



## Nebraska Adult Mosquito Surveillance Report for September 20- October 3, 2015

CDC Weeks 38/39

(All data are preliminary and may change as more data is received)

### State Summary:

Note that this will be the final biweekly mosquito surveillance report. For the two weeks covered in this report 28 of 28 counties reported data at the time of publishing. **Overall statewide mosquito counts were below average while Culex counts were slightly above historical averages. Counts for total and Culex mosquitoes decreased significantly over the two weeks compared to the previous biweekly sampling period.** The statewide mosquitoes per trap night were 63.8% of the five year average while Culex mosquito counts per trap night were 129.7% of their five year average for this time of year but within the average range. Regionally across the state, overall mosquitoes per trap night (Trap Night = 1 trap ran over 1 night) were at or below five year historical averages in seven of the eight regions. Only the southeast saw above average numbers, however all regions did see decreases in overall counts. Culex mosquito (primary vector of West Nile Virus) counts were also at or below average in most areas with the southeast region again showing counts in the well above average range. A majority of counties (n= 23) had overall mosquito counts at or below their historical average with 17 of these counties having counts below their five year average. In terms of Culex mosquitoes a majority of counties (n= 19) had counts below their historical averages, however eight counties had Culex counts above their historic averages with Richardson County still showing very high capture rates. Although Culex mosquitoes are still active, now is the time of year where remaining Culex mosquitoes will begin looking for places to overwinter and should begin to start winding down in activity. During these two weeks of sampling the predominant type of mosquitoes collected across the state was again the floodwater/nuisance group of mosquitoes making up 62.7% of trap catches. This was an increase of 10.1 percentage points for the flood water group compared to the previous biweekly period. Only the southeast region had Culex mosquitoes making up the majority of mosquito trap collections. Again mosquitoes will still remain active, although at low levels, until the first hard frost. So proper mosquito prevention methods should be used if mosquito activity is observed with the methods below:

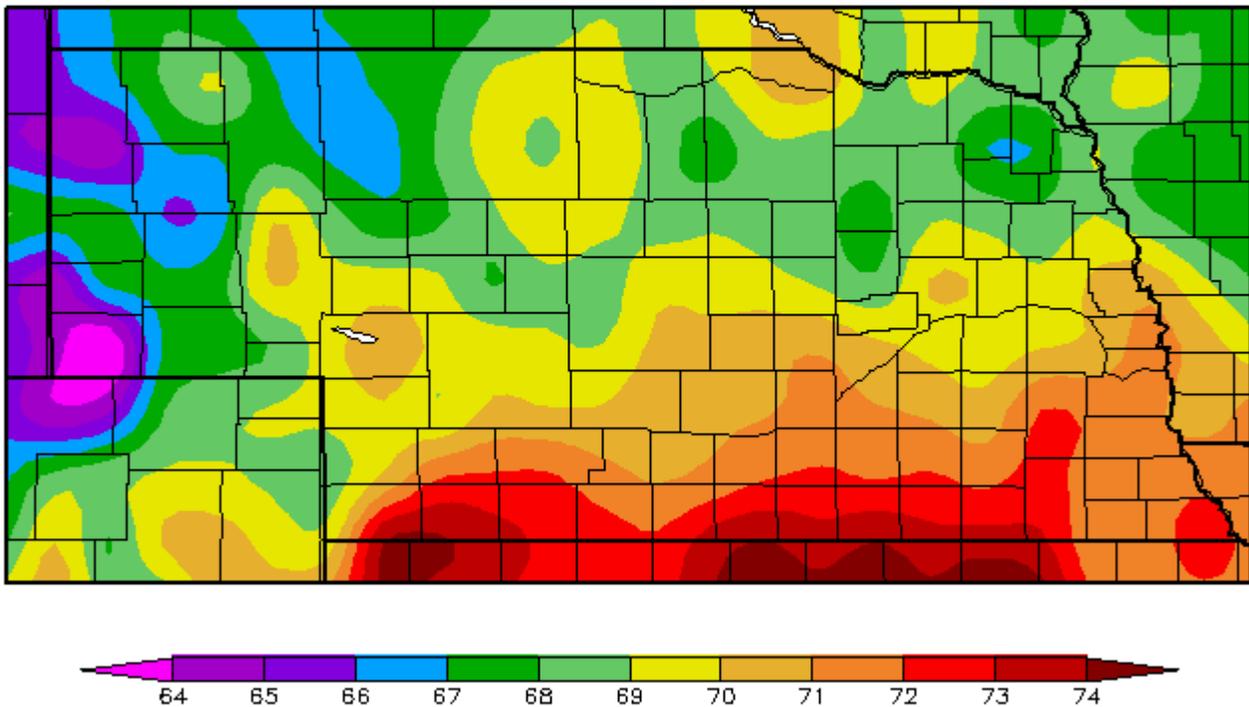
- a. Wearing insect repellants containing DEET, picaridin, IR3535, and certain oil of lemon eucalyptus or para-methane-diol products. **Use Products According to Label Instructions.**
- b. Wear long sleeves, long pants, and socks where weather permits when going outdoors.
- c. Take extra precautions during prime mosquito biting activity, typically at dusk and dawn. This includes the use of repellants and wearing of protective clothing. If possible avoid peak mosquito activity by not going outside.

**Climate Factors:**

The five subsequent figures show the average temperature, departure from normal temperature, total precipitation, departure from normal precipitation, and percent of normal precipitation. Data was retrieved from the High Plains Regional Climate Center at the University of Nebraska-Lincoln.

For the reported 30 day climate period, temperatures across the state were above average in all regions of Nebraska. The reported 30 day climate period also saw below average precipitation across most of the state with areas in the north central, northeast, and east central of the state seeing well above average precipitation.

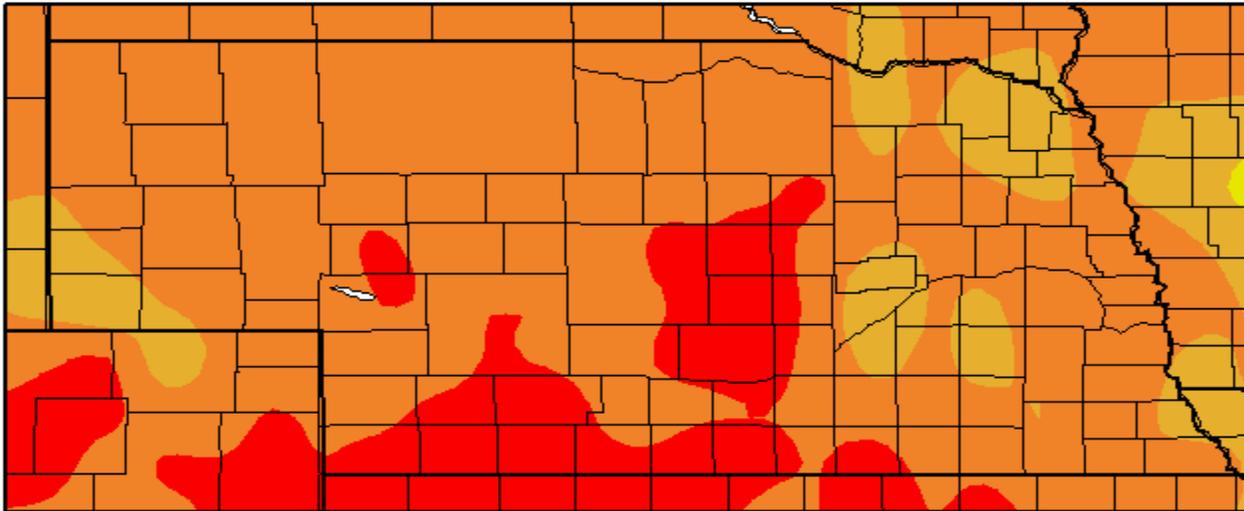
## Temperature (F) 8/29/2015 – 9/27/2015



Generated 9/28/2015 at HPRCC using provisional data.

Regional Climate Centers

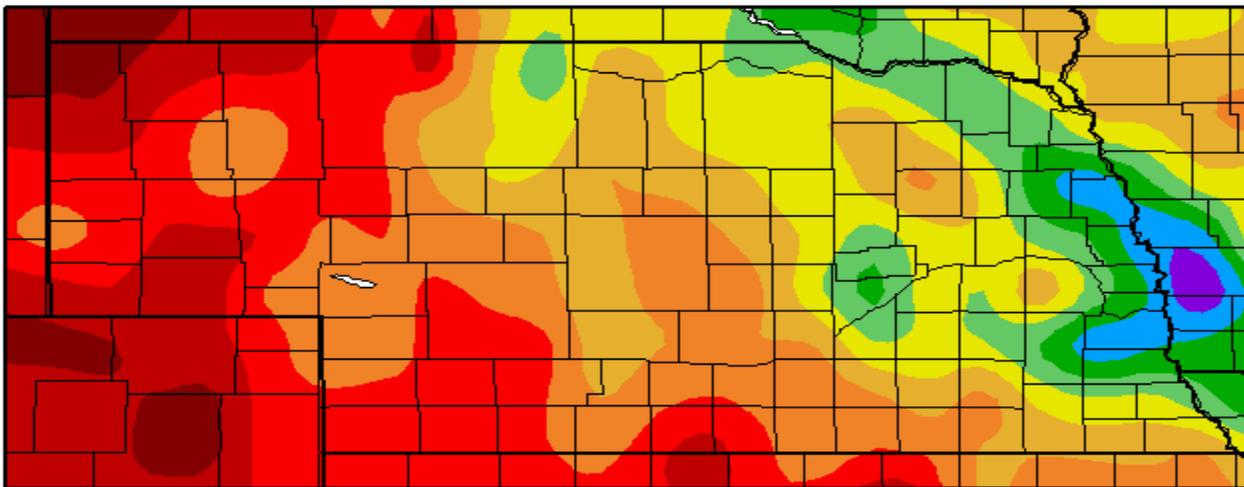
# Departure from Normal Temperature (F) 8/29/2015 – 9/27/2015



Generated 9/28/2015 at HPRCC using provisional data.

Regional Climate Centers

# Precipitation (in) 8/29/2015 – 9/27/2015

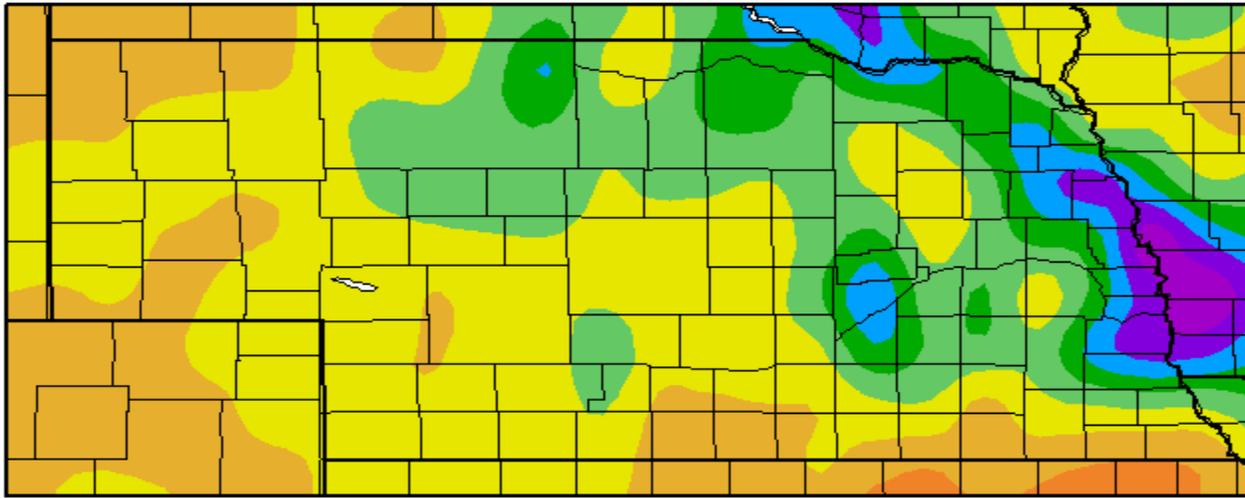


Generated 9/28/2015 at HPRCC using provisional data.

Regional Climate Centers

# Departure from Normal Precipitation (in)

8/29/2015 – 9/27/2015

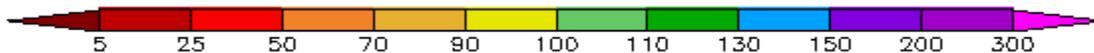
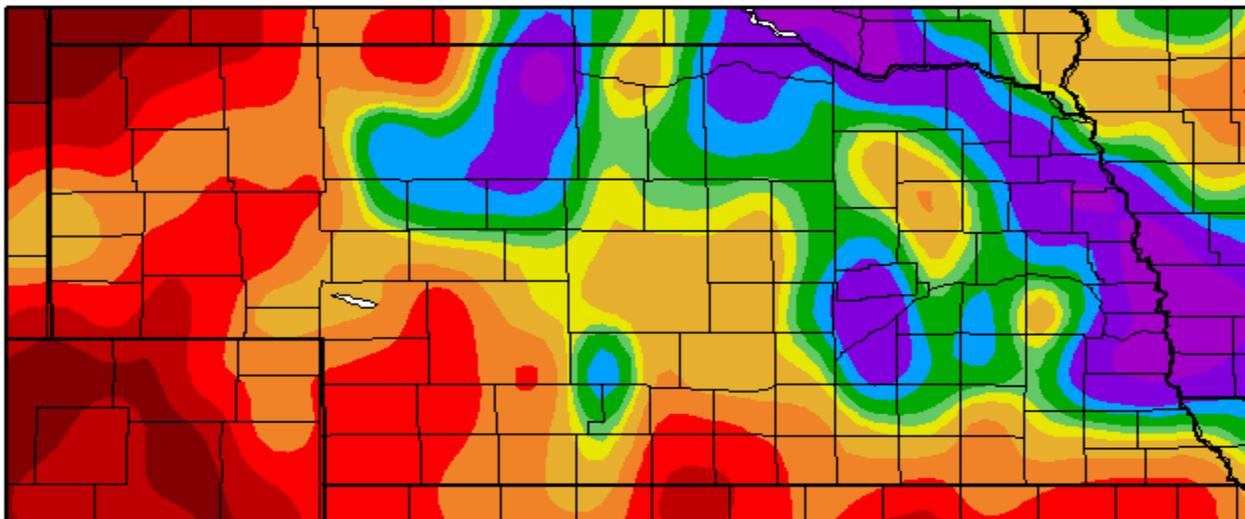


Generated 9/28/2015 at HPRCC using provisional data.

Regional Climate Centers

# Percent of Normal Precipitation (%)

8/29/2015 – 9/27/2015



Generated 9/28/2015 at HPRCC using provisional data.

Regional Climate Centers

### Bi-weekly Nebraska Mosquito Summary Table

	Mosquitoes/TN		Culex/TN	
County	This week (38/39)	5 Yr. Avg.	This week (38/39)	5 Yr. Avg.
Buffalo	7.0	22.0	1.0	0.5
Butler	13.0	39.7	1.0	1.0
Chase	19.0	14.7	14.0	2.3
Cherry	4.3	24.7	0.7	0.6
Dawes	9.3	74.3	0.3	2.3
Dawson	27.8	18.3	5.7	10.9
Dixon	8.3	8.5	3.3	0.3
Dodge	4.7	648.3	1.8	4.0
Douglas	60.7	77.6	12.7	26.2
Garden	15.8	18.5	10.7	4.7
Garfield	3.0	89.2	0.7	2.1
Hall	12.0	30.5	1.2	10.8
Holt	6.0	9.6	2.0	0.2
Jefferson	163.0	94.7	26.5	32.8
Lancaster	100.2	99.3	4.8	12.3
Lincoln	42.3	30.0	7.5	8.0
Madison	131.3	200.3	5.7	21.8
Phelps	10.5	22.8	3.2	3.2
Platte	20.4	*	1.2	*
Polk	13.0	34.3	6.0	0.3
Red Willow	7.3	57.9	3.7	15.3
Richardson	214.7	74.7	186.0	29.7
Scottsbluff	47.2	41.4	4.8	7.9
Seward	14.0	40.0	8.0	3.0
Sheridan	7.5	28.8	3.5	2.8
Wayne	16.7	189.4	5.7	4.5
Webster	34.3	25.2	3.5	3.1
York	38.0	19.4	5.0	3.6
Statewide	41.5	65.0	13.1	10.1
Well Below Avg.	≤50% of 5 yr. Avg.			
Below Avg.	51-90% of 5 yr. Avg.			
Avg.	91-150% of 5 yr. Avg.			
Above Avg.	151-300% of 5 yr. Avg.			
Well Above Avg.	>300% of 5 yr. Avg.			
*	No Historical Data			
ND	No Data			

**\*Note: 28 Nebraska counties currently participate in mosquito surveillance. Week's averages are compared at most to five year average. Some counties may not have a full five years of trapping data.**

## Regional Mosquito Trap Night Graphs:

The following graphs show the average total mosquitoes and Culex per trap night (TN) of the current bi-weekly sampling period plotted against the 5 year averages of total mosquitoes and Culex per trap night for eight regions in Nebraska. The eight regions were chosen based upon the eight climate divisions the state is divided into by National Oceanic and Atmospheric Administration (NOAA). Each trap county was placed into its respective region and counties in the same region had their mosquitoes tallied together to get regional data. The purpose is to identify trends and allow for evaluation of changing mosquito populations. **Note that on the X-axis the biweeks are approximations as to the months they are found in and can vary slightly from year to year.**

Panhandle Region counties included- Dawes, Garden, Scotts Bluff, and Sheridan

North Central Region counties included- Cherry, Garfield, and Holt

Southwest Region counties included- Chase, Lincoln, and Red Willow

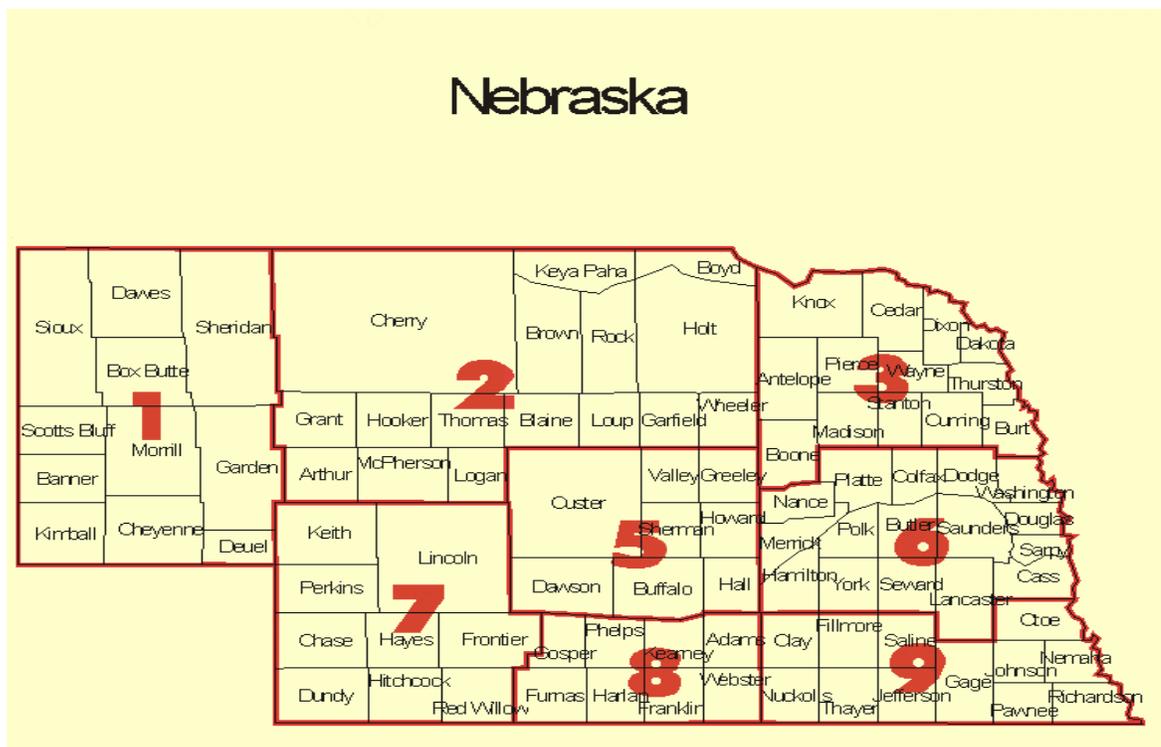
Central Region counties included- Buffalo, Dawson, and Hall

South Central Region counties included- Phelps and Webster

Northeast Region counties included- Dixon, Madison, Wayne

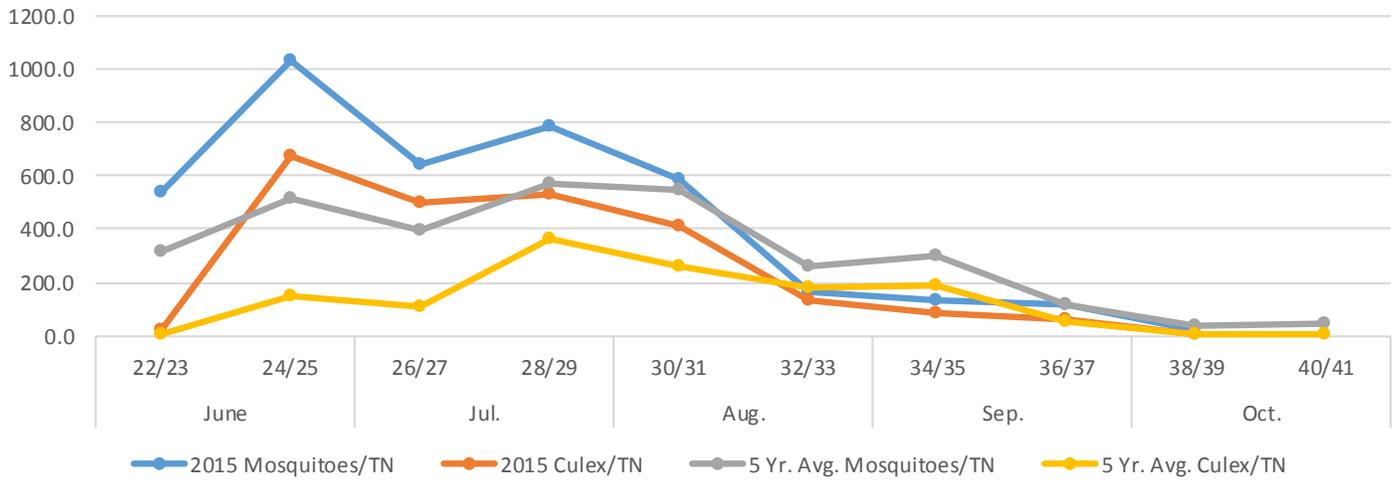
East Central Region counties included- Butler, Dodge, Douglas, Lancaster, Platte, Polk, Seward, and York

Southeast Region counties included- Jefferson and Richardson

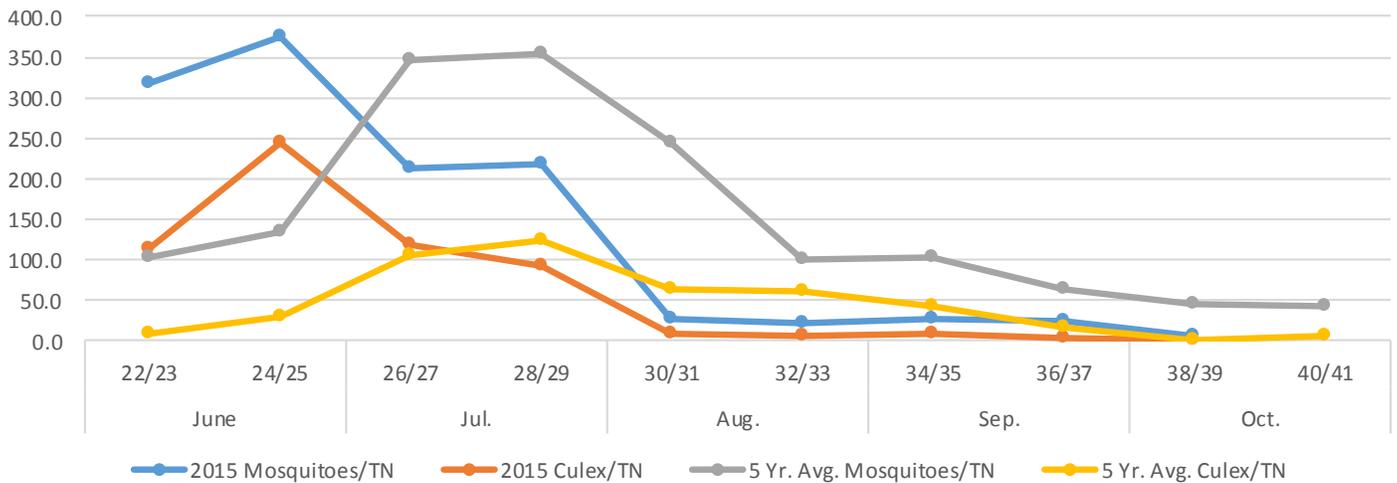


**NOAA Climate Divisions of Nebraska. 1= Panhandle Region, 2= North-Central Region, 3= Northeast Region, 5= Central Region, 6= East-Central Region, 7= Southwest Region, 8= South-Central Region, and 9= Southeast Region. Map from National Weather Service, Climate Prediction Center. Note that there is no region number four.**

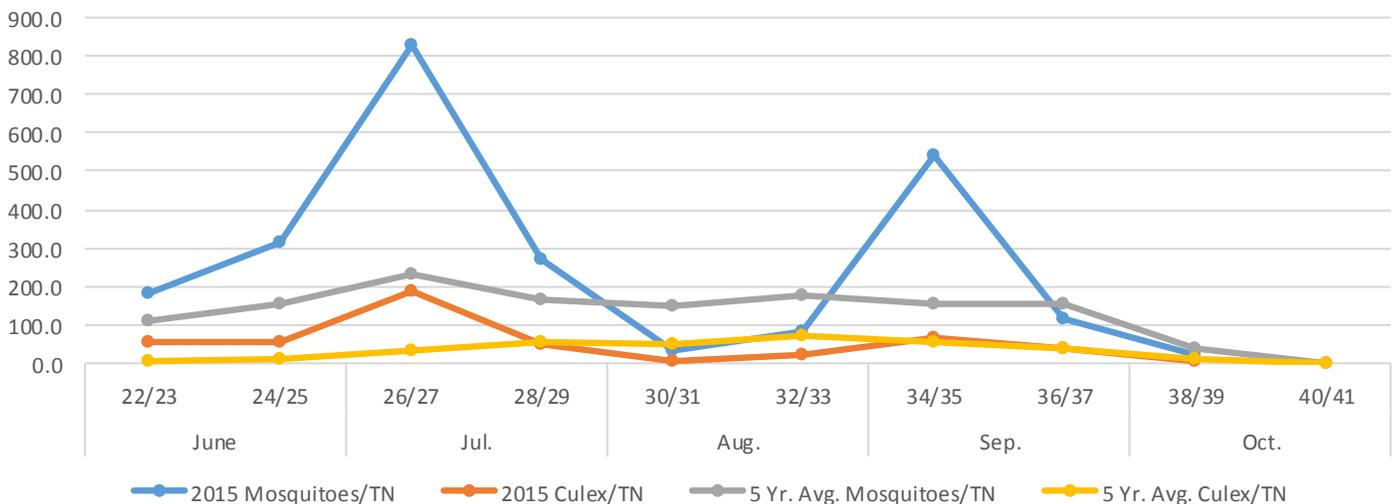
### Panhandle Region Mosquito Seasonality



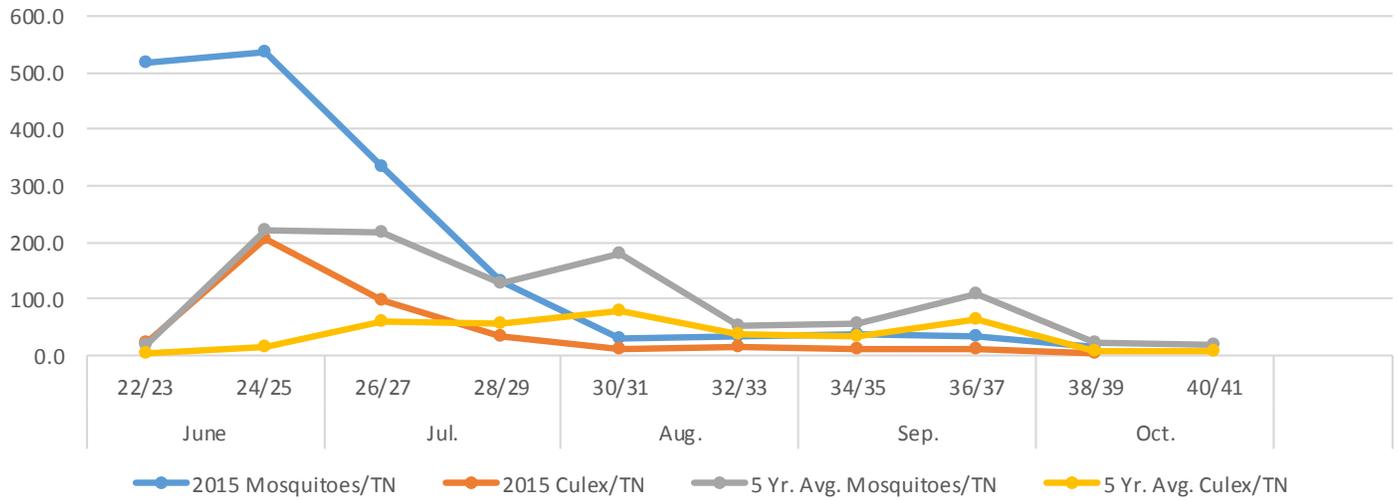
### North Central Region Mosquito Seasonality



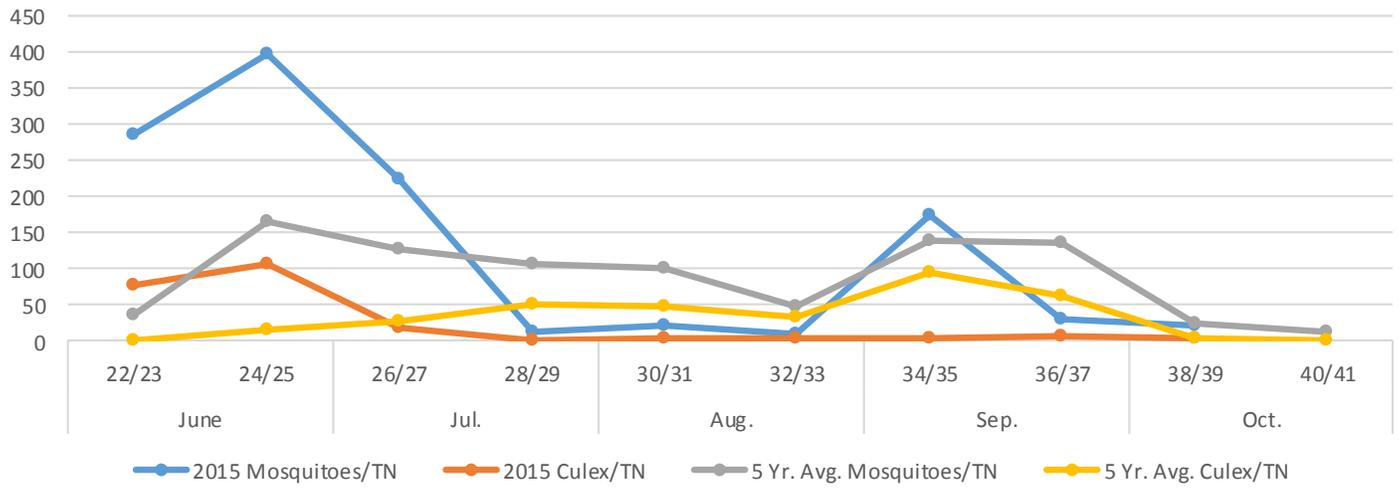
### Southwest Region Mosquito Seasonality



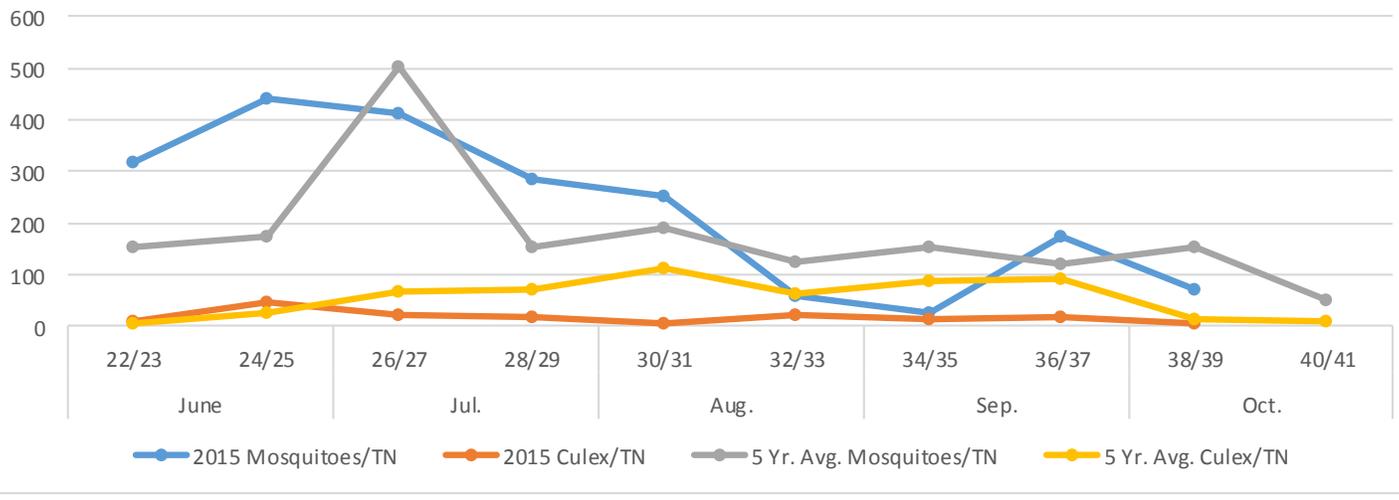
### Central Region Mosquito Seasonality



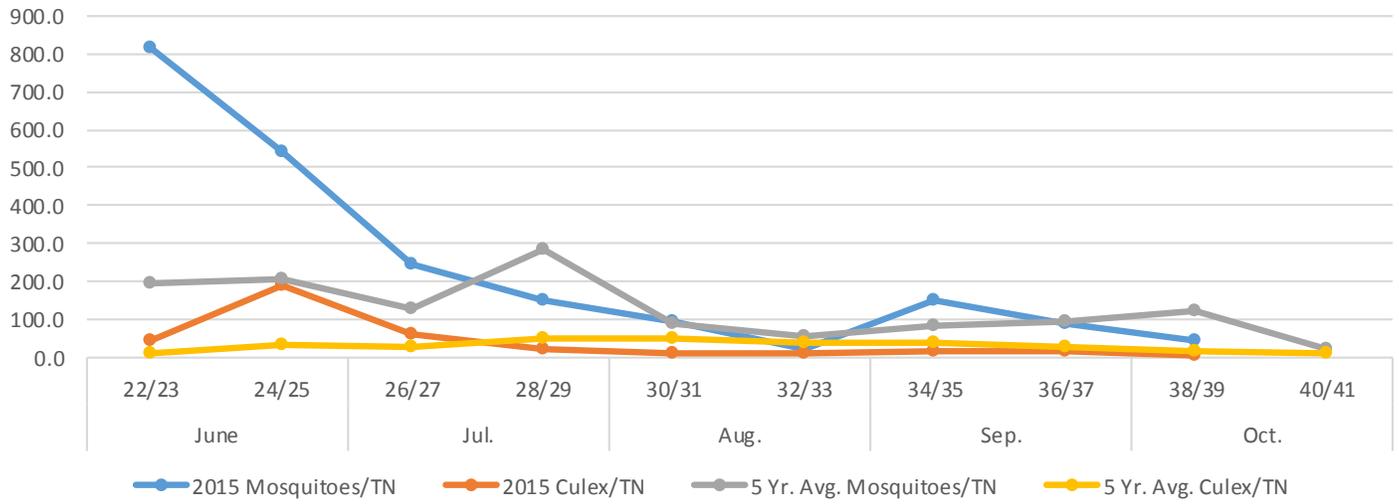
### South Central Region Mosquito Seasonality



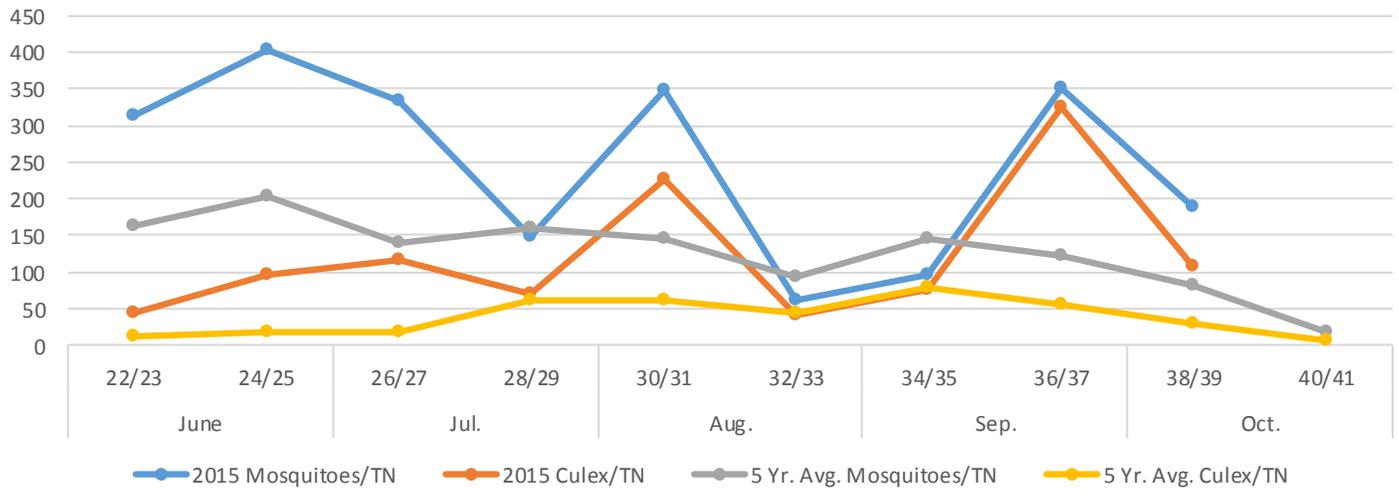
### Northeast Region Mosquito Seasonality



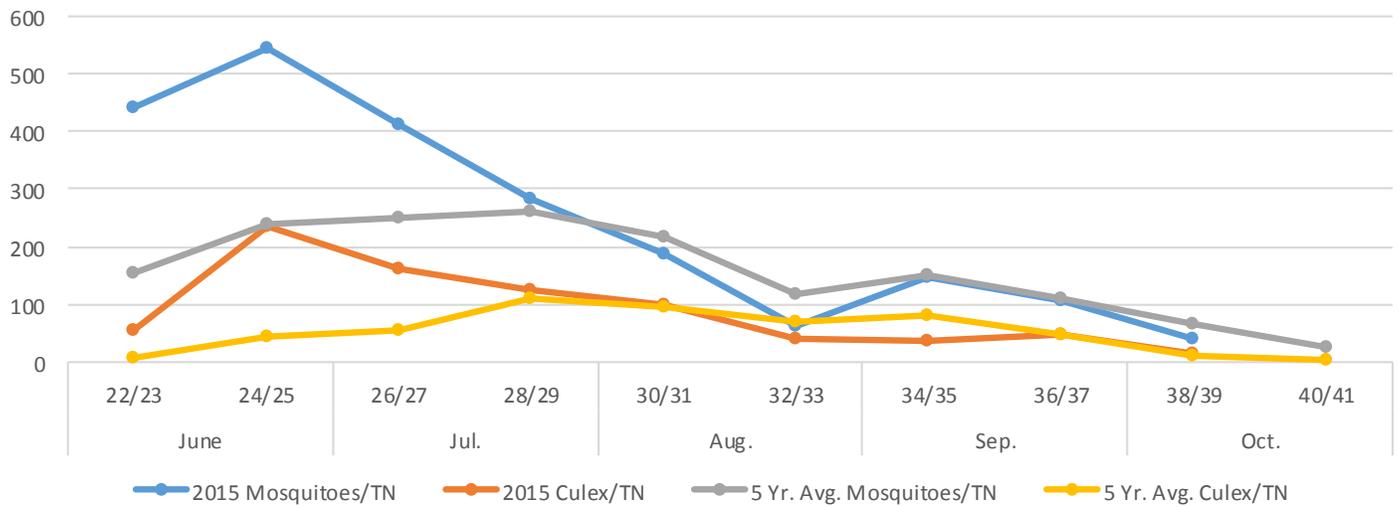
### East Central Region Mosquito Seasonality



### Southeast Region Mosquito Seasonality

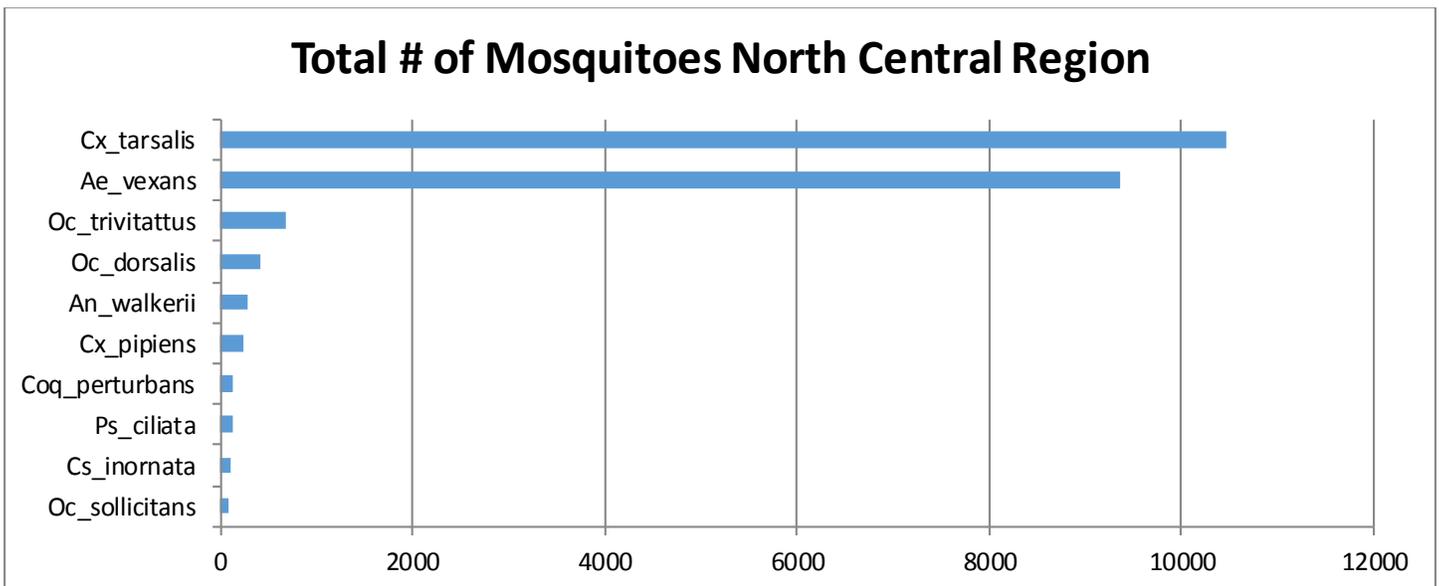
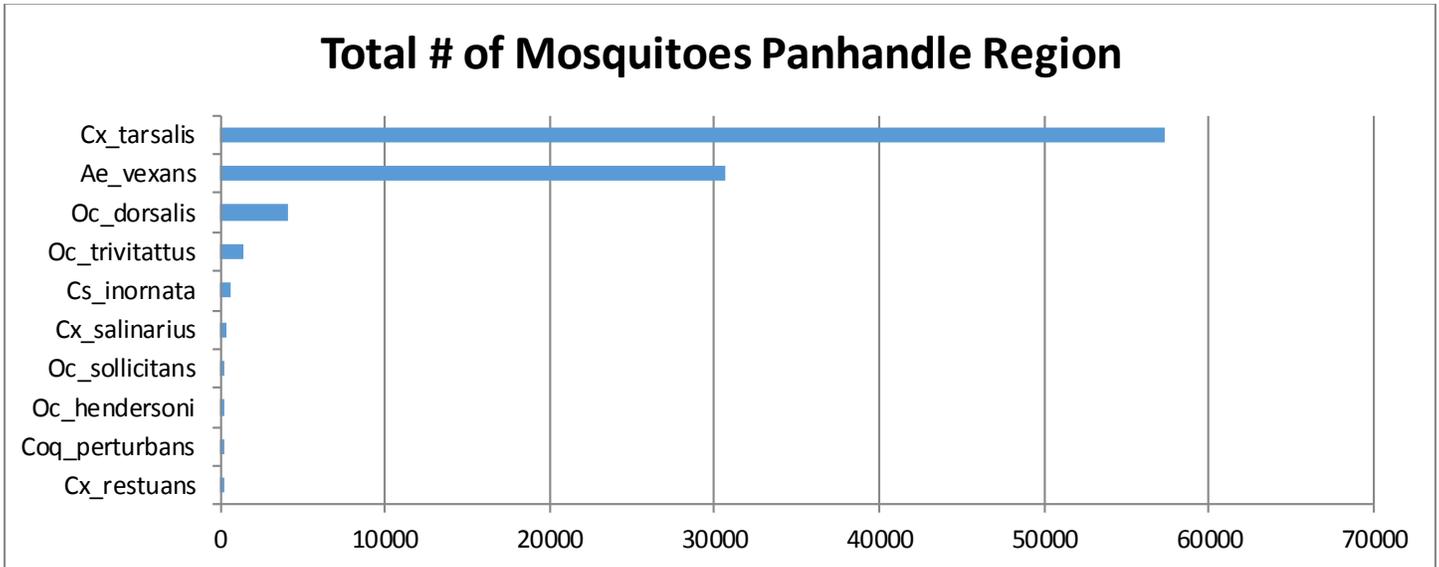


### Statewide Mosquito Seasonality

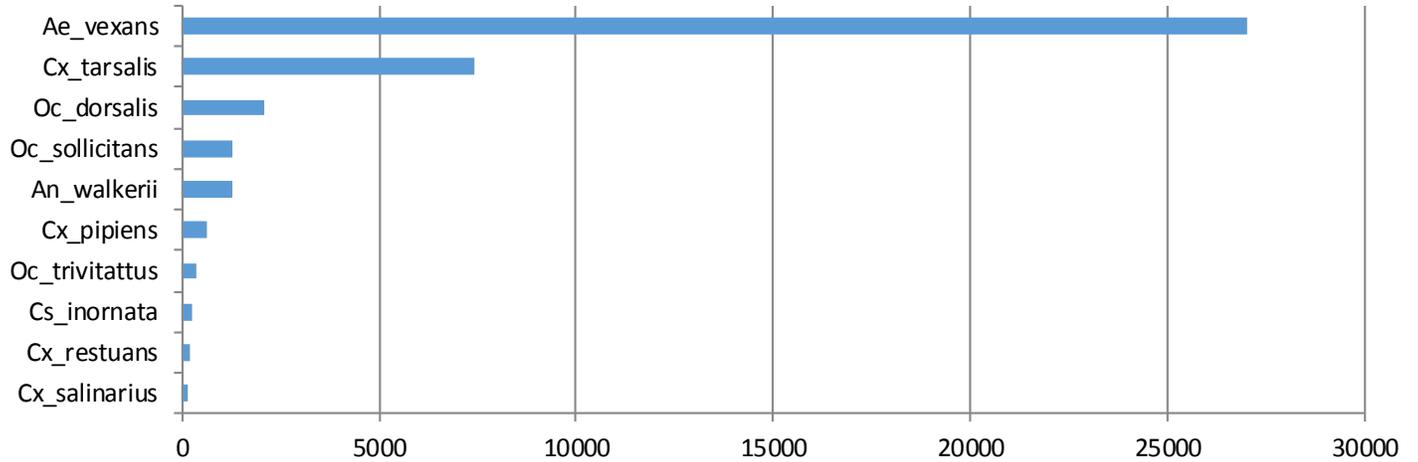


### Top Cumulative Mosquito Species By Region :

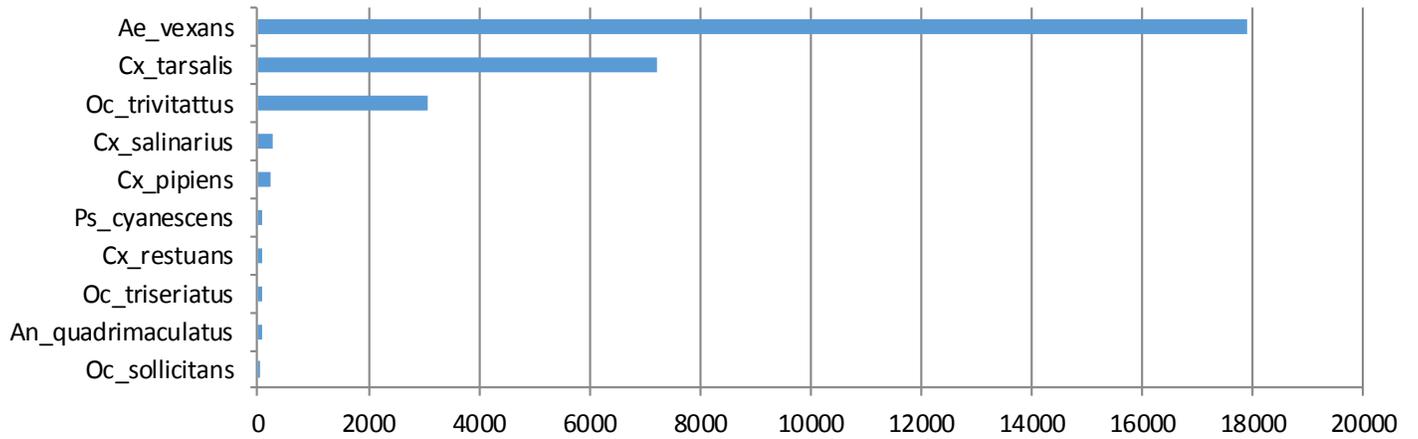
The following graphs show the top ten cumulative mosquito species for each of the eight regions in Nebraska for the current season. **Note that the first part of the mosquito species names have been abbreviated. Ae= Aedes, An= Anopheles, Cs= Culesita, Cx= Culex, Oc= Ochlerotatus, and Ps= Psorophora.**



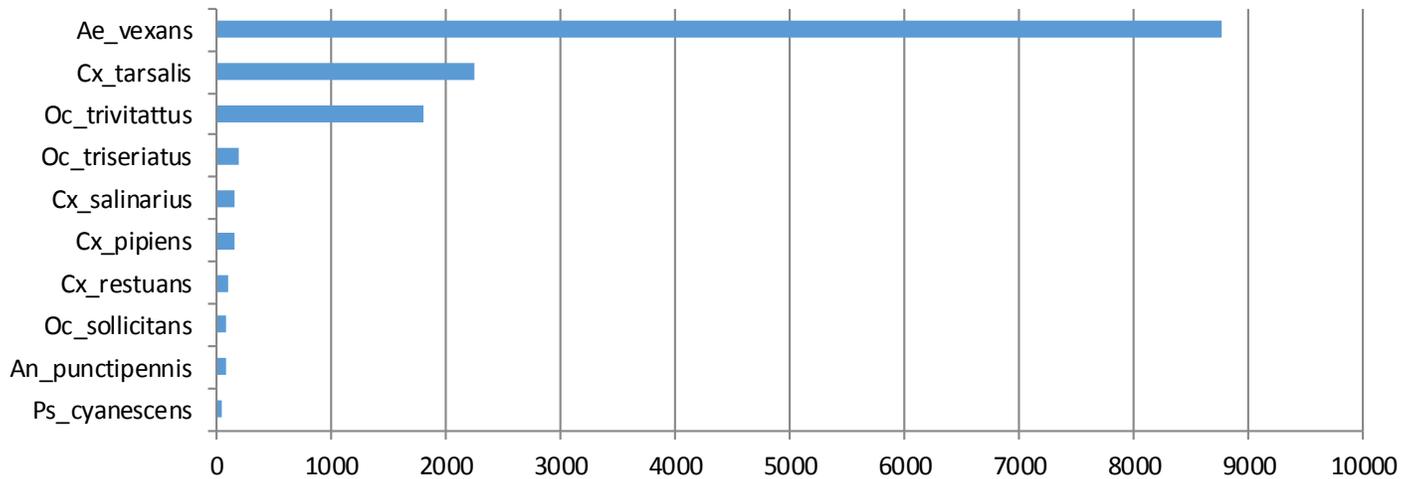
## Total # of Mosquitoes Southwest Region



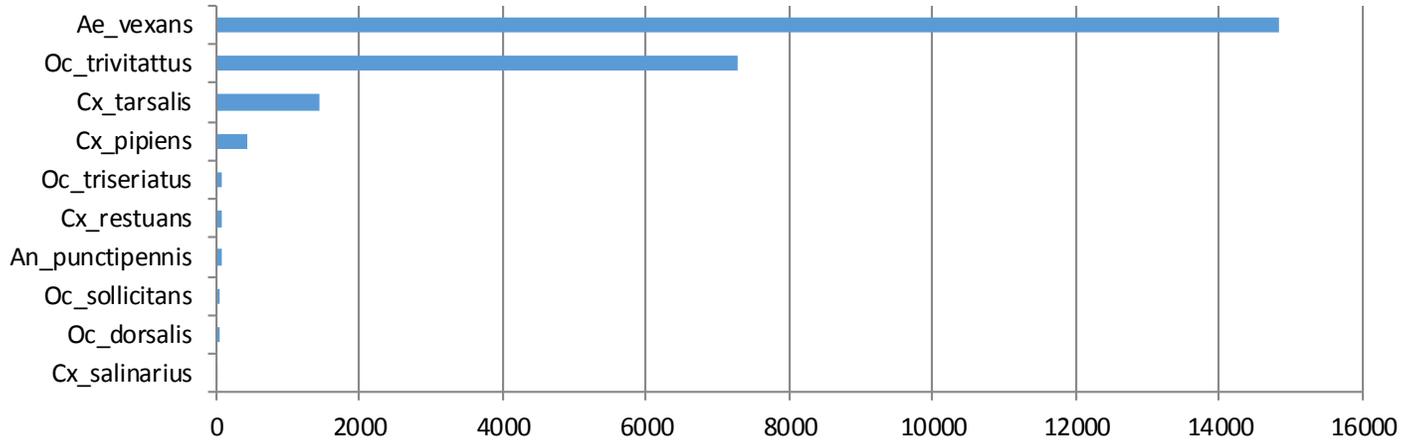
## Total # of Mosquitoes Central Region



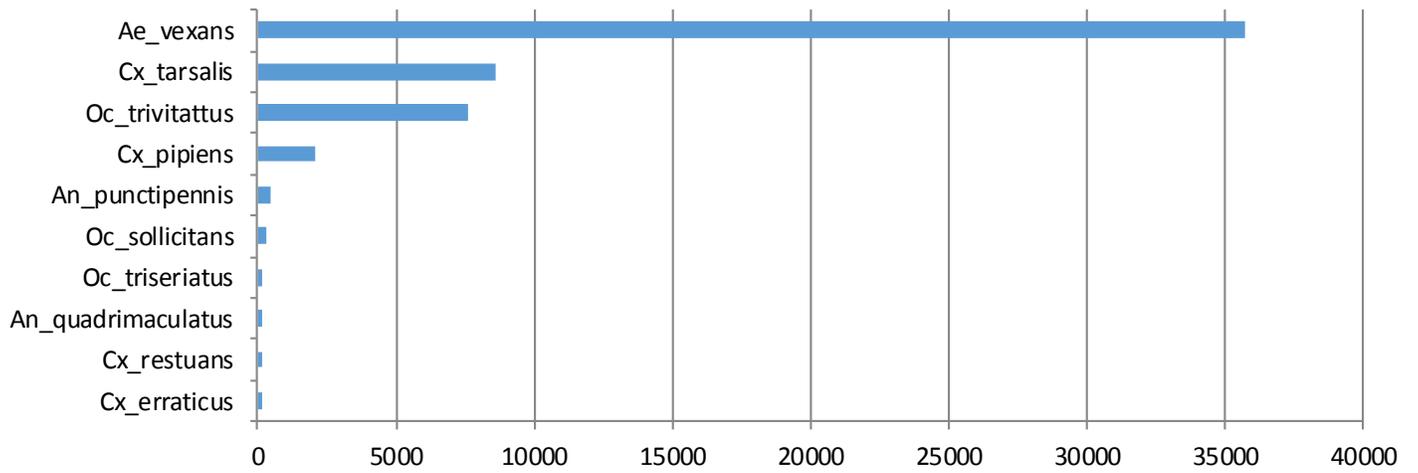
## Total # of Mosquitoes South Central Region



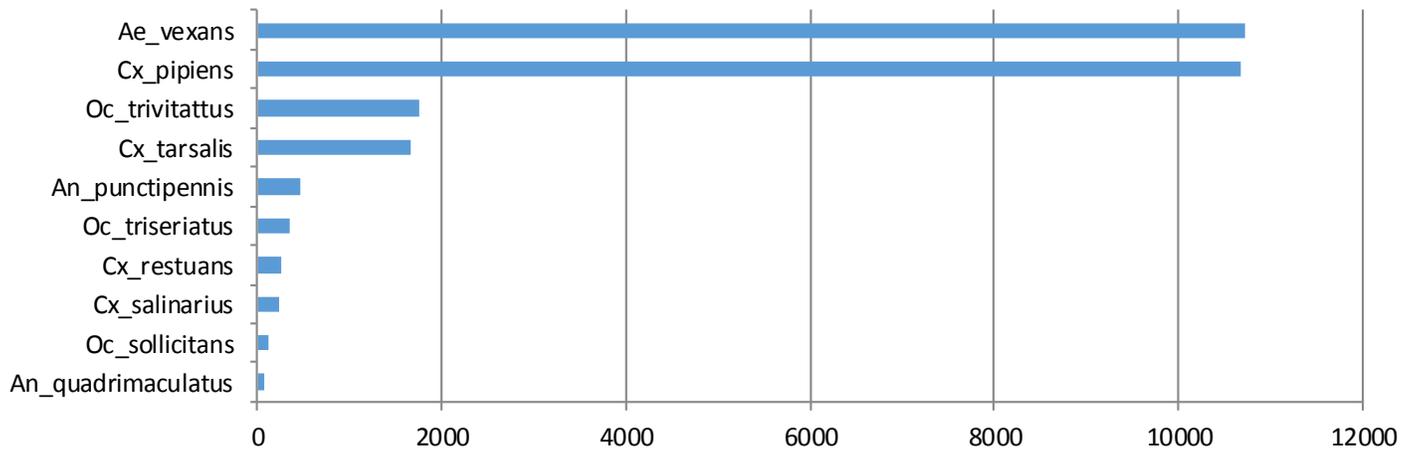
## Total # of Mosquitoes Northeast Region



## Total # of Mosquitoes East Central Region



## Total # of Mosquitoes Southeast Region



## Total # of Mosquitoes Statewide

