# Economic Output and Risk Factors

## Nathan Seto

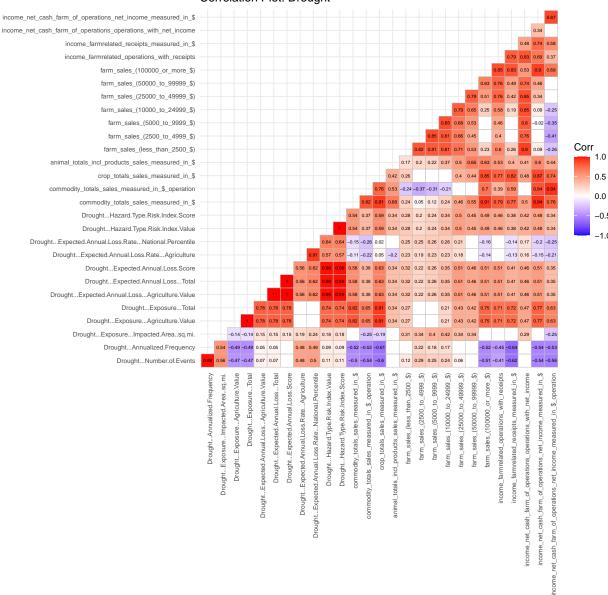
What is the relationship between health risk concentrations and economic output? Calculate correlations between environmental exposures and farm sales (and/or other econ. variables) to understand economic linkages.

The values used as variables of economic output are listed below. Variables ending in "\$\_operation" denote "dollars per operation".

```
## [[1]]
   [1] "commodity_totals_sales_measured_in_$"
   [2] "commodity_totals_sales_measured_in_$_operation"
   [3] "crop_totals_sales_measured_in_$"
   [4] "animal_totals_incl_products_sales_measured_in_$"
##
   [5] "commodity_totals_operations_with_sales"
    [6] "farm_sales_(less_than_2500_$)"
##
##
   [7] "farm sales (2500 to 4999 $)"
   [8] "farm sales (5000 to 9999 $)"
##
   [9] "farm_sales_(10000_to_24999_$)"
## [10] "farm sales (25000 to 49999 $)"
## [11] "farm_sales_(50000_to_99999_$)"
## [12] "farm_sales_(100000_or_more_$)"
## [13] "income_farmrelated_operations_with_receipts"
## [14] "income_farmrelated_receipts_measured_in_$"
  [15] "income_net_cash_farm_of_operations_operations_with_net_income"
## [16] "income_net_cash_farm_of_operations_net_income_measured_in_$"
## [17] "income_net_cash_farm_of_operations_net_income_measured_in_$_operation"
```

Below are a series of correlation plots between variables of economic output and different weather/natural disaster predictors.

### Correlation Plot: Drought



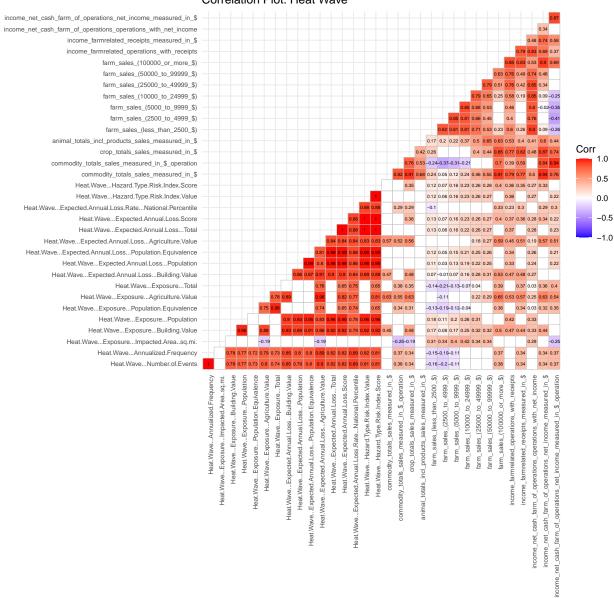
1.0

0.0

-0.5

-1.0

#### Correlation Plot: Heat Wave



#### Correlation Plot: Wildfire

Wildfire...Exposure...Building.Value Wildfire...Exposure...Population .Exposure...Population.Equivalence

Wildfire...Exposure...Impacted.Area..sq.mi.

Wildfire...Historic.Loss.Ratio...Population Wildfire...Historic.Loss.Ratio...Agriculture Wildfire...Expected.Annual.Loss...Building.Value Wildfire...Expected.Annual.Loss...Population Wildfire...Expected.Annual.Loss...Agriculture.Value

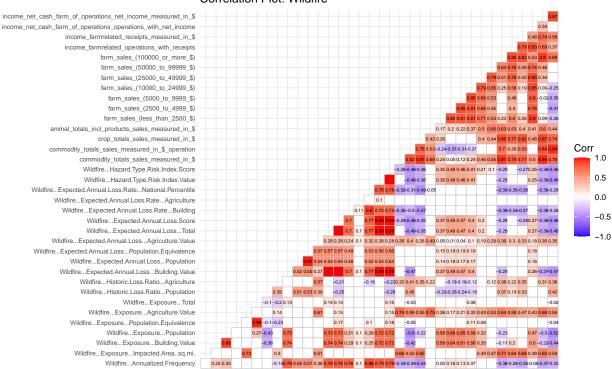
Wildfire..

Wildfire...Expected.Annual.Loss.Rate...Building Wildfire...Expected.Annual.Loss.Rate...Agriculture Wildfire...Expected.Annual.Loss.Rate...National.Percentile

Wildfire...Expected.Annual.Loss... Wildfire...Expected.Annual.Loss.

Wildfire...Expected.Annual.Loss...Population.Equivale

Wildfire...Hazard.Type.Risk.Index.Value Wildfire...Hazard.Type.Risk.Index.Score commodity\_totals\_sales\_measured\_in\_\$



farm\_sales\_(2500\_to\_4999\_\$) farm\_sales\_(5000\_to\_9999\_\$) farm\_sales\_(10000\_to\_24999\_\$) farm\_sales\_(25000\_to\_49999\_\$) \_sales\_(50000\_to\_999999\_\$) \_sales\_(100000\_or\_more\_\$)

income\_farmrelated\_receipts\_measured\_in\_\$

income\_net\_cash\_farm\_of\_operations\_operations\_with\_net\_income income\_net\_cash\_farm\_of\_operations\_net\_income\_measured\_in\_\$\_operation

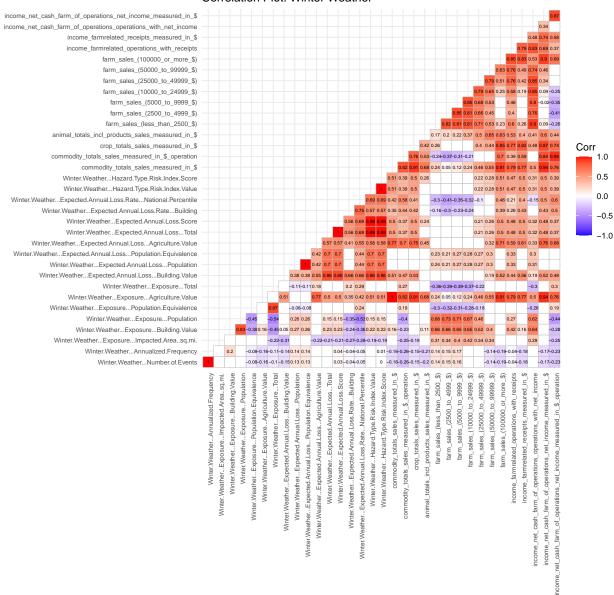
income\_net\_cash\_farm\_of\_operations\_net\_income

farm\_sales\_(less\_than\_2500\_\$)

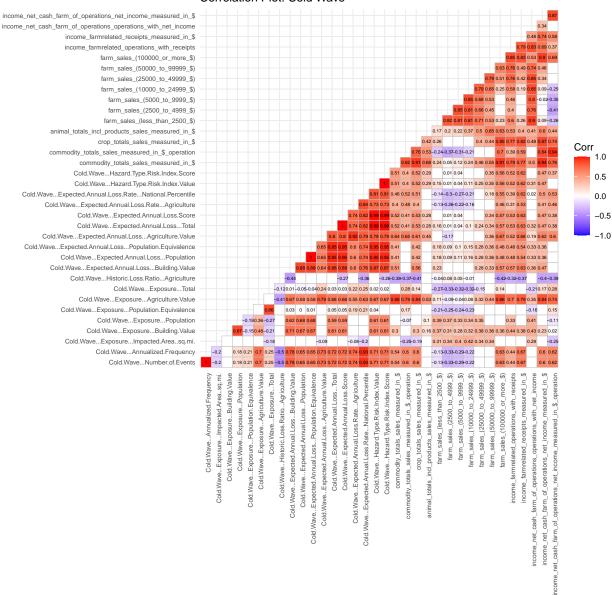
animal\_totals\_incl\_products\_sales\_measured\_in\_

crop\_totals\_sales

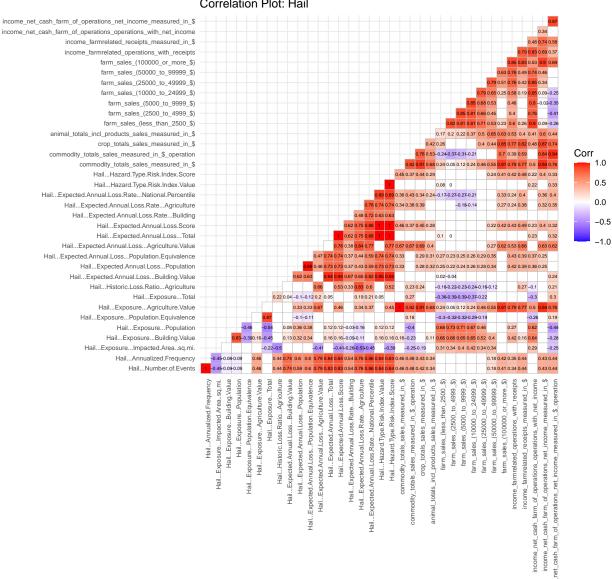
#### Correlation Plot: Winter Weather



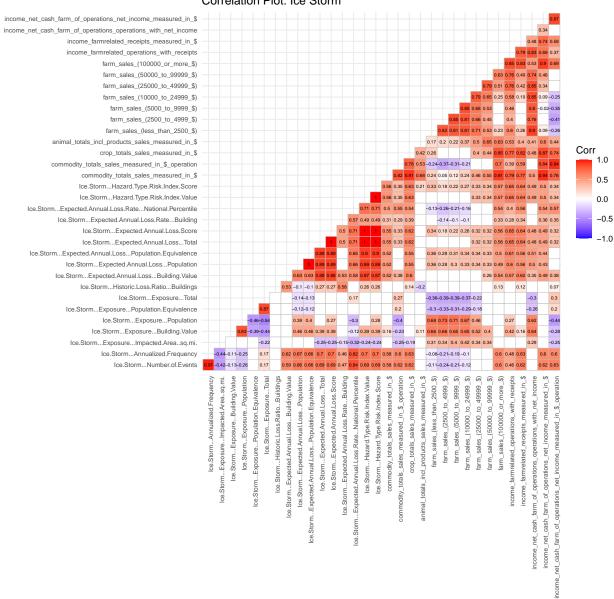
#### Correlation Plot: Cold Wave



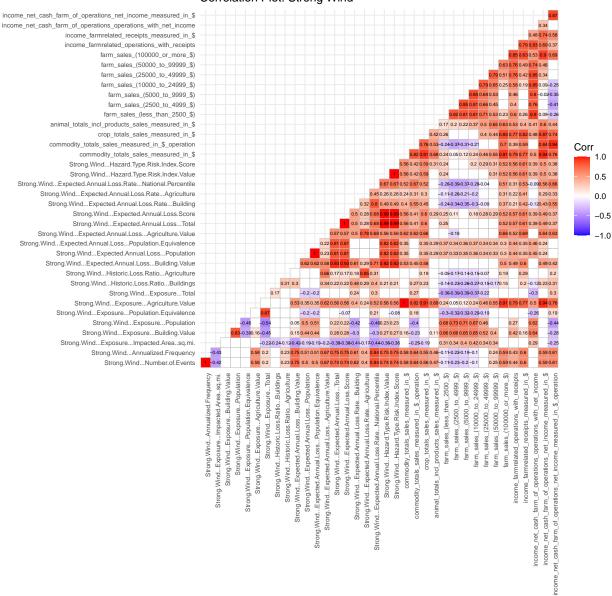
#### Correlation Plot: Hail



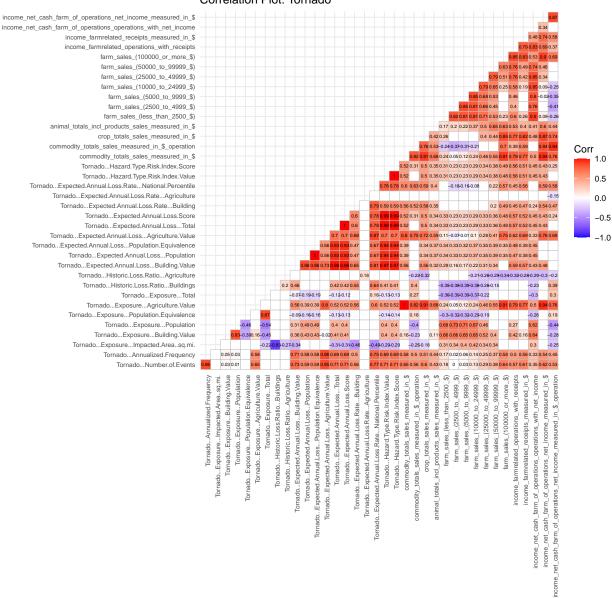
#### Correlation Plot: Ice Storm



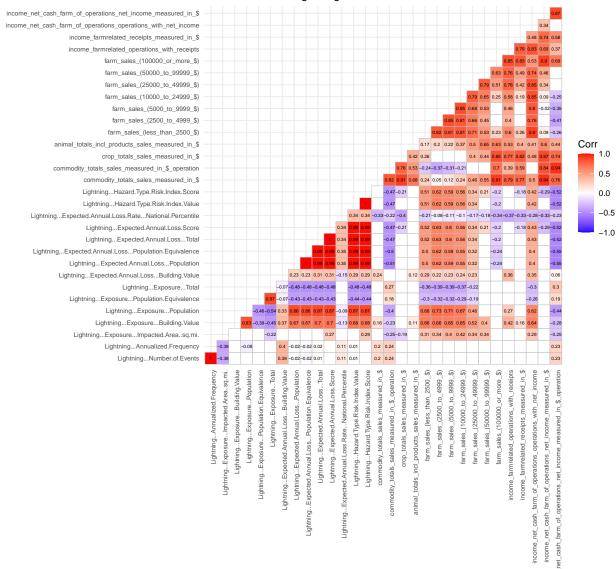
## Correlation Plot: Strong Wind



#### Correlation Plot: Tornado



### Correlation Plot: Lightning



#### Correlation Plot: Avalanche

