|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | | **R squared** | | | **Predicting insecure** | | | **Overall accuracy** | | | |
|  | logFCS | | HDDS | rCSI | logFCS | HDDS | rCSI | logFCS | HDDS | rCSI |  |
| **Split by year** | | | | | | | | | | | |
| main results | 0.649 | | 0.643 | 0.119 | 0.833 | 0.994 | 0.860 | 0.897 | 0.882 | 0.635 |  |
| Lasso results | 0.633 | | 0.612 | 0.043 | 0.833 | 1.000 | 1.000 | 0.665 | 0.823 | 0.458 |  |
| **Split by region (use south and central to predict north)** | | | | | | | | | | | |
| main results | 0.574 | | 0.660 | 0.115 | 0.313 | 0.772 | 0.417 | 0.943 | 0.769 | 0.736 |  |
| Lasso results | 0.588 | | 0.672 | 0.139 | 0.313 | 0.813 | 0.444 | 0.943 | 0.774 | 0.712 |  |

Split by year

1. Log FCS model

Best alpha = 1, best lambda = 0.001

|  |  |
| --- | --- |
| (Intercept) | 3.457 |
| IPC1 | -0.014 |
| raincytot | 0.101 |
| day1rain | 0.000 |
| floodmax | . |
| maxdaysnorain | . |
| gdd | . |
| tmean | 0.017 |
| heatdays | -0.001 |
| clust\_maize\_current | -0.001 |
| clust\_maize\_mktthin\_current | -0.013 |
| clust\_maize\_lag | 0.000 |
| clust\_maize\_mktthin\_lag | . |
| GIEW\_price\_current | -0.002 |
| percent\_ag | 0.014 |
| elevation | 0.000 |
| nutri\_rent\_moderate\_constraint | -0.006 |
| dist\_road | -0.002 |
| dist\_admarc | 0.003 |
| roof\_natural\_inverse | 0.168 |
| number\_celphones | 0.160 |
| hhsize | -0.004 |
| hh\_age | -0.003 |
| quarter1 | -0.061 |
| quarter2 | . |
| quarter3 | 0.006 |
| region\_Central | 0.032 |
| region\_North | . |

1. HDDS

Best alpha = 0, best lambda = 0.043

|  |  |
| --- | --- |
| (Intercept) | 4.285 |
| IPC1 | -0.077 |
| raincytot | 0.161 |
| day1rain | -0.002 |
| floodmax | 0.002 |
| maxdaysnorain | -0.003 |
| gdd | 0.002 |
| tmean | 0.041 |
| heatdays | -0.002 |
| clust\_maize\_current | -0.002 |
| clust\_maize\_mktthin\_current | -0.102 |
| clust\_maize\_lag | -0.001 |
| clust\_maize\_mktthin\_lag | 0.089 |
| GIEW\_price\_current | -0.004 |
| percent\_ag | 0.061 |
| elevation | 0.078 |
| nutri\_rent\_moderate\_constraint | -0.067 |
| dist\_road | -0.011 |
| dist\_admarc | 0.006 |
| roof\_natural\_inverse | 0.692 |
| number\_celphones | 0.363 |
| hhsize | -0.017 |
| hh\_age | -0.016 |
| quarter1 | -0.195 |
| quarter2 | -0.017 |
| quarter3 | -0.053 |
| region\_Central | 0.182 |
| region\_North | 0.127 |

1. rCSI

Best alpha = 0, best lambda = 0.305

|  |  |
| --- | --- |
| (Intercept) | 3.921 |
| IPC1 | 1.102 |
| raincytot | -1.306 |
| day1rain | 0.008 |
| floodmax | -0.016 |
| maxdaysnorain | -0.042 |
| gdd | -0.050 |
| tmean | 0.284 |
| heatdays | 0.050 |
| clust\_maize\_current | 0.012 |
| clust\_maize\_mktthin\_current | -0.519 |
| clust\_maize\_lag | 0.020 |
| clust\_maize\_mktthin\_lag | -0.055 |
| GIEW\_price\_current | 0.080 |
| percent\_ag | -0.128 |
| elevation | 0.008 |
| nutri\_rent\_moderate\_constraint | 0.340 |
| dist\_road | -0.006 |
| dist\_admarc | 0.006 |
| roof\_natural\_inverse | -0.174 |
| number\_celphones | -0.671 |
| hhsize | 0.461 |
| hh\_age | -0.016 |
| quarter1 | 0.305 |
| quarter2 | -0.170 |
| quarter3 | -0.816 |
| region\_Central | -0.160 |
| region\_North | -0.984 |

**Split by Region**

1. Log FCS model

Best alpha = 0.9, best lambda = 0.003

|  |  |
| --- | --- |
| (Intercept) | 3.460 |
| IPC1 | -0.009 |
| raincytot | 0.062 |
| day1rain | 0.000 |
| floodmax | 0.000 |
| maxdaysnorain | 0.000 |
| gdd | 0.001 |
| tmean | 0.008 |
| heatdays | -0.001 |
| clust\_maize\_current | . |
| clust\_maize\_mktthin\_current | -0.012 |
| clust\_maize\_lag | . |
| clust\_maize\_mktthin\_lag | . |
| GIEW\_price\_current | . |
| percent\_ag | . |
| elevation | -0.009 |
| nutri\_rent\_moderate\_constraint | -0.002 |
| dist\_road | -0.002 |
| dist\_admarc | 0.004 |
| roof\_natural\_inverse | 0.175 |
| number\_celphones | 0.164 |
| hhsize | . |
| hh\_age | -0.003 |
| quarter1 | -0.078 |
| quarter2 | 0.000 |
| quarter3 | 0.016 |
| region\_Central | 0.004 |
| region\_North | . |

1. HDDS

Best alpha = 0.4, best lambda = 0.014

|  |  |
| --- | --- |
| (Intercept) | 4.505 |
| IPC1 | -0.050 |
| raincytot | 0.051 |
| day1rain | -0.001 |
| floodmax | 0.002 |
| maxdaysnorain | -0.002 |
| gdd | 0.003 |
| tmean | 0.017 |
| heatdays | -0.002 |
| clust\_maize\_current | 0.000 |
| clust\_maize\_mktthin\_current | -0.116 |
| clust\_maize\_lag | 0.000 |
| clust\_maize\_mktthin\_lag | 0.036 |
| GIEW\_price\_current | . |
| percent\_ag | 0.031 |
| elevation | . |
| nutri\_rent\_moderate\_constraint | -0.069 |
| dist\_road | -0.009 |
| dist\_admarc | 0.008 |
| roof\_natural\_inverse | 0.780 |
| number\_celphones | 0.416 |
| hhsize | -0.003 |
| hh\_age | -0.017 |
| quarter1 | -0.255 |
| quarter2 | . |
| quarter3 | 0.001 |
| region\_Central | 0.059 |
| region\_North | . |

1. rCSI

Best alpha = 0, best lambda = 0.305

|  |  |
| --- | --- |
| (Intercept) | 4.205 |
| IPC1 | 1.095 |
| raincytot | -0.780 |
| day1rain | 0.013 |
| floodmax | -0.023 |
| maxdaysnorain | -0.059 |
| gdd | -0.046 |
| tmean | 0.299 |
| heatdays | 0.045 |
| clust\_maize\_current | 0.006 |
| clust\_maize\_mktthin\_current | -0.671 |
| clust\_maize\_lag | 0.006 |
| clust\_maize\_mktthin\_lag | -0.291 |
| GIEW\_price\_current | 0.025 |
| percent\_ag | 0.331 |
| elevation | -0.509 |
| nutri\_rent\_moderate\_constraint | 0.512 |
| dist\_road | -0.007 |
| dist\_admarc | 0.016 |
| roof\_natural\_inverse | -0.042 |
| number\_celphones | -1.239 |
| hhsize | 0.575 |
| hh\_age | -0.007 |
| quarter1 | 0.735 |
| quarter2 | -0.063 |
| quarter3 | -0.619 |
| region\_Central | -0.307 |
| region\_North | . |