## September 2011

## Precipitation:

September was a quiet month with many dry days which aided harvest progress. The larger rainfall events that occurred in parts of North Dakota (ND) happened on the $1^{\text {st }}, 18^{\text {th }}, 19^{\text {th }}$, and $20^{\text {th }}$. The rainfall event on the $20^{\text {th }}$ was widespread with the higher amounts falling in the northeast. For September, the northeastern part of the state had above normal precipitation ranging from approximately $125 \%$ to $250 \%$ of normal (Figure 1. North Dakota State Climate Office). For the most part, the rest of the state had below normal precipitation of less than $50 \%$. The northwest corner had near


Figure 1. Precipitation Percent of Normal in September 2011 for North Dakota (North Dakota State Climate Office) normal September rainfall. September precipitation amounts ranged from a trace in the southeast to $\sim 4$ inches in the northeast. For many locations it was in the top 10 driest Septembers. For example, for Fargo it was the $4^{\text {th }}$ driest September since 1881.

## Temperature:

NDAWN September average air temperatures ranged from $55^{\circ} \mathrm{F}$ to $61^{\circ} \mathrm{F}$. NDAWN departure from normal temperatures ranged from $-1^{\circ} \mathrm{F}$ to $7^{\circ} \mathrm{F}$ (Figure 2. North Dakota State Climate Office). In the late hours of August 31 ${ }^{\text {st }}$ and the early hours of September $1^{\text {st }}$ a severe thunderstorm that produced powerful winds swept through northeast North Dakota (ND) and hit especially hard in northwestern Minnesota (MN) in which a peak wind of 121 mph was measured. The 121 mph peak wind is under review and could possibly become the new MN state record, beating the previous record of 117 mph . The first few


Figure 2. Temperature Departure from Normal in September 2011 for North Dakota (North Dakota State Climate Office) days of September had near normal average air temperatures for most parts of ND which was followed by a stretch from the $5^{\text {th }}$ through the $11^{\text {th }}$ of above normal average temperatures. The first killing frost hit on the $14^{\text {th }}$ $15^{\text {th }}$. Daily minimum temperatures on the $14^{\text {th }}$ fell to $28^{\circ} \mathrm{F}$ in parts of the central west. Daily minimum temperatures fell to $28^{\circ} \mathrm{F}$ and less primarily in the east on the $15^{\text {th }}$. Average temperatures rebounded after the $15^{\text {th }}$ to near normal. The $21^{\text {st }}-22^{\text {nd }}$ again had below normal average air temperatures for most. Beginning around the $25^{\text {th }}$ was a long stretch of warm, sunny days that went into October. The National Weather Service (NWS) recorded a record high temperature on the $28^{\text {th }}$ at Fargo with $90^{\circ} \mathrm{F}$ and Grand Forks airport with $88^{\circ} \mathrm{F}$.

