. at 10.

\(^{57}\) Id. at Summary.

\(^{58}\) Id. at Summary.


\(^{60}\) Id.
enforcement of conservation and that the language was vague and could create loopholes to compliance. 61 Moreover, the new Farm Bill removed direct payments,62 the federal assistance payments that were previously tied to highly erodible land and wetland conservation.63 The removal of direct payments is problematic because, as the USDA reported in 2012, these payments account for about half of the producer payments linked to compliance.64 Furthermore, the replacement of direct payments with crop insurance as a conservation tool is troubling since “[m]ost environmentally sensitive land tends to be located in areas where crop insurance subsidies are smaller than direct payments.”65 Finally, in the same USDA report, research showed that eliminating direct payments and instead connecting crop insurance to compliance would bring some farms into compliance that had not been before, but overall, would result in “fewer farms and fewer acres” that would be subject to compliance.66

A number of groups suggest practices that can reduce risk of loss from extreme climatic events—practices that could be tied to crop insurance in the future. NSAC cited the USDA in saying that the government should incentivize farmers to adapt by “‘diversifying crop rotations, integrating livestock with crop production systems, improving soil quality, [and] minimizing off-farm flow of nutrients and pesticides,’” practices which “‘may increase the capacity of the agricultural system to minimize the effects of climate change on productivity.’”67 NRDC

61 Id.
63 ROGER CLAASSEN THE FUTURE OF ENVIRONMENTAL COMPLIANCE INCENTIVES IN U.S. AGRICULTURE Abstract (USDA March 2012).
64 Id. at iii.
65 Id. at iv.
66 Id. at 11.
suggests linking crop insurance to no-till farming, cover cropping, and efficient use of irrigation.68  These practices, along with crop rotations, have a great potential to mitigate “extreme weather-related crop loss.”69  Linking the implementation of buffer strips to crop insurance could lessen pesticide runoff in our waterways, prevent soil erosion, and reduce flooding downstream from farms.70  The Natural Resources Conservation Service (NCRS) recommends using contour farming—“farming with row patterns that run nearly level around the hill” instead of “up and down the hill,” and contour strip cropping, which “is crop rotation and contouring combined in equal-width strips of corn or soybeans planted on the contour and alternated with strips of oats, grasses, or legumes” to reduce soil erosion.71  As long ago as 1938, the USDA endorsed strip cropping, leaving crop residue after harvest, and the use of terraces and strips or buffers of trees and grass to retain moisture and prevent erosion.72  If these practices were joined with crop insurance eligibility, the risk of loss from extreme weather events could be reduced even more.

There are some impediments to linking these practices to crop insurance, but none that cannot be overcome.  In general, it is always easier to stick with the status quo, and for the most

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72 WALTER V. KELL, STRIP CROPPING FOR SOIL CONSERVATION at 6, 7, 8, 12 (USDA 1938).
part, the alternative practices listed above have not been connected to crop insurance payments on a federal level. Another problem is lack of funding. NSAC points out that there is currently “insufficient funding for investigation and enforcement of conservation requirements,” and adding more programs to crop insurance would likely only exacerbate the problem. Similarly, past conservation compliance programs not tied to crop insurance have suffered from “lack of resources, training, and guidance; de-emphasis on compliance relative to other work; and a reluctance to assume an enforcement role.” There are also a number of voluntary conservation programs that adopt some of the alternatives listed above—so the government may be reluctant to basically make these programs mandatory by connecting them to crop insurance. Lastly, the private companies that provide federal crop insurance to producers have little incentive to “avoid losses from extreme weather events” by “encourag[ing] farmers” to implement the alternative practices listed above because their losses are subsidized by the federal government. Overall, the main impediment seems to be a lack of political willpower.

Given all the discussion on crop insurance, its recent changes, and its potential to harm long-term sustainability, landowners might want to know what type of crop insurance their tenants have. As was discussed previously, crop insurance as a whole tends to encourage more risk and less diversification on the farm. Therefore, if an owner’s plan for the land is for it to sustain a

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74 MEGAN STUBBS, CONG. RESEARCH SERV., R42459, CONSERVATION COMPLIANCE AND U.S. FARM POLICY 10 (2012).
diversified farm in order to adapt to climate change and encourage sustainability, then the
landowner might want to know whether their tenant has crop insurance, and they might want to
include the plan for their farm in the lease so that crop insurance does not encourage the tenant
not to diversify. The same could be said if the landowner knows their land is particularly
susceptible to erosion, has wetlands, etc.—the owner would want to know whether the tenant has
crop insurance or intends to obtain it. The landowner might also want to know whether the
tenant’s crop insurance policy covers prevented planting. Late planting or re-planting may affect
soil quality and erosion potential. What is more, with prevented planting, if the tenant holds an
insurance policy and decides not to plant the crop at all, a cover crop may be planted, but forage
crops cannot.\textsuperscript{77} The landowner would want to know about the policy and its preventive planting
provisions so that they could include how they would want a potential cover crop, re-planting, or
late planting to be handled in their lease agreement.

In addition to knowing about the tenant’s crop insurance coverage and potentially including
that in the lease, there are other lease provisions that can help landowners protect their land from
extreme climatic events. The provisions may depend on what kind of lease is created. For
instance, in a fixed cash lease, the landowner has a great amount of control—from what types of
crops can be planted to what tillage and conservation, and pesticide practices the tenant will
use.\textsuperscript{78} Other provisions, like the removal of the corn stover, maintaining soil fertility, agreeing
who will pay for improvements such as buffers and wetlands can be helpful in protecting land.\textsuperscript{79}
Writing a longer-term lease may create more of an incentive for the tenant to take care of the

\textsuperscript{77} Alejandro Plastina, \textit{Delayed and Prevented Planting Provisions}, IOWA STATE UNIVERSITY,
\textsuperscript{78} Kevin Leibold, \textit{Improving Your Farm Lease Contract}, IOWA STATE UNIVERSITY,
\textsuperscript{79} \textit{Id}. 
land. The landowner could also add an entire conservation addendum to their farm lease that could include maintaining minimum levels or organic matter in soil, specific tillage practices, and maintenance of conservation practices like buffer strips and terraces. The lease can include provisions that limit the types of crops and production methods, livestock numbers, and can dictate the “timing or frequency of applications of fertilizers, herbicides, or pesticides.”

The lease can also simply require “‘generally accepted agricultural practices’ or NRCS best management practices.” When it comes to land-protecting provisions, the options available to landowners are numerous.

Finally, there are also lease provisions that can help mitigate the effects of climate change on farmland. A provision to use bio-fuels in the farm operation will reduce the amount of greenhouse gasses put off by the operation because it is displacing the transportation, production, and processing of traditional fuels. Provisions can be included that require the planting of trees or perennials to act as carbon sinks. Cutting back on tillage, having a grazing rotation, and implementing organic farming can similarly act as carbon sinks by increasing the carbon content

80 Id.
83 Id. at 32.
85 Id.
in the soil.\textsuperscript{86} Other mitigation strategies include “improved cropland and grazing land management, restoration of degraded lands,” changing from traditional land use to agro-forestry, “improved nutrition” for livestock, and “better management of manure.”\textsuperscript{87} Provisions to reduce the amount of nitrogen fertilizers, which release “the most potent greenhouse gas,” by composting, using manure, and crop rotations can also be included.\textsuperscript{88} All of these strategies and more to mitigate climate change could be written into land leases.

Risk in agriculture is managed by a number of management tools, including crop insurance. Crop insurance can encourage risk-taking to the detriment of long-term productivity or sustainability of farmland. Although crop insurance has recently been tied to some conservation compliance programs, there is definitely room to link more practices that address extreme climatic events to crop insurance. While waiting for congress or crop insurance providers to act on this front, landowners can take matters into their own hands to protect their land from extreme climatic events and help mitigate the effects of climate change by including any number of provisions in their leases with tenant farmers.

\textsuperscript{86} Claire Schaffnit-Chatterjee, *MITIGATING CLIMATE CHANGE THROUGH AGRICULTURE*, 1 (Deutsche Bank Report 2011).
\textsuperscript{88} Claire Schaffnit-Chatterjee, *MITIGATING CLIMATE CHANGE THROUGH AGRICULTURE*, 10-11 (Deutsche Bank Report 2011).