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Crop Insurance Reform in the Face of Climate Change

*Perry Elerts**

Abstract

Climate change will increase temperature, precipitation, droughts, storms and fires, as well as exacerbate extreme weather events and disasters.¹ Such events are expected to have a significant and costly impact on property.² These impacts pose an uncertain financial risk to the agricultural industry, more specifically to farmers. As a result, farmers are counting on crop insurance to protect their investment from increased risks associated with climate change. However, it is uncertain whether the current crop insurance scheme in the United States will be able to protect farmers' investments. Many interested parties dispute how the risks and costs associated with insurance should be shared. Currently, Congress is debating this topic, and many are calling for budget cuts to the scheme. This paper focuses on how to reform crop insurance to cope with climate change-induced difficulties. This paper argues that to better address climate change, Congress, in the 2018 Farm Bill and all subsequent Farm Bills, should phase out premium subsidies, as well as administrative and operating payments, to private insurance companies. Then Congress should uncap private insurance companies' profit levels and give them more freedom to compete and write their own policies. Under this amended scheme, private insurance companies will encourage farmers to implement low-risk, environmentally friendly farming practices, because such practices will decrease payouts and act as a financial incentive for insurance companies. Those more sustainable farming practices, in turn, will help the U.S. mitigate and adapt to climate change.

* Perry Elerts is a law student at the University of California, Hastings College of the Law, class of 2019. Perry dedicates this paper to his sister, Ellie, who makes him want to leave the world a better place.

1. Wuebbles, D. J., et al., *Executive Summary*, CLIMATE SCIENCE SPECIAL REPORT: FOURTH NATIONAL CLIMATE ASSESSMENT, VOLUME I 11-34 (2017), <https://perma.cc/97U5-N9LS>.

2. *Id.*

I. Introduction

This paper begins with the history and background of the Federal Crop Insurance Act and the context that led to its enactment. By reviewing the Dust Bowl and Great Depression, it is evident that crop insurance was, and is, needed to support farmers, agricultural industries, and agricultural economies.³

Next this paper will explore how crop insurance plays a vital role in areas such as economics, agriculture, trade, and social justice.⁴ At a glance, the United States' agricultural exports are around \$140 billion, while imports are around \$90 billion.⁵ In 2016, crop insurance covered 1.2 million different policies, spanning more than 290 million acres of farmland.⁶ The importance of these policies extend beyond economics; increasing rates of suicide in the farming profession has been connected to crop failures, further implicating the need for a functioning crop insurance scheme.⁷

Third, this paper will look at how crop insurance will be affected by climate change.⁸ Some effects of climate change include the impact on food production. Although North America may benefit from a warmer climate and increased carbon dioxide; severe weather storms and increased drought will result in significant losses in crop yield.⁹ Additionally, "increases in temperatures coupled with more variable precipitation will reduce reproductivity of crops and these effects will outweigh the benefits of increasing carbon dioxide."¹⁰ Pests, insects, and weeds may also thrive under increasing air temperatures, causing a decrease in crop yields.¹¹ Thus, climate change poses numerous problems to the agriculture industry: higher temperatures, severe storms, and increasing number of pests,

3. USDA., *History of Crop Insurance Program*, About Risk Management Agency (Oct. 15, 2018, 10:43 PM), <https://perma.cc/43H5-YT74>.

4. *Id.*; Dr. Rajinder S. Aurora et al., *Crop Insurance*, INT'L J. OF RECENT RESEARCH ASPECTS, Vol. 3, Issue 2, June 2016.

5. Charles L. Walthall et al., *Climate Change and Agriculture in the United States: Effects and Adaptation*, in USDA TECHNICAL BULLETIN 1935, at 11.

6. Crop Insurance Keeps America Growing, *Facts & Figures*, Crop Insurance 101 (Oct. 12, 2018, 7:58 PM), <https://perma.cc/WHP9-BMQT>.

7. Dr. Rajinder S. Aurora et al., *Crop Insurance*, INT'L J. OF RECENT RESEARCH ASPECTS, Vol. 3, Issue 2, June 2016; Charles L. Walthall et al., *Climate Change and Agriculture in the United States: Effects and Adaptation*, in USDA TECHNICAL BULLETIN 1935, at 32–36.

8. Wuebbles, D. J., et al., *supra* note 1.

9. Patricia Romero-Lankao et al., *North America*, CLIMATE CHANGE 2014: IMPACTS, ADAPTATION, AND VULNERABILITY, PART B: REGIONAL ASPECTS. CONTRIBUTION OF WORKING GROUP II TO THE FIFTH ASSESSMENT REPORT OF THE INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE (2014).

10. Charles L. Walthall et al., *supra* note 4, at 1.

11. *Id.*

insects, and weeds.¹² The effects of climate change on crop insurance demonstrate the vulnerabilities of the scheme, and that reforms are necessary for the scheme to optimally function.

Lastly, this paper will discuss ways Congress could utilize the Farm Bill to reform crop insurance. The combination of the current political climate and proposed reforms discussed, should prompt Congress to enact reform. This paper suggests Congress should phase out premium subsidies, as well as administrative and operating payments to private insurance companies. Then Congress should uncap private insurance company profit levels and give them more freedom to develop their own policies. These reforms will help the country adapt to climate change and mitigate some of its effects. The reforms will also incentivize private companies to lower pay-outs, and offer discounts to farmers who implement low-risk, environmentally friendly practices. Further, the reduction in subsidies will lower the cost to taxpayers. Fewer subsidies allow the market to signal farmers of potential risks associated with farming.

II. The Basics and How We Got Here

The farming business is very similar to starting and running any other type of business. Farmers typically take out loans from banks or use large portions of their savings to begin their farming businesses.¹³ They spend some initial capital on educating themselves about the industry.¹⁴ That capital is also used to purchase all the required materials and tools, which allows them to continually grow and harvest crops.¹⁵ Their investments become vested in their crops, making the crops an asset to farmers.¹⁶ As the crops are grown and harvested, they hopefully yield a return on the investment for the farmer.¹⁷ Ideally, the yield or return on investment becomes enough for the farmer to survive and provide a basic standard of living.¹⁸ Farmers usually spend their return on paying off debt, living expenses, putting money into savings, and reinvesting in the next season's crops.¹⁹

Unfortunately, when natural disasters or market fluctuations hit farmers their crop yields are not enough to pay off their initial investment, because their crops

12. Charles L. Walthall et al., *supra* note 4, at 1.

13. Accion, *10 Ways An Agricultural Loan Can Help Farmers Grow*, Business Resources (Oct. 12, 2018, 8:18 PM), <https://perma.cc/A6ZM-UA8A>.

14. *Id.*

15. *Id.*

16. Crop Insurance Keeps America Growing, *Essential Strengths*, Crop Insurance 101 (Oct. 12, 2018, 8:19 PM), <https://perma.cc/NZ67-KAHS>.

17. USDA., *History of Crop Insurance Program*, *supra* note 2.

18. *Id.*

19. Accion, *Supra* note 13.

become devalued due to damage or a change in market prices.²⁰ Consequently, if a farmers' assets fail to actualize, meaning their investments into farming does not return a profit or break even, the farmers will incur a financial loss. If farmers do not have enough saved, they must default on their loans. They may also not have enough capital to replant, which can lead to food shortages.²¹

If that nightmare scenario sounds familiar, it is because that is precisely what happened during the Dust Bowl and Great Depression.²² A mix of bad farming practices and drought led to massive crop failures, and farmers did not have enough capital to replant.²³ This gave way to food shortages and skyrocketed food prices across America.²⁴ It became such a problem that Congress had to offer disaster relief funding on multiple occasions.²⁵

However, *ad hoc* disaster relief funding takes a long time to pass in Congress, and dispersing aid can be a timely and burdensome procedure.²⁶ The more recent hurricanes in Houston and Puerto Rico demonstrate this problem today.²⁷ Congress recognized the need for a quicker, more stable way to support the United States' agriculture industry.²⁸ The Federal Crop Insurance Act was born as a result.²⁹ Crop insurance was Congress' and the agriculture industry's response to the Dust Bowl and the Great Depression.³⁰

III. The Critical Role of Crop Insurance

The purpose of crop insurance is to "promote the national welfare by improving the economic stability of agriculture through a sound system of crop insurance and providing the means for the research and experience[s] helpful in devising and establishing such insurance."³¹ Crop insurance also provides farmers

20. USDA., *History of Crop Insurance Program*, *supra* note 2.

21. *Id.*

22. *Id.*

23. Kimberly Amadeo, *How the Dust Bowl Environmental Disaster Impacted the US Economy: The Scary Thing Is That It Could Happen Again*, THE BLAZE (Oct. 12, 2018, 8:20 PM), <https://perma.cc/DM6D-SUAH>.

24. *Id.*

25. USDA., *History of Crop Insurance Program*, *supra* note 2.

26. Crop Insurance Keeps America Growing, *What is Crop Insurance*, Crop Insurance 101 (Oct. 12, 2018, 8:24 PM), <https://perma.cc/U5TG-KV72>.

27. Jack Healy et al., *Aid Is Getting to Puerto Rico. Distributing It Remains a Challenge*, N.Y. TIMES (Oct. 12, 2018, 9:10 PM), <https://perma.cc/T556-2EH5>.

28. USDA., *History of Crop Insurance Program*, *supra* note 2.

29. *Id.*

30. *Id.*

31. 7 U.S.C.A. § 1502 (2014).

with the capital and security to stay effective and competitive in world markets.³² It offers a safety net in cases of natural disasters or market fluctuations.³³ Without crop insurance, farmers are reliant on disaster relief funding from Congress, which takes too long to reach farmers.³⁴ It takes Congress a significant amount of time to write and pass a bill and disburse financial relief. By the time money reaches farmers it's too late and farmers have already been forced to shut down or the planting season has already gone by.³⁵ With crop insurance, private companies can quickly respond to losses and help farmers get back on their feet.³⁶ This helps ensure a stable output of food and natural resources from America's farms.³⁷ Climate change, however, may be the straw that breaks the net set up to protect farmers.

Crop insurance is vital to the United States because farmers grow food, fiber, wheat, and numerous other raw food sources, which provide materials for thousands of essential products.³⁸ People around the world depend daily on products grown by American farmers.³⁹ Crop insurance has become a cornerstone for stability in the agriculture industry, and a healthy farm economy is essential to the growth and stability of America's economy as a whole.⁴⁰ Agricultural exports are around \$140 billion and imports are around \$90 billion, making agriculture a net positive to the U.S. trade balance.⁴¹

In 2016, crop insurance covered more than 290 million acres of farmland.⁴² This amounted to around 1.2 million different policies across the country.⁴³ In 2015, agriculture and related industries contributed \$992 billion to U.S. GDP,

32. Crop Insurance Keeps America Growing, *Why It Matters*, Crop Insurance 101 (Oct. 12, 2018, 8:26 PM), <https://perma.cc/2FB8-PX27>.

33. *Id.*

34. Crop Insurance Keeps America Growing, *What is Crop Insurance*, Crop Insurance 101 (Oct. 12, 2018, 8:24 PM), <https://perma.cc/U5TG-KV72>.

35. *Id.*

36. Crop Insurance Keeps America Growing, *Why is Private Sector Delivery of Crop Insurance Important*, Crop Insurance 101 (Oct. 12, 2018, 8:26 PM) <https://perma.cc/3PNX-63H5>.

37. *Id.*

38. Crop Insurance Keeps America Growing, *Why It Matters*, Crop Insurance 101 (Oct. 12, 2018, 8:26 PM), <https://perma.cc/2FB8-PX27>.

39. Charles L. Walthall et al., *supra* note 4.

40. Crop Insurance Keeps America Growing, *What is Crop Insurance*, Crop Insurance 101 (Oct. 12, 2018, 8:24 PM), <https://perma.cc/U5TG-KV72>.

41. Charles L. Walthall et al., *supra* note 4, at 11.

42. Crop Insurance Keeps America Growing, *Facts & Figures*, Crop Insurance 101 (Oct. 12, 2018, 7:58 PM), <https://perma.cc/WHP9-BMQT>.

43. *Id.*

around a 5.5% share.⁴⁴ Participation in crop insurance has continually grown.⁴⁵ There are more than 130 different crops covered with an issued value of around \$100 billion.⁴⁶ Crop insurance has become such a cornerstone of the economy, that it is imperative to America's prosperity that it continues to serve its purpose.

IV. Social Costs of Crop Insurance

Crop insurance is vital for many other countries as well.⁴⁷ India is currently on their third crop insurance scheme.⁴⁸ Due to poor implementation and buy-in by farmers, previous schemes failed.⁴⁹ India's agricultural economy is large—it accounts for 14% of its GDP and employs nearly half of its population.⁵⁰ The program has proved vital in India because of India's vulnerability to droughts, floods and monsoons.⁵¹ Nearly 55% of cultivated areas in India are dependent on the timely arrival of monsoons.⁵² Since many farmers lack the capital to build costly and sophisticated irrigation systems for their crops, they must rely on annual rainfall instead.⁵³

A stunning study out of the University of California, Berkeley highlighted India's need to address crop failures.⁵⁴ The study attributed more than 59,000 farmer suicides in India to rising temperatures since 1980.⁵⁵ The study found a correlation between increased temperatures in growing seasons and farmer suicide rates.⁵⁶ Nearly two-thirds of India's farmers are poor and lack access to constant irrigation,⁵⁷ so they rely on rainfall from monsoons.⁵⁸ This leaves Indian farmers

44. USDA. Economic Research Service, *Ag and Food Sectors and the Economy*, Ag and Food Statistics: Charting the Essentials (Oct. 12, 2018, 8:15 PM), <https://perma.cc/KGF5-XDQX>.

45. Crop Insurance Keeps America Growing, *What is Crop Insurance*, Crop Insurance 101 (Oct. 12, 2018, 8:24 PM), <https://perma.cc/U5TG-KV72>.

46. *Id.*

47. Dr. Rajinder S. Aurora et al., *supra* note 3, at 32–36.

48. *Id.* at 32.

49. *Id.*

50. Dr. Rajinder S. Aurora et al., *supra* note 3, at 32–36.

51. *Id.*

52. *Id.*

53. *Id.*

54. *Id.*

55. Tamma A. Carleton, *Crop-damaging temperatures increase suicide rates in India*, PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE US (July 31, 2017).

56. *Id.*

57. *Id.*

58. *Id.*

particularly susceptible to droughts and climate change.⁵⁹ Climate change alters monsoon patterns and increases droughts and floods, which reduces crop yields and causes crop failures.⁶⁰ This causes financial hardships for farmers, who are often working on razor thin financial margins.⁶¹ Facing financial ruin, some farmers turn to suicide.⁶²

The study concludes that climate change accounts for about 7% of the increased rate of suicide in India.⁶³ This is one of many studies that calculate the true costs and impacts of climate change. It is not enough to only consider the effects of climate change on agriculture and crop yield. A well-constructed crop insurance scheme should address social justice concerns, including increase suicide rates.

V. Climate Change Effects on Agriculture and Crop Insurance

The International Panel on Climate Change (“IPCC”) states that food production in North America may benefit from the warmer climate and increases in carbon dioxide, but overall drought increases and severe weather storms will result in significant loss in crop yield, meaning less food production.⁶⁴ The United States Department of Agriculture (“USDA”) reiterates this in their *Effects and Adaptation* report stating that “increases in temperatures coupled with more variable precipitation will reduce reproductivity of crops and these effects will outweigh the benefits of increasing carbon dioxide.”⁶⁵ Additionally, the report states pests, insects and weeds are likely to thrive under increasing temperatures.⁶⁶ Increases and changes in timing of rain and snow mix will also pose challenges to managing irrigation systems.⁶⁷

Crop yields will be affected by increases in temperatures. All plants have minimum, maximum, and optimum temperatures.⁶⁸ The minimum is the floor temperature in which a plant can grow, and the maximum is the highest

59. Tamma A. Carleton, *supra* note 55.

60. Tamma A. Carleton, *supra* note 55.

61. Dr. Rajinder S. Aurora et al., *supra* note 3, at 32–36.

62. *Id.*

63. Tamma A. Carleton, *supra* note 55.

64. Patricia Romero-Lankao et al., *North America, CLIMATE CHANGE 2014: IMPACTS, ADAPTATION, AND VULNERABILITY, PART B: REGIONAL ASPECTS. CONTRIBUTION OF WORKING GROUP II TO THE FIFTH ASSESSMENT REPORT OF THE INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE* (2014).

65. Charles L. Walthall et al., *supra* note 4, at 11.

66. *Id.*

67. *Id.*

68. Charles L. Walthall et al., *supra* note 4.

temperature in which a plant can grow.⁶⁹ Each plant species has a different optimal, minimum and maximum level. Studies show that temperature increases past the optimal growth level can lead to sharp declines in crop yield.⁷⁰ Some models illustrate how increased temperatures will lead to a decline between 2.5% and 10% for some agronomic species.⁷¹ Other models estimate a decline in yield between 3.8% and 5%.⁷² A study cited in the USDA report estimated that declines in wheat, corn, and cotton would be between 36% to 40% under a low emissions scenario, and a decline from 63% to 70% in a higher emissions scenario.⁷³ These studies do not account for the beneficial effects of carbon dioxide, nor the negative effects of pests or weeds.⁷⁴ These studies also failed to consider market adaptations like new fertilizers, genetically modified seeds, tillage, or other adaptation methods which may be used.⁷⁵ Still, even slight decreases in crop yields can lead to large payouts under the current crop insurance scheme.

Further, the increase in temperature will affect the dissemination of weeds and non-desired plants throughout the United States.⁷⁶ According to the USDA, the most troublesome weeds are constrained to the tropical and subtropical area of the Gulf States.⁷⁷ Warmer temperatures in the Midwest will likely cause these aggressive weed species to move northward throughout the United States.⁷⁸ This will likely reduce crop yield and increase payouts for those farmers covered by crop insurance.

An additional component of crop yields is the prevalence of pest species that damage crops. Increasing air temperatures will continue to expand many insects' geographical ranges.⁷⁹ Increases in temperature cause longer growing seasons.⁸⁰ Earlier springs allow for longer life cycles for pests and more time for damage to crops.⁸¹ However, due to increased climate variability, pest population outbreaks and crashes will be more common.⁸² Therefore, climate change will not only affect

69. *Id.*

70. *Id.*

71. Charles L. Walthall et al., *supra* note 4.

72. *Id.*

73. Charles L. Walthall et al., *supra* note 4, citing W. Schlenker & M.J. Roberts, *Nonlinear Temperature Effects Indicate Severe Damages to U.S. Crop Yields Under Climate Change*, PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES 15594–15595 (2009).

74. Charles L. Walthall et al., *supra* note 4, at 11.

75. *Id.* at 6.

76. *Id.* at 39.

77. Charles L. Walthall et al., *supra* note 4.

78. *Id.*

79. *Id.* at 45.

80. *Id.* at 36.

81. *Id.* at 44.

82. *Id.* at 45.

the growth of crops, but it will also affect a number of other factors that influence agriculture.⁸³

These impacts will vary regionally, and the ability of farmers to adapt and adjust farming practices will lessen the negative effects of climate change.⁸⁴ A farmer's ability to adapt to climate change will largely depend on market, institutional, and governmental policy signals.⁸⁵ Technological advances in irrigation, genetically modified seeds, fertilizers, and pesticides are a few areas that may help mitigate the effects of climate change. These advances and adaptation measures will help to increase crop yield and lessen crop failures. However, some of these adaptation methods may come with their own environmental concerns.

Climate change's effects on agriculture threaten the viability of the current crop insurance schemes. Crop insurance policies cover damages from pests, severe storms, and lower yield levels.⁸⁶ Climate change is set to increase the costs of payouts because it will exacerbate lower crop yields, droughts, floods, temperature changes, pests, and weeds.⁸⁷ Private insurance companies issue payouts when farmers have a legitimate claim under their insurance policy. Payouts may increase to such a degree that private insurance companies are unable to cover all the losses, resulting in the need for the federal government, to once again, step in and issue disaster relief funding. The Federal Crop Insurance Act was passed for this very reason—to avoid the need for disaster relief funding.⁸⁸ In these instances, the federal government is forced to intervene because failure to do so could destroy the United States' agriculture industry. The agriculture industry may be unable to recover on its own, or not recover in time to prevent food and resource shortages. Countries will need to adapt, by amending their schemes to better handle increased payouts and to incentivize low risk farming practices. A failure to modify crop insurance schemes to take climate change's impacts into account may lead to another Dust Bowl or contribute to rising farmer suicide rates.

VI. The United States' Crop Insurance Scheme

The United States Crop Insurance Scheme is authorized through the Federal Crop Insurance Act, often referred to as the Federal Crop Insurance Program

83. Charles L. Walthall et al., *supra* note 4, at 45.

84. Patricia Romero-Lankao et al., *North America*, CLIMATE CHANGE 2014: IMPACTS, ADAPTATION, AND VULNERABILITY, PART B: REGIONAL ASPECTS. CONTRIBUTION OF WORKING GROUP II TO THE FIFTH ASSESSMENT REPORT OF THE INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE 1439, 1444 (2014).

85. *Id.*

86. 7 U.S.C.A. § 1508(a)(1) (2014).

87. Charles L. Walthall et al., *supra* note 4, at 11.

88. USDA, History of Crop Insurance Program, *supra* note 2.

(“FCIP”).⁸⁹ The Federal Crop Insurance Corporation (“FCIC”), operated under the Risk Management Agency (“RMA”), is a part of the United States Department of Agriculture (“USDA”).⁹⁰ The RMA is responsible for writing the Multiple Peril Crop Insurance (“MPCI”) policies, as well as overseeing and regulating the industry.⁹¹ The FCIC, as part of its regulatory duties, is tasked with setting crop insurance rates.⁹² MPCI policies typically cover destructive weather, like frost, wind, disease, drought, fire, flooding and insect damage.⁹³

The federal government, in addition to regulating insurance, also subsidizes the premiums that farmers pay.⁹⁴ Farmers pay around 38% of the costs of the premium and the government pays the remaining 62%.⁹⁵ This helps reduce the costs borne by farmers and allows more farmers to participate in the program. The federal government also reimburses private insurance companies for both the costs of operating and administrative costs.⁹⁶ These costs include things like staff salaries, commissions, adjusting losses, trainings, marketing, and a profit component.⁹⁷ The price has averaged around \$1.3 billion a year.⁹⁸ The federal government reimburses operating and administrative costs to lower the cost of farmers’ policies.⁹⁹ Further, the federal government reinsures private companies for any excess losses.¹⁰⁰ This way, in the case of a large disaster, the private companies do not go bankrupt and leave farmers without needed payouts on their claims. The private insurance companies share in any additional underwriting, meaning any excess profit reverts back to the government.¹⁰¹ These subsidies illustrate how taxpayers primarily bear the burdens of climate change, because they will pay for the additional costs and increased subsidies.

89. 7 U.S.C.A. § 1508 (2014).

90. 7 U.S.C.A. § 1506 (2014).

91. *Id.*

92. *Id.*

93. 7 U.S.C.A. § 1508(a)(1) (2014).

94. 7 U.S.C.A. § 1508(d) (2014).

95. CONG. BUDGET OFFICE, REDUCE SUBSIDIES IN THE CROP INSURANCE PROGRAM (2016), <https://perma.cc/8RL9-SD8Z>.

96. 7 U.S.C.A. § 1508(c)(4)(C)(v)(ii) (2014).

97. Keith Collins & Frank Schanpp, *Explaining the Costs of the Crop Insurance Program*, CROP INSURANCE TODAY (February 2012), <https://perma.cc/Q6LQ-6W8N>.

98. CONG. BUDGET OFFICE, *supra* note 96.

99. Crop Insurance Keeps America Growing, *Who are Approved Insurance Providers* (August 2018), <https://perma.cc/94UB-ZNPK>.

100. 7 U.S.C.A. § 1508(a)(1) (2014).

101. Keith Collins & Frank Schanpp, *Explaining the Costs of the Crop Insurance Program*, CROP INSURANCE TODAY (February 2012), <https://perma.cc/Q6LQ-6W8N>.

After an insurance company becomes approved to issue crop insurance, it becomes an Approved Insurance Provider (“AIP”).¹⁰² Currently there are fifteen AIPs.¹⁰³ They enter into a contract with the FCIC known as the Standard Reinsurance Agreement (“SRA”).¹⁰⁴ In the contract, the government agrees to reinsure them, and the AIP agrees to follow all procedures and processes established by the FCIC for issuing crop insurance.¹⁰⁵ The AIPs are responsible for writing and reinsuring the policies, marketing, adjusting and processing claims, training, and record keeping.¹⁰⁶ The premium rates and insurance terms are set by the FCIC, and uniform throughout the industry, making these rates non-competitive.¹⁰⁷ Thus, the premiums and rates farmers pay for coverage will be the same, regardless of the company that insures them.¹⁰⁸ This leaves the private companies to compete based on their insurance knowledge, marketing, customer service, and other related products.¹⁰⁹

With all the subsidies given to private companies, and the government setting noncompetitive rates, it raises the question of whether the scheme should be nationalized. The government contends that private insurance companies are needed because of the importance of the implementation of the crop insurance scheme.¹¹⁰ The federal government lacks the manpower and resources to issue policies across the United States.¹¹¹ As noted, the major problem in India has been implementation.¹¹² In India it is difficult reaching rural farmers and convincing them to buy insurance.¹¹³ The inclusion of private insurance companies also allows the government to shift some of the risks associated with crop insurance.¹¹⁴

102. Crop Insurance Keeps America Growing, *Who are Approved Insurance Providers* (August 2018), <https://perma.cc/F8BL-KA3A>.

103. *Id.*

104. Crop Insurance Keeps America Growing, *Who are Approved Insurance Providers* (August 2018), <https://perma.cc/F8BL-KA3A>.

105. *Id.*

106. ProAG, *The Basics of Crop Insurance*, [<https://perma.cc/2CL6-S7CZ>].

107. *Id.*

108. *Id.*

109. *Id.*

110. Crop Insurance Keeps America Growing, *Why is Private Sector Delivery of Crop Insurance Important*, <https://perma.cc/7AMC-SVCP>.

111. *Id.*

112. Chandra Bhushan & Vineet Kumar, *Pradhan Mantri Fasal Bima Yojana: An Assessment* (2017), at 15.

113. *Id.*

114. Crop Insurance Keeps America Growing, *Why is Private Sector Delivery of Crop Insurance Important*, <https://perma.cc/7AMC-SVCP>.

VII: Possible Reforms to Crop Insurance

A. The Farm Bill as the Vehicle for Reform

The Farm Bill is a multi-year piece of legislation enacted by Congress which governs: commodity programs, conservation, trade, nutrition, credit, rural development, research, forestry, energy, horticulture and organic agriculture, and crop insurance.¹¹⁵ The most recent Farm Bill, also referred to as the Agricultural Act, was introduced in 2014.¹¹⁶ It is set to expire in 2018.¹¹⁷ The Farm Bill is renewed about every five years, allowing policymakers, Congress, and other interested parties, the chance to revisit and address issues involving food and agriculture.¹¹⁸ Therefore, now is the perfect time to discuss issues around crop insurance and possible reforms. Congress needs to address these issues now or another five years may pass before they are resolved. With the United States already feeling the effects of climate change on agriculture, there is an urgency to address these issues.¹¹⁹

When Congress last amended the Farm Bill in 2014 it weakened the system and placed more strain on taxpayers in two key ways.¹²⁰ First, Congress added a beginning farmer provision, which waives a \$300 administrative fee, and increases premium subsidies by 10%.¹²¹ This move was questionable, because beginning farmers are less likely to be experienced and educated than more experienced or seasoned farmers, therefore making them riskier to insure. This would place a larger burden on taxpayers, and give incorrect market signals to first time farmers.

Second, Congress added a provision known as the Actual Production History (“APH”) Yield Exclusion (“YE”).¹²² This provision allows producers to exclude exceptionally poor yield years from their production history.¹²³ The provision alters their average historical yields and production history, which is how the RMA calculates crop insurance coverage rates.¹²⁴ Thus, the government—in an effort to keep costs low—is allowing farmers and the RMA to ignore risks or pretend that

115. Renee Johnson & Jim Monke, *What is the Farm Bill?* CONGRESSIONAL RESEARCH SERVICE (Oct. 5, 2017), <https://perma.cc/Q7E2-9VCH>.

116. *Id.*

117. *Id.*

118. *Id.*

119. Wuebbles, D. J., et al., *supra* note 1.

120. *Id.*

121. Risk Management Agency, *Beginning Farmer and Rancher Benefits for Federal Crop Insurance*, USDA (June 2014), <https://perma.cc/E29Z-J744>.

122. Risk Management Agency, *Actual Production History Yield Exclusion*, USDA (July 2016), <https://perma.cc/PT8M-JSBF>.

123. *Id.*

124. *Id.*

certain risks don't exist. This allows natural disasters to be ignored, and the risks to be disregarded in later calculating insurance rates.

On the other hand, Congress did appear to strengthen the FCIP in other provisions. The Whole-Farm Revenue Protection ("WFRP") Policy was added to help insure diverse farming operations.¹²⁵ This permits all the crops that farmers are growing are insured, allowing farmers to practice altering crop rows and increase diversity on their land.¹²⁶ Congress also added the Stacked Income Protection Program ("STAX"), which was specifically tailored to insuring cotton.¹²⁷ A Conservation Compliance provision was also added, which requires farmers to file a Highly Erodible Land Conservation and Wetlands Conservation Certification form, in order to remain eligible for crop insurance.¹²⁸ The form requires farmers to have a conservation plan, which helps manage and control erosion, and prohibits farmers from converting wetlands into farmland.¹²⁹ Congress also cut benefits to farmers who plant on native sod.¹³⁰

After seeing the previous administration's crop insurance reforms, all eyes are on the Trump administration and how it will react (keep in mind, it was the country farmers in the Midwest who provided the backbone of support for Trump's presidency). In President Trump's proposed budget he called for a 36% cut in subsidies to crop insurance over the coming decade.¹³¹ President Trump also mentioned capping subsidies per person to a total of \$40,000 a year, and denying subsidies to people with an adjusted gross income above \$500,000 a year.¹³² These caps would eliminate premium subsidies to the biggest and wealthiest farmers.¹³³ It seems these cuts are needed to balance the budget and pay for military spending and tax reform.¹³⁴ Although the current administration has commented on crop insurance reform, if any changes are to take place it would not be as a result of the recognition of climate change, given the current administration fails to recognize climate change.

125. Risk Management Agency, *Beginning Farmer and Rancher Benefits for Federal Crop Insurance*, USDA (June 2014), <https://perma.cc/E29Z-J744>.

126. Risk Management Agency, *Beginning Farmer and Rancher Benefits for Federal Crop Insurance*, USDA (June 2014), <https://perma.cc/E29Z-J744>.

127. Risk Management Agency, *Stacked Income Protection Plan for Upland Cotton*, USDA (July 2016), <https://perma.cc/4UKM-SDQG>.

128. *Id.*

129. *Id.*

130. Risk Management Agency, *Native Sod Guideline for Federal Crop Insurance*, USDA (July 2016), <https://perma.cc/8FDA-2MUF>.

131. Daniel Looker, *Budget Proposal "Will Kill Crop Insurance," Says Insurance Expert*, Agriculture.com (May 24, 2017), <https://perma.cc/Y2AQ-DFVA>.

132. *Id.*

133. *Id.*

134. *Id.*

B. Proposed Reforms to Crop Insurance to Better Address Climate Change

There are many suggestions on how crop insurance can be reformed to better address costs and climate change.¹³⁵ In 2014, the Government Accountability Office (“GAO”) issued a report, which called for the USDA to promote the incorporation of resilient agricultural practices into their expert guidance reports.¹³⁶ This would allow for implementation of agricultural practices, which mitigate the effects of climate change and promote resilience in the industry.¹³⁷ This practice, if adopted by farmers, would help mitigate climate change, thus lessening its effects on the industry.¹³⁸

The USDA later issued the *Building Blocks for Climate Smart Agriculture and Forestry: Implementation Plan and Progress Report*.¹³⁹ This report outlined ten building blocks designed to help farmers reduce greenhouse emissions and set goals for improving resilience to climate change.¹⁴⁰ However, as the GAO points out, the USDA report is based on voluntary actions, making it unclear if crop insurance policyholders will actually implement these measures to improve resilience.¹⁴¹

Critics suggest that the USDA should incorporate their Building Blocks Report into the “good farming practices requirement,” instead of making the resilience measures voluntary.¹⁴² The Federal Crop Insurance Act states that crop insurance will not apply to losses due to “the failure of the producer to follow good farming practices.”¹⁴³ Good farming practices are defined as:

135. U.S. GOV’T ACCOUNTABILITY OFF., *Climate Change: Better Management of Exposure to Potential Future Losses Is Needed for Federal Flood and Crop Insurance*, Report to Congressional Requesters (Oct. 2014), <https://perma.cc/2429-UVNM>.

136. U.S. GOV’T ACCOUNTABILITY OFF., *Climate Change: Better Management of Exposure to Potential Future Losses Is Needed for Federal Flood and Crop Insurance*, Report to Congressional Requesters (Oct. 2014), <https://perma.cc/2429-UVNM>.

137. *Id.*

138. *Id.*

139. USDA, *USDA Building Blocks for Climate Smart Agriculture and Forestry, Implementation Plan and Progress Report*, (May 2016), <https://perma.cc/L5WH-D4A5>.

140. *Id.*

141. U.S. GOV’T ACCOUNTABILITY OFF., *Climate Change: Better Management of Exposure to Potential Future Losses Is Needed for Federal Flood and Crop Insurance*, Report to Congressional Requesters (Oct. 2014), <https://perma.cc/D82Z-SMKX>.

142. Chad G. Marzen & J. Grant Ballard, *Climate Change and Federal Crop Insurance*, 43 B.C. ENVTL. AFF. L. REV. 387 (2016).

143. 7 U.S.C. § 1508(a)(3)(A)(iii) (2014).

The production methods utilized to produce the insured crop and allow it to make normal progress toward maturity and produce at least the yield used to determine the production guarantee or amount of insurance, including any adjustments for late planted acreage, which are: (1) For conventional or sustainable farming practices, those generally recognized by agricultural experts for the area; or (2) For organic farming practices, those generally recognized by organic agricultural experts for the area or contained in the organic plan. We may, or you may request us to, contact FCIC to determine whether or not production methods will be considered to be good farming practices.¹⁴⁴

Thus, farmers are financially motivated to use “good farming practices,” in order to be successful in any claims under their crop insurance policy.¹⁴⁵ The RMA further defined the good farming practice standard in the Good Farming Practices Determination Standards Handbook (“Handbook”).¹⁴⁶ The main factors for assessing good farming practices are the, (1) agronomic situation of the policy holder, including: (a) material facts about the production methods that were used or will be used to produce the crop; (b) weather and climate factors; (c) pest or disease risks; and (d) other factors affecting the crop and (2) expert opinions from at least one agricultural expert.¹⁴⁷

However, the good “farming practice standard” has received much criticism.¹⁴⁸ The GAO has called on the USDA to promote the incorporation of resilient agriculture to mitigate climate change risks.¹⁴⁹ An example cited by Marzen and Ballard illustrates how the “good farming practice standard” has failed to mitigate climate change risks. They cite the “case of an insured crop producer who was awarded a Natural Resources Conservation Service Conservation Innovation Grant for his work with cover crops on his farm, but was later denied crop insurance coverage by the RMA, based on a “good farming practices” determination and allegations that his cover crops violated the RMA “interplanting” regulations.”¹⁵⁰ This illustrates the rigidity of the “good farming practice standard,” and its failure to allow for innovation, environmentally friendly,

144. 7 C.F.R. § 457.8 (2018).

145. 7 U.S.C. § 1508(a)(3)(A)(iii) (2014).

146. USDA, *Good Farming Practice Determinations Handbook*, (October 2014), <https://perma.cc/DY2G-DEJ6>.

147. *Id.* at 8.

148. Chad G. Marzen & J. Grant Ballard, *supra* note 148.

149. U.S. GOV’T ACCOUNTABILITY OFF., *Climate Change: Better Management of Exposure to Potential Future Losses Is Needed for Federal Flood and Crop Insurance*, Report to Congressional Requesters (Oct. 2014), <https://perma.cc/D82Z-SMKX>.

150. Chad G. Marzen & J. Grant Ballard, *supra* note 148.

and resilient management practices.¹⁵¹ Marzen and Ballard suggest amending the “good farming practice standard” and Handbook to include an additional factor.¹⁵² The additional factor would allow policyholders that use sustainable, resilient, or soil building practices, to count them toward a determination of good farming practices.¹⁵³

Further, Natural Resource Defense Council (“NRDC”) critiques crop insurance because it “has become a crutch on which farmers will increasingly be forced to lean on while taxpayers pick up the ever-growing bill.”¹⁵⁴ Under the FCIP, insurance companies may propose to the RMA “pilot programs” which reduce premium rates below those set with the loss cost formula.¹⁵⁵ NRDC proposed its own pilot program addressing two major areas of concern, the current premium rates attract high-risk producers and the program incentives encourage harmful farming practices which damage natural resources and increase risk of crop loss.¹⁵⁶

Regarding premium rates, NRDC argues that because loss cost ratemaking depends on historical yield and indemnities, any quick change in one factor results in inaccurate ratemaking and unfair premiums.¹⁵⁷ Relying on historical data is even more problematic because climate change is changing current climates, making historical yield and indemnities less reliable for assessing future risk.¹⁵⁸ For example, if crop yields increase in an area due to warmer temperatures and the loss cost ratemaking has yet to reflect that, then the farmer would be overpaying in premiums. Conversely, if a troublesome weed species is now present in an area because of temperature changes and increasing indemnities, the farmer may be underpaying in premiums. This risk analysis attracts high-risk farmers and punishes low-risk farmers.¹⁵⁹ As a result, taxpayers pay more and program costs increase.¹⁶⁰

151. *Id.*

152. Chad G. Marzen & J. Grant Ballard, *supra* note 148.

153. *Id.*

154. Claire O’Connor, Natural Resource Defense Council, *Soil matters: How the Federal Crop Insurance Program Should be Reformed to Encourage Low-risk Farming Methods with High-reward Environmental Outcome* (August 2013), <https://perma.cc/Y9XP-86AT>.

155. 7 USCA § 1523 (2018).

156. Claire O’Connor, *supra* note 160.

157. *Id.*

158. Maffie Koerth-Baker, *Mutually Insured Destruction*, N.Y. TIMES (Aug. 27, 2013), <https://perma.cc/GJ7J-GNNB>.

159. Claire O’Connor, *supra* note 160.

160. *Id.*

NRDC also criticizes the program for incentivizing harmful farming practices, which damage natural resources and increase risk of crop loss.¹⁶¹ The RMA sets noncompetitive rates which does not allow the insurance companies to send market signals to farmers.¹⁶² This means private insurance companies are unable to require mitigation, or risk reduction techniques. This is contrary to how insurance companies typically work. Insurance companies increasingly push for policies that reduce risks.¹⁶³ For example, companies offer discounts for homeowner policyholders who have fire alarms installed and discounts for car insurance policy holders who have a safe driving record.¹⁶⁴ These noncompetitive rates encourage high-risk farmers, because they are able to pay disproportionately lower premiums.¹⁶⁵ Due to set prices, high-risk farmers pay significantly lower than what their actual rates would be otherwise. Conversely, low-risk farmers are discouraged from using environmentally friendly, risk-reducing management techniques, because they would pay disproportionately higher premiums.¹⁶⁶ For example, with fixed rates, a farmer who uses cover crops and is a low risk will have a set premium, which does not reflect the actual risk to the farm.

NRDC's pilot program offers a solution for the problems it perceives. For a pilot program to be adopted by the RMA it must meet several factors.¹⁶⁷ It must produce actuarially sound premium rate reductions, be in the best interest of producers, avoid unfair discrimination among farmers, be offered in adequate geographic areas, have expansion potential, and meet all technical and procedural requirements.¹⁶⁸ NRDC believes their program meets all those factors.¹⁶⁹ The pilot program is based on giving premium reductions to farmers who use risk-reducing management practices.¹⁷⁰ For example, NRDC cites a study, which reports that in 2010 corn farmers who used no-till (a type of soil-building farming management practice), were 30% less likely to receive an indemnity payment under the FCIP.¹⁷¹ If all farmers had adopted this method, \$224 million in indemnities could have been saved.¹⁷² Additionally, large savings could occur by incentivizing farmers to

161. *Id.*

162. Claire O'Connor, *supra* note 160.

163. Jim Malewitz, *Advocates for Climate Action Urge Insurers to Join Up*, Stateline (Feb. 20, 2013), <https://perma.cc/3AYD-RFLH>.

164. Jim Malewitz, *Advocates for Climate Action Urge Insurers to Join Up*, Stateline (Feb. 20, 2013), <https://perma.cc/3AYD-RFLH>.

165. Claire O'Connor, *supra* note 160.

166. *Id.*

167. 7 USCA § 1523 (2018).

168. *Id.*

169. Claire O'Connor, *supra* note 160.

170. *Id.* at 10.

171. Claire O'Connor, *supra* note 160.

172. *Id.*

use cover crops and efficient irrigation farming practices.¹⁷³ In 2012, irrigation supply failures accounted for more than \$14.7 million in indemnity payouts.¹⁷⁴

NRDC argues that by lowering premiums for farmers who take risk reduction measures farmers will be incentivized to adopt more environmentally friendly, low risk, practices.¹⁷⁵ These practices would make farms more resilient to climate change and natural disasters, and lower indemnity payments.¹⁷⁶ Additionally, lowered premiums would pay for themselves, because the decrease in indemnity payouts would be more than the reduction in premiums.¹⁷⁷ NRDC believes this pilot program is a “holistic view of risk management [and] would be good for farmers, good for taxpayers, and good for the environment.”¹⁷⁸

NRDC, together with the Iowa Department of Agriculture and Land Stewardship (“IDALS”), and other groups, have launched a similar pilot program.¹⁷⁹ The program will give farmers who plant cover crops a \$5 discount per acre on their crop insurance over the next three years.¹⁸⁰ Only 1.5% of Iowa farmers currently use cover crops because it can be costly, but 80% are insured through the FCIP.¹⁸¹ Hopefully, the discount will be an incentive for farmers to implement cover crops. The use of cover crops will help promote soil health and reduce runoff from agriculture.¹⁸² If adopted, this practice can help the country mitigate climate change effects on soil erosion and soil health, reduce risks of crop failure, and may help farmers adapt to changes in climate as a result of having healthier soil.¹⁸³

A critique of NRDC’s plan is that it goes against the current political climate by calling for increased taxpayer subsidies.¹⁸⁴ However, in the long run, it appears to be beneficial and financially sound.¹⁸⁵ Alternatively this paper suggests, rather than having the government raise subsidies, the private insurance industry could offer a very similar program. Amending the FCIP and allowing for competitive rates would solve the disproportional impact of farmers paying more, despite their low risk measures, and high-risk farmers paying too little. Private companies

173. *Id.*

174. *Id.*

175. *Id.*

176. *Id.*

177. Claire O’Connor, *supra* note 160.

178. Claire O’Connor, *supra* note 160 at 12.

179. Lara Bryant, *Iowa Breaks New Ground with Innovative Cover Crop Incentive*, Nat. Res. Def. Council (Nov. 17, 2017), <https://perma.cc/7F6X-5UVH>.

180. *Id.*

181. Lara Bryant, *supra* note 185.

182. *Id.*

183. *Id.*

184. Daniel Looker, *Budget Proposal “Will Kill Corp Insurance,” Says Insurance Expert*, Agriculture.com (May 24, 2017), <https://perma.cc/Y2AQ-DFVA>.

185. Claire O’Connor, *supra* note 160.

should compete with one another and offer policies tailored to the risk level of particular farmers. These private competitive policies would encourage farmers to implement good farming practices because their risk level will be better reflected in their premiums.

VIII: Lifting the Restraints on the Private Insurance Market

The government needs to subsidize crop insurance to keep prices low so farmers buy in. If they don't, and disaster strikes, Congress will be forced to bail out farmers and offer *ad hoc* disaster relief.¹⁸⁶ Agriculture is too vital to the economy, jobs, and politics to have the industry suffer. However, the prices of subsidies are becoming too high, and there has been a push by President Trump and others to use that money in other areas.¹⁸⁷ Regardless, many environmentalist solutions target increased subsidies and incentives for farmers who use low-risk and environmentally friendly practices.¹⁸⁸

Howard Kunreuther suggests two principles for why insurers do not promote coverage.¹⁸⁹ These principles are, uncertainty of risk and fear over severe financial cost of catastrophic disaster during widespread coverage.¹⁹⁰ To the first point, climate change is adding uncertainty and risk to insurance modeling; and some are calling for a "paradigm shift" in the way insurers calculate risks.¹⁹¹ Typically, modeling has been based on historical data, but climate change makes much of that data an unreliable predictor.¹⁹² However, companies are adapting to stay in business and more money is being placed in climate research and risk modeling.¹⁹³ To the second point, many insurers of crop insurance share this fear, which is why the federal government reinsures private companies. The fear that one drought can cause catastrophic damage for a wide range of policy holders is one reason why companies either pull out of offering coverage or set unaffordable prices. This highlights the need for supporting private insurance companies in case of a large-scale disaster. Possible solutions include reinsurance by other companies or the

186. USDA, *History of Crop Insurance Program*, About Risk Management Agency, <https://perma.cc/ZY9E-DEQC>.

187. USDA, *History of Crop Insurance Program*, About Risk Management Agency, <https://perma.cc/ZY9E-DEQC>.

188. Claire O'Connor, *supra* note 160.

189. Howard Kunreuther, *Mitigating Disaster Losses through Insurance*, JOURNAL OF RISK AND UNCERTAINTY (1996), <https://perma.cc/9YR5-2NPY>.

190. *Id.*

191. Maffie Koerth-Baker, *Mutually Insured Destruction*, N.Y. TIMES (Aug. 27, 2013), <https://perma.cc/GJ7J-GNNB>.

192. *Id.*

193. Munich RE, *Climate Change is a Topic that Concerns us all*, <https://perma.cc/FD94-XYDS>.

government, or a fund that is set-aside for insurance companies in cases of extreme loss. This paper suggests fears may dissipate if the FCIP is amended to uncap the profit level of private companies. This way, insurers could accumulate enough profit to handle large payouts and in the case of a disaster still issue indemnities with help from built-up profit reserves.

Further, crop insurance is not *sui generis*¹⁹⁴ and similar discussions are occurring regarding flood insurance and possible reforms to the National Flood Insurance Program.¹⁹⁵ Flood insurance presents growth opportunities, an expansive market, and profit potential for private insurers.¹⁹⁶ However, a 2014 report by the GAO noted that private insurers are not likely to write flood insurance without the freedom to charge adequate, risk-based premiums.¹⁹⁷ The report suggested a way to balance these concerns—allow private insurance companies to offer risk-based premiums and the government to offer a voucher-based program to those unable to afford the insurance.¹⁹⁸ Crop insurance also offers private companies an expansive market with large potential gains.¹⁹⁹ If the FCIP was amended, private companies could write their own policies and if policies were too expensive the government could offer vouchers. This may be less expensive than subsidizing premiums.

Additionally, insurance companies have been known to encourage safe behavior in order to minimize their payouts.²⁰⁰ They do this by offering discounts to risk-reducing policyholders, encouraging policyholders to take precautionary measures and lobbying Congress to pass meaningful legislation.²⁰¹ Examples of insurance companies encouraging safe behavior include: building codes, smoke detectors, seat belts, and safer work place environments.²⁰² Based on the role of insurance companies throughout history, if they were allowed to write their own policies they would likely incentivize low-risk farming, which is exactly what NRDC wants. In this regard, it seems environmentalists and private insurers could team up to promote low-risks practices, which could lower prices for farmers and benefit the planet.

194. *Sui Generis* is Latin for of its own kind or unique.

195. Aditya U. Singh, *The potential for flood insurance privatization in the U.S. Could Carriers keep their heads above water?* Deloitte Center for Financial Services (2014), <https://perma.cc/6SU9-HSPW>.

196. *Id.*

197. U.S. GOV'T ACCOUNTABILITY OFF., FLOOD INSURANCE – STRATEGIES FOR INCREASING PRIVATE SECTOR INVOLVEMENT (Jan. 22, 2014), <https://perma.cc/ZT8H-NR4J>.

198. *Id.*

199. *Facts and Figures*, Crop Insurance 101, Crop Insurance in America, <https://perma.cc/SC2H-AW5B>.

200. Jim Malewitz, *Advocates for Climate Action Urge Insurers to Join Up*, *Stateline* (Feb. 20 2013), <https://perma.cc/HRC5-74PG>.

201. *Id.*

202. Jim Malewitz, *supra* note 206.

As the GAO noted, private insurers are not likely to write flood insurance without the freedom to charge adequate, risk-based premiums.²⁰³ Doing this would shift the burden of the risk back onto the farmers and private insurers. Without subsidies, the taxpayers would no longer be paying for, or carrying the risks that come with, crop insurance. This seems like the better allocation of risks, because it reflects the risk onto those actually involved in the risky activity. Having the taxpayers burdened with around 63% of the costs, the risk is too far removed and won't send any market signals.²⁰⁴ By having farmers front the full costs of insurance, they will be encouraged to take risk-reducing measures to get discounts from competing private companies. It is very possible that the additional costs to farmers get passed onto consumers in the form of higher food prices. But, hypothetically, the consumers would have more money in their pockets from not subsidizing the insurance in the first place. So, either way, the average American will pay for crop insurance through either food prices or taxes. The later seems preferable because increased food prices are not necessarily the result, if insurance prices stay low. Plus, if farmers are more in tune with market signals they will be more likely to adopt better farming practices.

IX: Conclusion

To better address climate change in the 2018 Farm Bill, and subsequent Farm Bills, Congress should phase out premium subsidies, as well as administrative and operating payments to private insurance companies. Under the current subsidy structure, taxpayers are, and will continue to be, burdened with increased payouts.²⁰⁵ Shifting the financial burden away from farmers takes away policy and market signals from farmers.²⁰⁶ Burdening farmers with the true costs of insurance will incentivize them to take risk mitigation measures. By continually reinsuring the private companies, the government will still be there in case private companies are unable to issue payouts. This method will help stabilize the market in dire circumstances and remove the need for disaster relief funding. This plan also follows the current political climate, which seeks to lessen the deficit and make budget cuts to the program.

Congress should also uncap profit levels of private insurance companies to give them more freedom to compete and write their own policies. Allowing the free market to tackle the challenges of crop insurance will ease the risks and costs

203. U.S. GOV'T ACCOUNTABILITY OFF., *supra* note 203.

204. Claire O'Connor, *supra* note 160.

205. CONG. BUDGET OFFICE, *Reduce Subsidies in the Crop Insurance Program, Options for Reducing the Deficit: 2017 to 2026*, (Dec. 8, 2016), <https://perma.cc/KJY7-3U7F>.

206. Claire O'Connor, *supra* note 160.

carried by the taxpayers.²⁰⁷ The uncapped profit levels will also lessen the need for reinsurance. Allowing companies to compete will drive down prices and help ensure affordability and farmer buy-in. Insurance companies will have a financial incentive to decrease payouts, in hopes of increasing their own profits. To do that, insurance companies will encourage farmers to take risk-reduction measures. These measures are typically environmentally friendly, like soil building practices.²⁰⁸ Allowing insurance companies to offer their own policies will provide more flexibility and room for innovation. Farmers will be incentivized to show insurance companies practices that reduce risk, which should lead to lower premiums. Companies will also encourage these practices to decrease the odds of a payout. When private companies encourage farmers to implement low-risk, environmentally friendly practices, the United States will be in a position where the private sector is helping the country mitigate and adapt to climate change.

207. CONG. BUDGET OFFICE, *supra* note 211.

208. Claire O'Connor, *supra* note 160.
