# PRAIRIE WIND TRAJECTORY AND CEREAL RUST RISK REPORT for June 3-9, 2025

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3. Environment and Climate Change Canada

Agriculture and Agri-Food Canada (AAFC) and Environment and Climate Change Canada (ECCC) have been working together to study the potential of trajectories for monitoring insect movements since the late 1990s. Trajectory models are used to deliver an early-warning system for the origin and destination of migratory invasive species, such as diamondback moth. In addition, plant pathologists have shown that trajectories can assist with the prediction of plant disease infestations and are also beginning to utilize these same data. We receive two types of model output from ECCC: reverse trajectories and forward trajectories.

'Reverse trajectories' (RT) refer to air currents that are tracked back in time from specified Canadian locations over a five-day period prior to their arrival date. Of particular interest are those trajectories that, prior to their arrival in Canada, originated over northwestern and southern USA and Mexico, anywhere diamondback moth populations overwinter and adults are actively migrating. If diamondback adults are present in the air currents that originate from these southern locations, the moths may be deposited on the Prairies at sites along the trajectory, depending on the local weather conditions at the time that the trajectories pass over our area (e.g. rain showers, etc.). Reverse trajectories are the best available estimate of the ''true'' 3D wind fields at a specific point. They are based on observations, satellite and radiosonde data.

**Disclaimer**

Information related to trajectory events based on forecast and diagnostic wind fields and cereal rust risk is experimental, and is **OFFERED TO THE PUBLIC FOR INFORMATIONAL PURPOSES ONLY**. Agriculture and Agri-Food Canada, Environment Canada, and their employees assume no liability from the use of this information.

## 1. RUST DEVELOPMENT IN SOURCE LOCATIONS

### a. Pacific Northwest (PNW)

i. Dr. Chen's most recent update on May 21, 2025 indicates that stripe rust has developed further in the PNW and this is likely due to rainfall and cooler temperatures over the last few weeks (https://striperust.wsu.edu/2025/05/21/stripe-rust-update-may-21-2025/ and Stripe rust update 05/21: Disease has been developing in Washington | WAWG). Unfortunately, weather conditions are forecast to continue to be favourable for stripe rust over the next couple of weeks. Stripe rust was noted in commercial fields as well as research trials/fields, but generally at low incidence levels. Symptoms of stripe rust were also noted on barley in a disease nursery site at Central Ferry station (Garfield County). With current and forecast weather conditions, Dr. Chen's recommendation is for fungicide application before flowering on susceptible to moderately susceptible winter wheat varieties, and herbicide timings for spring wheat. Moreover, he recommends continued scouting of previously sprayed fields where applications were done at least three weeks previously, as the rust pathogen may resume growth and sporulation. Previously, Dr. Chen reported that in addition to Washington State and Oregon, rust symptoms were also reported in Georgia (Dr. A. Martinez, UGA, stripe rust of wheat and crown rust of oat), Louisiana (Dr. S.A. Harrison, LSU, crown rust of oat, leaf and stripe rust of wheat), Texas (Dr. B. Gerrish, TAMU, leaf and stripe rust) and Kansas (Drs. Eric De Wolf and K. Andersen Onofro, KSU), although generally at low levels. However, as of Dr. Chen's May 21, 2025 update, he indicated that no additional states have reported stripe rust.

ii. Drs. C. Bates and T. Paulitz, USDA/Washington State University, provided additional information to Dr. Chen's recent report (https://smallgrains.wsu.edu/rusthtap/) They indicated that stripe rust

development has been observed in both commercial fields in the counties of Franklin and Adams , while observations were also noted in research fields in Garfield and Whitman counties. Although levels are generally low, some susceptible experimental lines have had very high severities. They also indicated that recent rainfall and cooler temperatures have favoured further development, while weather forecasts will likely encourage further stripe rust expansion. Fungicide recommendations are similar to those previously reported by Dr. Chen.

iii. The third Cereal Disease Laboratory (CDL) was released May 30, 2025, and Dr. Fajolu indicated that further increases in stripe rust have been noted for a number on susceptible trial lines in Garfield county, while reiterating observations from previous CDL reports (https://www.ars.usda.gov/ARSUserFiles/50620500/CRBs/2025%20CRB%20May%2030.pdf). Of note is a report of significant stripe rust on susceptible barley lines in research trials in Garfield county.

iv. Previously in the second USDA-ARS CDL report for 2025, Dr. Oluseyi Fajolu (CDL, St. Paul, Minnesota) reported development of leaf rust in three wheat samples from the Pullman region of the PNW (https://www.ars.usda.gov/ARSUserFiles/50620500/CRBs/2025%20CRB%20May%2016.pdf).

v. The USDA-ARS Cereal Disease Laboratory posts maps showing observations of stripe and leaf rust in the USA and maps as of May 30, 2025 are shown in Figures 1a and 1b, respectively for the PNW region.

vi. **As of June 13, 2025, further development of stripe rust and forecast weather conditions in the PNW suggest this region represents a low to moderate risk of being a source of stripe rust inoculum for Prairie wheat growers in 2025. Stripe rust development in the PNW over the next couple of weeks could increase the risk for Prairie wheat producers. Leaf rust of wheat may also increase in risk depending on further reports from the PNW over the next few weeks.**

vii. Currently there are no reports of stripe rust symptoms in Prairie winter or spring wheat crops.

b. **Texas/Oklahoma**

i. In the first USDA-ARS Cereal Disease Laboratory (CDL) report for 2025, Dr. Oluseyi Fajolu (CDL, St. Paul, Minnesota) reported that CDL survey activities in Texas indicated the development of stem rust in various research trials and monitoring plots in Uvalde and Medina counties (Dr. O. Fajolu, Cereal Rust Bulletin #1, April 25, 2025, https://www.ars.usda.gov/ARSUserFiles/50620500/CRBs/2025%20CRB%20April%2025.pdf). However, in a subsequent May 16, 2025 bulletin (#2) Dr. Fajolu indicated these symptoms were not due to stem rust, but leaf rust (https://www.ars.usda.gov/ARSUserFiles/50620500/CRBs/2025%20CRB%20May%2016.pdf).

ii. In the April 25, 2025 report Dr. Fajolu indicated the appearance of leaf and stripe rust in Texas from late February to April depending on location. Leaf rust has been noted in Brazos, McLennan, Hidlago, and Duval,TX with trace to elevated levels, especially in April 2025. Stripe rust was noted in McLennan County in late February 2025, but at low levels. In the May 16, 2025 bulletin, leaf rust was reported in four Oklahoma counties, although at low levels with winter wheat fields being past anthesis.

iii. The third Cereal Disease Laboratory (CDL) released May 30, 2025, Dr. Fajolu indicated that increases in leaf rust have been noted for a number of locations in Oklahoma (https://www.ars.usda.gov/ARSUserFiles/50620500/CRBs/2025%20CRB%20May%2030.pdf). Counties confirmed to have leaf rust include Blaine, Caddo, Cotton, Grady, Garfield, Kingfisher, Payne, Tillman, and Washita.

iv. Dr. Fajolu also covers observations related to oat stem and crown rust. Both diseases were observed in Texas in early and late April in monitoring and disease screening plots, wind breaks (oat used in watermelon fields) as well as wild oats in ditches. Levels ranged from trace to significant depending on the variety/breeding line. Note these observations reported in the Cereal Rust Bulletin #1 are mainly based on surveillance activities by Drs. Y. Jin and M. Moscou (USDA-ARS Cereal Disease Laboratory (CDL) ([CEREAL-RUST-SURVEY] CDL Southern Texas and Louisiana survey trip, April 14, 2025, http://fmp.crl.umn.edu/fmi/webd/CRS-mail). As of Cereal Rust Bulletins #2 and 3, there have been no further reports of oat crown rust.

v. Previous observations of stripe rust and leaf rust in Texas in late February were reported by S. Liu, Texas A&M AgriLife Research (TAMU) based on observations at research sites by Dr. B. Gerrish (TAMU) and T. Mays (IPM-Hill County) at or near College Station, Waco, Castroville, McGregor, and Uvalde, TX ([CEREAL-RUST-SURVEY] FW: TAMU Variety Testing Rust Update, March 13, 2025, http://fmp.crl.umn.edu/fmi/webd/CRS-mail).

vi. In early May, Dr. M. Aoun, indicated that both leaf and stripe rust were at low levels based on observations from multiple areas of the state in late April 2025 (OSU Wheat Pathology). In the CDL Cereal Rust Bulletin #2, stripe rust was reported in eight Oklahoma counties (https://www.ars.usda.gov/ARSUserFiles/50620500/CRBs/2025%20CRB%20May%2016.pdf).

vii. In an update from Dr. Aoun for Oklahoma on May 22, 2025 further leaf rust development was indicated with reports from nine counties, although Dr. Aoun indicates the delayed appearance will likely not result in yield losses due to the late stage of crop development (https://spotlight.okstate.edu/wheat-pathology/2025/05/22/wheat-disease-update-may-22-2025/). Note stripe rust was not mentioned in the May 22, 2025 update, just leaf rust.

viii. The most recent update from Dr. Aoun, indicates that stripe and leaf rust remain low with limited further development and as indicated in the previous report the late appearance or rust will have limited impact on Oklahoma wheat yields ([CEREAL-RUST-SURVEY], M. Aoun, Oklahoma wheat disease update, June 2, 2025, http://fmp.crl.umn.edu/fmi/webd/CRS-mail).

ix. The USDA-ARS Cereal Disease Laboratory posts maps showing observations of stripe and leaf rust in wheat and crown rust in oat in the USA and the maps as of May 30, 2025 are shown in Figures 2-4, respectively.

x. **As of June 13, 2025, there is generally a low risk associated with the Texas/Oklahoma region being a significant source of stripe, leaf, stem and crown rust inoculum for dispersal into the Prairie region of Canada.** It is unlikely that further rust development will occur and increase this risk, especially given that as of June 8, 2025, 40% and 5% of the Texas and Oklahoma winter wheat crops have been harvested, respectively (https://quickstats.nass.usda.gov/results/6973F6E0-3DE0-3153-BEBB-489BD4DB599D). Note most Texas and Oklahoma winter wheat crops are likely mature and they will no longer represent an important source of uredospores which only develop on green living non-senesced plant tissues.

c. **Kansas/Nebraska**

i. Drs. Eric De Wolf and K. Andersen Onofro, KSU stated in their wheat rust update report that in addition to previous reports from Texas and Oklahoma, stripe rust was found in SW Kansas (Ford County) on one leaf from the mid-canopy in a field planted to a moderately susceptible winter wheat variety ([CEREAL-RUST-SURVEY] Wheat Rust Update -- Kansas (http://fmp.crl.umn.edu/fmi/webd/CRS-mail). Current surveillance efforts in Kansas indicate that stripe rust is absent from commercial fields as of April 28, 2025 and based on this and the late appearance of low levels observed in Texas and Oklahoma, the risk of stripe rust in Kansas is low. There were no observations of stem rust in Kansas as of late April, while trace levels of leaf rust were noted in the state.

ii. In an disease update on May 1, 2025, Dr. K. Andersen Onofre (KSU) reported stripe rust at lower levels in Labette and Ford Counties and the risk was generally low for Kansas, even though conducive weather has occurred (https://eupdate.agronomy.ksu.edu/article/wheat-disease-update-fusarium-head-blight-and-leaf-spot-risk-elevated-in-kansas-639-12). However, in a subsequent update as of May 8, 2025 three more stripe observations were noted, and Dr. K. Andersen Onofre recommended to Kansas farmers that scouting for further signs of this disease will be important (https://eupdate.agronomy.ksu.edu/article/wheat-disease-update-stripe-rust-and-head-blight-risks-640-9).

iii. As of April 30, 2025, there have been no reports of stripe rust in Colorado (Dr. R. Roberts, Colorado State University (CSU), https://coloradowheat.org/colorado-wheat-disease-newsletter-april-30-2025/).

iv. County-based observations of stripe rust in Kansas and Oklahoma winter wheat fields as of May June 4, 2025, are shown in Figure 5 (https://wheat.agpestmonitor.org/stripe-rust/). Note only some states appear to be using this reporting tool.

v. Dr. DeWolf provided an update on June 3, 2025 regarding the appearance of low levels of stem rust in two Kansas counties, while also indicating stripe rust had been found in several central and northwestern Kansas counties, but generally at low levels ([CEREAL-RUST-SURVEY], E. DeWolf, Stem Rust Detection in Kansas, June 3, 2025, http://fmp.crl.umn.edu/fmi/webd/CRS-mail).

vi. There was a recent report of stripe rust in Ontario and this may be related to overwintering of the pathogen on winter wheat, while the agpest monitor site also indicates further detections (Figure 5, https://www.realagriculture.com/2025/05/growers-must-be-vigilant-as-stripe-rust-confirmed-in-ontario/?utm_source=twitter&utm_campaign=May%2014%2C%202025&utm_medium=soci). This early development could act as a source of stripe rust for further regional development and as a consequence scouting, especially in fields planted to susceptible varieties, may be needed along with potential fungicide application.

vii. As of May 12 and 16, 2025 both stripe and leaf rust have been reported in Ontario (https://x.com/OntAg/status/1925899641133953228; https://farmtario.com/crops/ontario-growers-urged-to-scout-for-stripe-rust/).

viii. Stripe rust has been reported for the first time in 2025 in Nebraska. Drs. Wegulo, Broderick, and Frels reported in their May 23, 2025 update that stripe rust was detected in SE Nebraska on May 22, 2025 (https://cropwatch.unl.edu/first-signs-stripe-rust-detected-southeast-nebraska-wheat-fields/). In a subsequent update on May 30, 2025 Dr. S. Wegulo found stripe rust in in Lancaster and Mead Counties in research trials ([CEREAL-RUST-SURVEY] Update from Nebraska, Dr. S. Wegulo, https://cropwatch.unl.edu/disease-severity-varies-risk-fusarium-head-blight-rises-nebraska/). In Lancaster there were trace incidence levels although severities ranges from low to moderate, while at Mead moderate incidence was observed while severities ranged from trace to very high depending on variety (Figure 6a).

ix. In his latest update Dr. Wegulo has indicated that stripe rust has continued to spread in Nebraska with a total of 14 counties reporting stripe rust symptoms, while only one county has reported very low levels of leaf rust (Figures 6a and b).

x. **As of June 13, 2025, there is generally a low risk associated with the Kansas/Nebraska region being a significant source of stripe and leaf rust inoculum for dispersal into the Prairie region of Canada.** However, the expansion of stripe rust is concerning and if cooler, wetter weather occurs over the next 7-14 days the risk of stripe rust inoculum coming from these USA regions could increase.

## 2. Reverse trajectories (RT)

a. Since April 1, 2025 the majority of reverse trajectories that have crossed the prairies have originated from the Pacific Northwest (Idaho, Oregon and Washington) (Figures 7-12).

b. **Pacific Northwest (Washington, Oregon, Idaho)** – Since April 1, 2025, the greatest number of reverse trajectories, crossing the Prairies, have originated from the Pacific Northwest (n=696, Figure 7). Most of these trajectories passed over Alberta and Saskatchewan (Figure 8). For the week of June 3-9, 2025 there have been a total of two trajectories for two locations down from 114 reverse trajectories that passed through the prairie region over 36 locations from May 27-June 2, 2025. LETHBRIDGE and MEDICINE HAT, AB each had one trajectory from the Pacific Northwest from June 3-9, 2025

   i. **As of June 9, 2025, there is low risk associated with the PNW region being a significant source of wind trajectories for dispersal of the stripe rust pathogen into most of the Prairie region.**

c. **Oklahoma and Texas** – Since April 1, 2025, 72 reverse trajectories, originating over Oklahoma and Texas were reported to cross the prairies, mainly in Manitoba and eastern Saskatchewan (Figure 9). Most of these trajectories passed over Manitoba and central to eastern Saskatchewan (Figure 10). This past week there were no trajectories from the TX/OK region.

   i. **As of June 9, 2025, there is a low risk associated with the TX/OK region being a significant source of wind trajectories for dispersal of rust pathogens into the Prairie region of Canada.**

d. **Nebraska and Kansas** – A total of 247 reverse trajectories, originating from Kansas and Nebraska have crossed the prairies, primarily Manitoba and Saskatchewan (April 1 – May 26, 2025) (Figure 11). Most of these trajectories passed over Manitoba and central to eastern Saskatchewan (Figure 12). From June 3-9, 2025, a total of five trajectories over five locations passed through the Prairies (Table 2). GRENFELL and YORKTON, SK and DAUPHIN, RUSSELL and SWAN RIVER, MB each had a total of one wind trajectory event from June 3-9, 2025.
    i. **As of June 9, 2025, there is a low risk associated with the KS/NE region being a significant source of wind trajectories for dispersal of rust uredospores into most of the Prairie region.**

## 3. Prairie Crop Development, Weather Conditions, and Overwintering of Rust

a. Winter wheat – Winter wheat has been resuming growth across the prairie region in April and early to mid May with most moving past the stem elongation phase and into the flag leaf emergence and booting/heading stages (https://tinyurl.com/pba6d29u; https://tinyurl.com/56jypr4e).
b. Spring wheat – Across the prairie region spring wheat has been planted with crops moving from the seedling stage into tillering and stem elongation (https://tinyurl.com/yubwx8hy; https://tinyurl.com/pba6d29u; https://tinyurl.com/56jypr4e).
c. This past week (June 2-8, 2025) the average temperature across the Prairies ranged from around 9 to 15.8°C, with the coolest areas being in south Peace River region of Alberta (Figure 13).
d. Growing season temperatures (April 1-June 8, 2025) have been slightly above average for large areas of the Prairies, although the BC Peace was up to 3.2°C above normal for this period, while areas in southcentral and southeastern Saskatchewan and western Manitoba have been cooler than normal (Figure 14).
e. Accumulated rainfall over the past week (June 2-8, 2025) ranged from around 8 to 24 mm for large areas of the Prairie region, except in a band from the Peace River region down into centre and eastern Alberta and southwestern and south central of Saskatchewan (Figure 15).
f. Growing season rainfall from April 1 to June 8, 2025 has been below normal across much of the Prairie region, with south central to SE Saskatchewan and southwestern Manitoba having somewhat higher than normal rainfall (Figure 16).
g. Currently, there are no reports of early season stripe rust development in winter wheat, which would suggest potential overwintering, especially of stripe rust (personal communication: S. Rehman, R. Aboukhaddour, AAFC Lethbridge; and H.R. Kutcher, U. of S.).

## 4. Overall Rust Risk Assessment and Need For In-Crop Scouting

a. **Crop development and weather**
    i. Prairie winter wheat crops are generally moving into the booting to head emergence growth stages, while much of the spring wheat crop is ranging from the seedling to 4-5 leaf stages and tillering .
    ii. Temperatures have been somewhat higher than normal for most of the Prairie region since April 1, 2025, and from June 2-8, 2025 temperatures have ranged from around 9 to 15.8°C. These temperatures are generally not conducive to rust development, although cooler temperatures are more conducive for stripe rust versus leaf and stem rust.
    iii. Growing season rainfall for the Prairie region has been generally drier than normal. Recent rainfall in some areas the Prairies could potentially have washed rust spores from the air and into wheat crops, especially winter wheat, while also resulting in canopy moisture conditions that may favour infection and further rust development.
b. **Pacific Northwest** – There were very low numbers of reverse wind trajectories that passed over the PNW region and into the prairies from June 3-9, 2025. Although, stripe rust development continues, it is generally lower versus 2024; however, further development may occur over the next 1-2 weeks. **Overall, as of June 12, 2025 the risk of stripe rust appearance from the PNW is generally limited and scouting for this disease in the Prairie region is generally not urgent (Figure 17).**
c. **Texas-Oklahoma corridor** – There were no wind trajectories that passed over the TX/OK region and into the prairies from June 3-9, 2025, while development of stripe and leaf rust of wheat is generally limited. Moreover, most of the crop is likely mature, with harvest progressing. **Overall, as of June 12, 2025 the risk**

**of stem, leaf, stripe, and crown rust appearance from the Texas-Oklahoma corridor is limited and scouting for these diseases in the Prairie region is not urgent (Figure 18).**

d. **Kansas-Nebraska corridor** – There was a very low number of wind trajectory events from the KS/NE region from June 3-9, 2025. **Overall, as of June 12, 2025 the risk of stem, leaf, stripe, and crown rust appearance from the Kansas-Nebraska corridor is generally limited and scouting for these diseases in the Prairies is not urgent** (**Figure 19).** However, continuing rust (mainly stripe rust) observations, especially in Nebraska and further development may increase the risk.

e. Where farmers or consultants noticed stripe rust development on winter wheat in the fall of 2024, it is recommended to scout winter wheat fields that have resumed growth in spring 2025. Scouting is especially critical where the variety being grown is susceptible/moderately susceptible to stripe rust. Currently, there are no early spring reports of stripe rust on winter wheat.

## 5. Contacts for rust research and extension expertise

a. **Research**

i. Reem Aboukhaddour, AAFC Lethbridge, AB, reem.aboukhaddour@agr.gc.ca. Stripe rust;
ii. H.R. Kutcher, University of Saskatchewan, Saskatoon, SK, randy.kutcher@usask.ca. Stripe rust;
iii. B. McCallum, AAFC Morden, MB, brent.mccallum@agr.gc.ca. Leaf, stem, and stripe rust;
iv. Xiben Wang, AAFC Brandon/Morden, MB, xiben.wang@agr.gc.ca. Stem and crown rust of oat.
v. S. Rehman, Western Crop Innovations (formerly Olds College/Alberta Agriculture), Field Crop Development Centre, Lacombe, AB, srehman@westerncropinnovations.com. Stripe and leaf rust;
vi. G. Brar, University of Alberta, gurcharn.brar@ualberta.ca. Stripe rust.

b. **Extension**

i. Alberta Ministry of Agriculture and Irrigation, Mike Harding, michael.harding@gov.ab.ca;
ii. Saskatchewan Ministry of Agriculture, Alireza Akhavan, alireza.akhavan@gov.sk.ca;
iii. Manitoba Ministry of Agriculture, TBA.

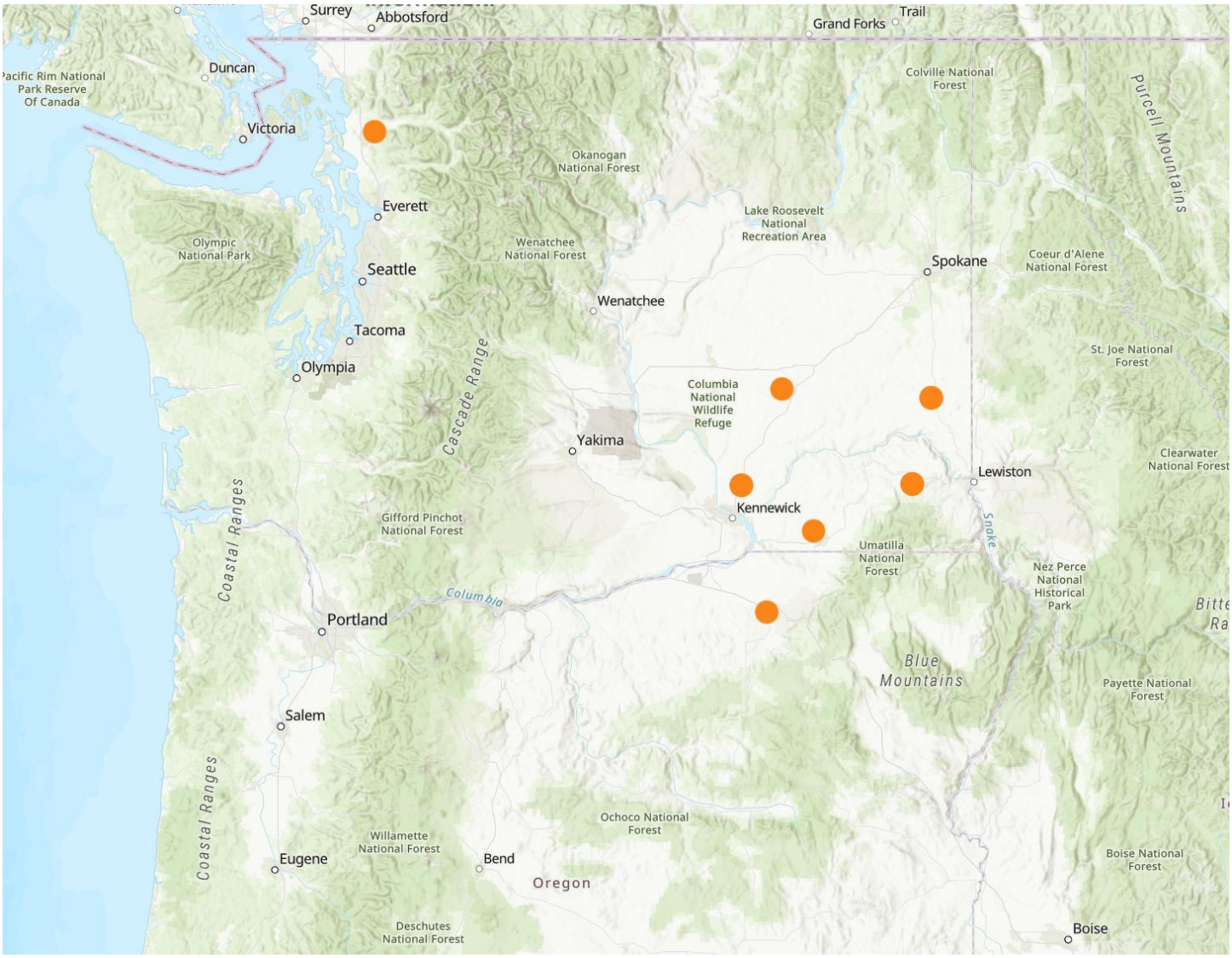



**Figure 1a. Pacific Northwest stripe rust observations in wheat, USDA-ARS, Cereal Disease Laboratory, Cereal Rust Observation Maps as of May 30, 2025 (site checked on June 13, 2025 with not changes). https://usdaars.maps.arcgis.com/apps/mapviewer/index.html?webmap=7eabb3bc66c045568a406569b731ac6d (note the map is updated as new reports are received).**


**Figure 1b. Pacific Northwest leaf rust observations in wheat, USDA-ARS, Cereal Disease Laboratory, Cereal Rust Observation Maps as of May 30, 2025 (site checked on June 13, 2025 with not changes), https://usdaars.maps.arcgis.com/apps/mapviewer/index.html?webmap=5dedcdc1a86443a09189c2b6e5598c54 note the map is updated as new reports are received).**

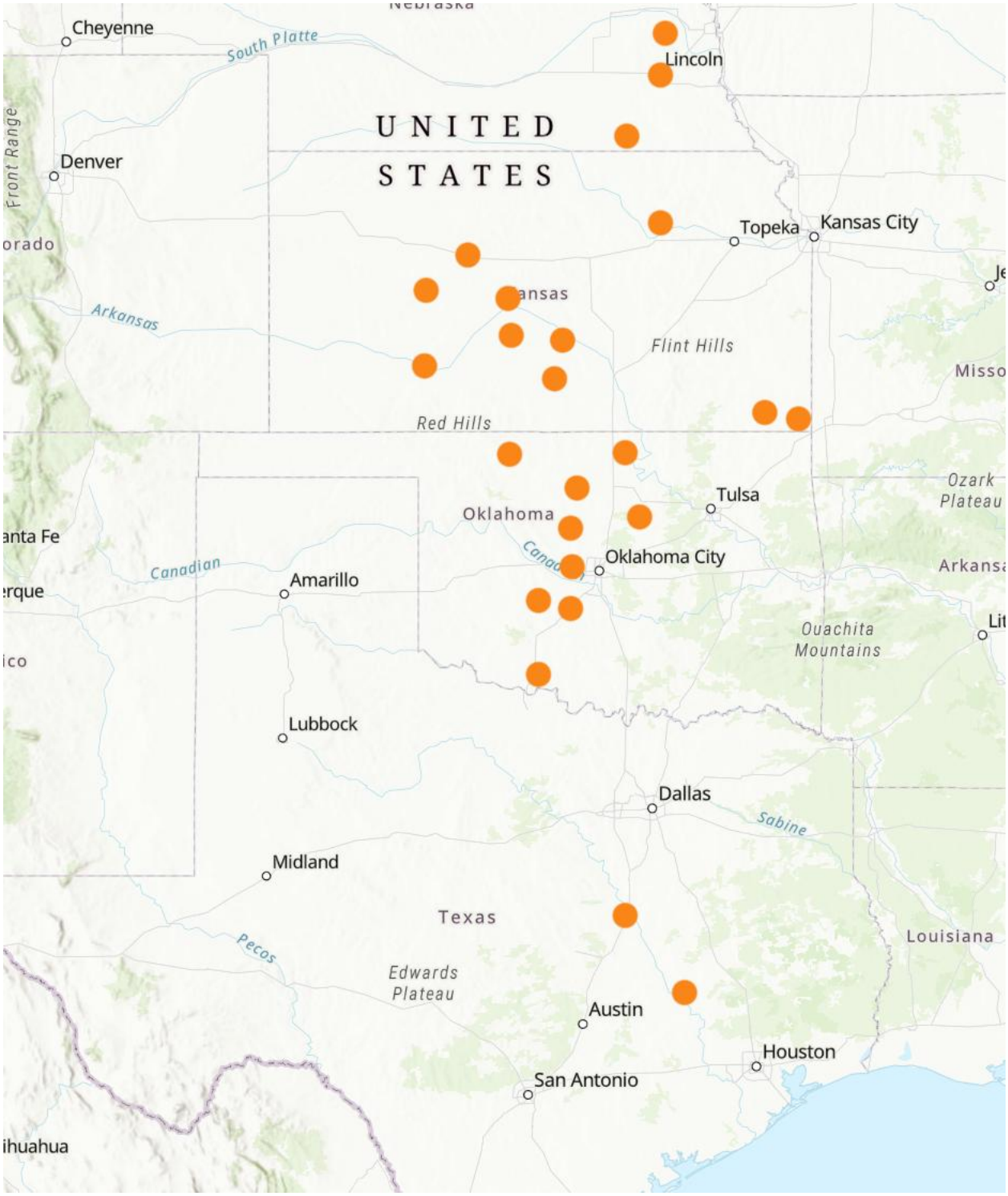



**Figure 2. Texas, Oklahoma, and Kansas stripe rust observations in wheat, USDA-ARS, Cereal Disease Laboratory, Cereal Rust Observation Maps as of May 30, 2025 (site checked on June 13, 2025 with not changes), https://usdaars.maps.arcgis.com/apps/mapviewer/index.html?webmap=7eabb3bc66c045568a406569b731ac6d (note the map is updated as new reports are received).**

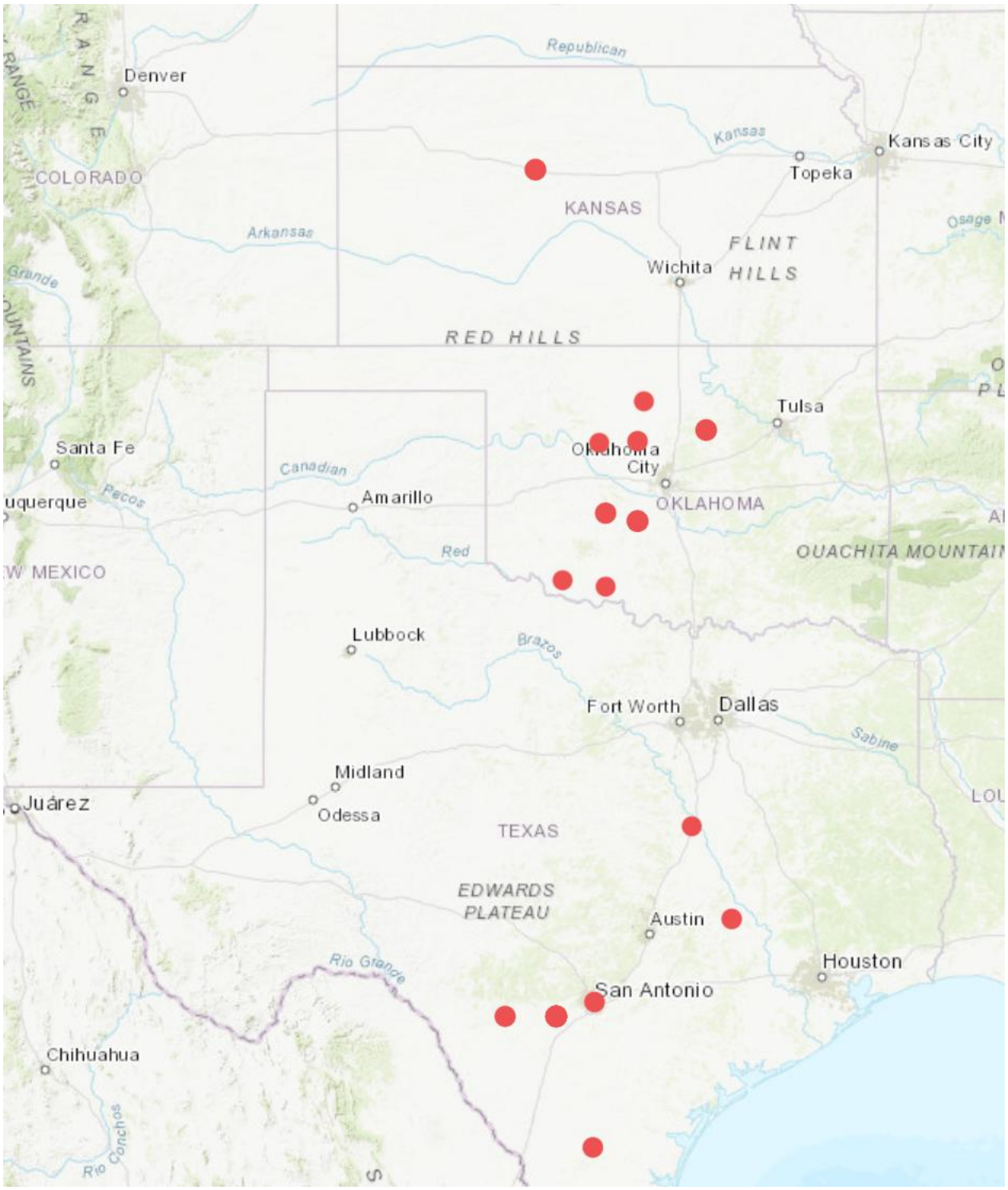



**Figure 3. Texas and Oklahoma leaf rust observations/collections in wheat, USDA-ARS, Cereal Disease Laboratory, Cereal Rust Observation Maps as of May 30, 2025 (site checked on June 13, 2025 with not changes), https://usdaars.maps.arcgis.com/apps/mapviewer/index.html?webmap=5dedcdc1a86443a09189c2b6e5598c54 (note the map is updated as new reports are received).**

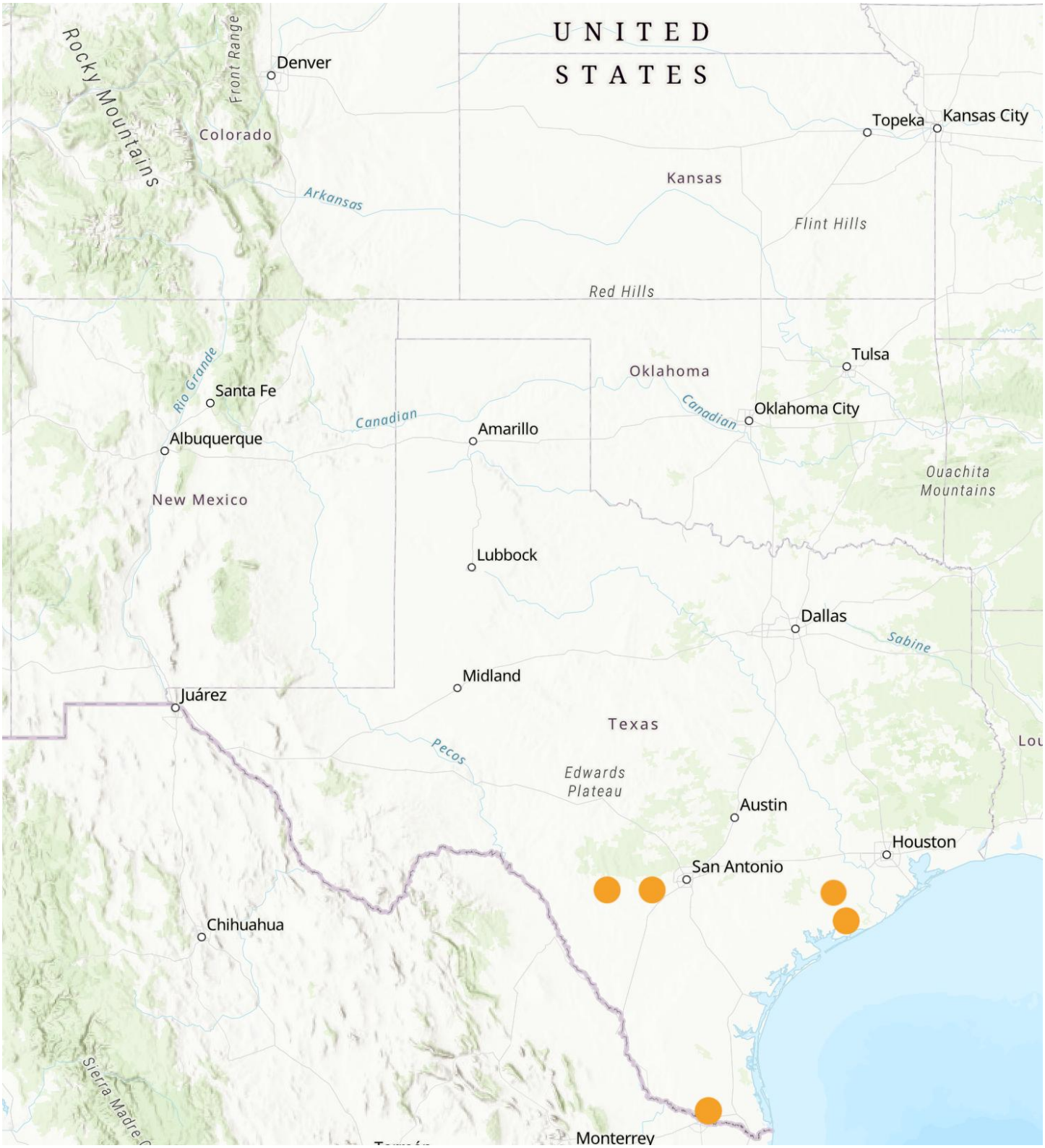



**Figure 4. Texas oat crown rust observations/collections in wheat, USDA-ARS, Cereal Disease Laboratory, Cereal Rust Observation Maps as of May 30, 2025 (site checked on June 13, 2025 with not changes), https://usdaars.maps.arcgis.com/apps/mapviewer/index.html?webmap=a5bae196706b48fa83a8d5e1b344f802 (note the map is updated as new reports are received).**

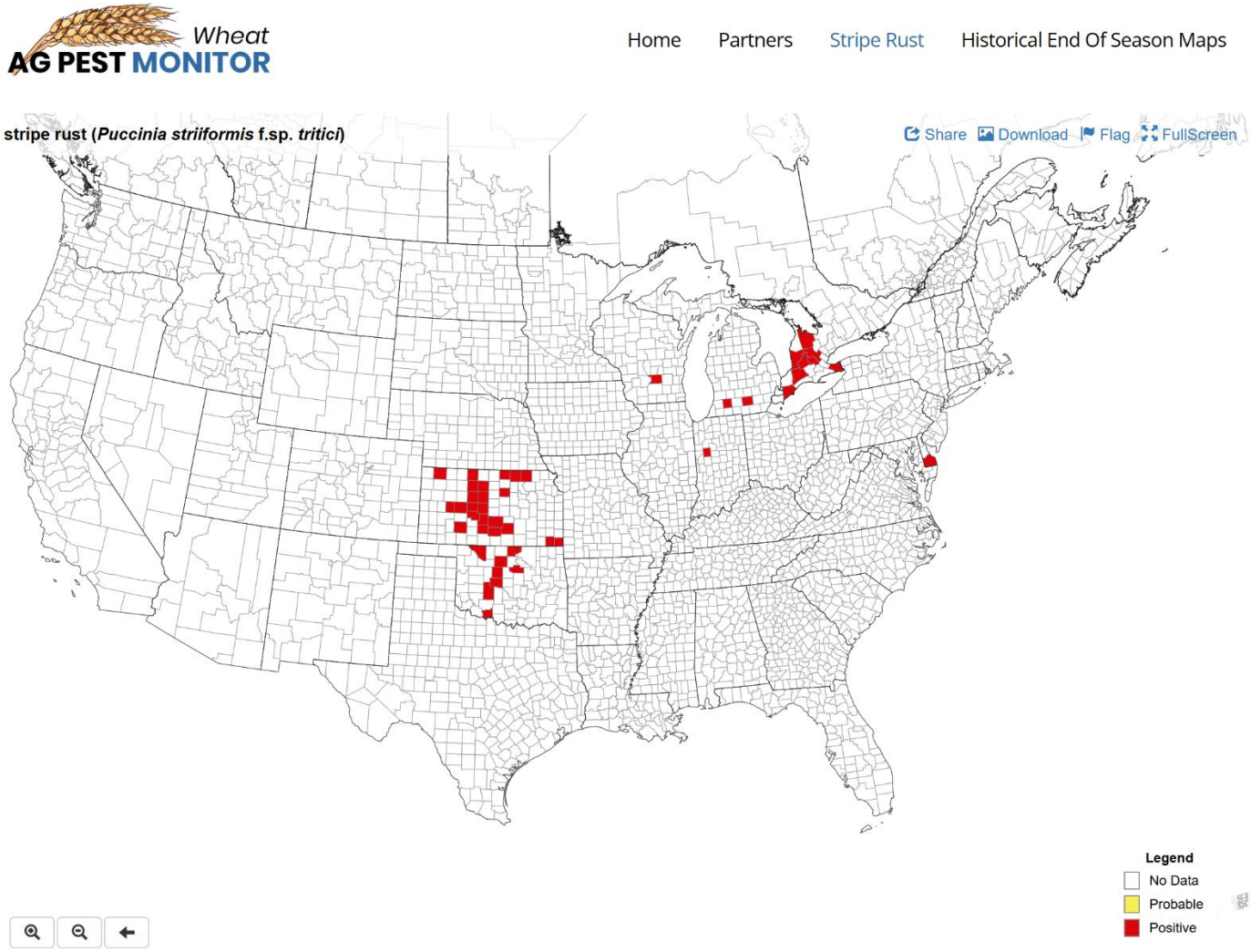
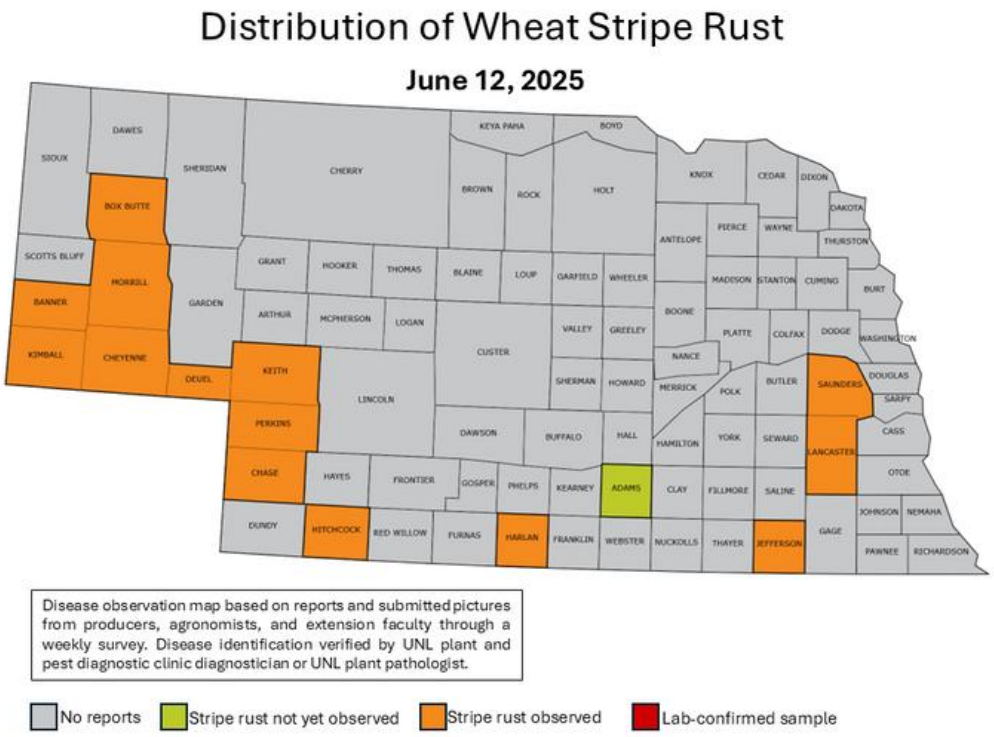



**Figure 5. USA stripe rust observations, as of June 13, 2025, courtesy of AG PEST MONITOR: Wheat, https://wheat.agpestmonitor.org/stripe-rust/.**



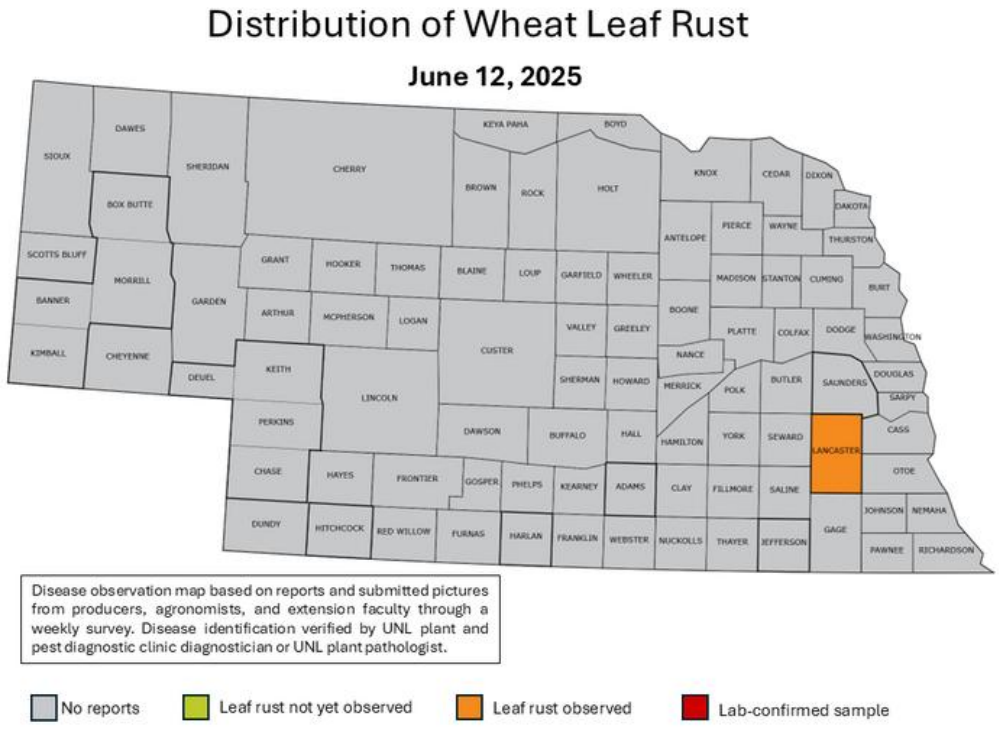




**Figure 6. Distribution of stripe (top) and leaf (bottom) rust in Nebraska, USA, as of June 12, 2025 (https://cropwatch.unl.edu/stripe-rust-expands-nebraska-wheat-fields-leaf-rust-remains-isolated/).**

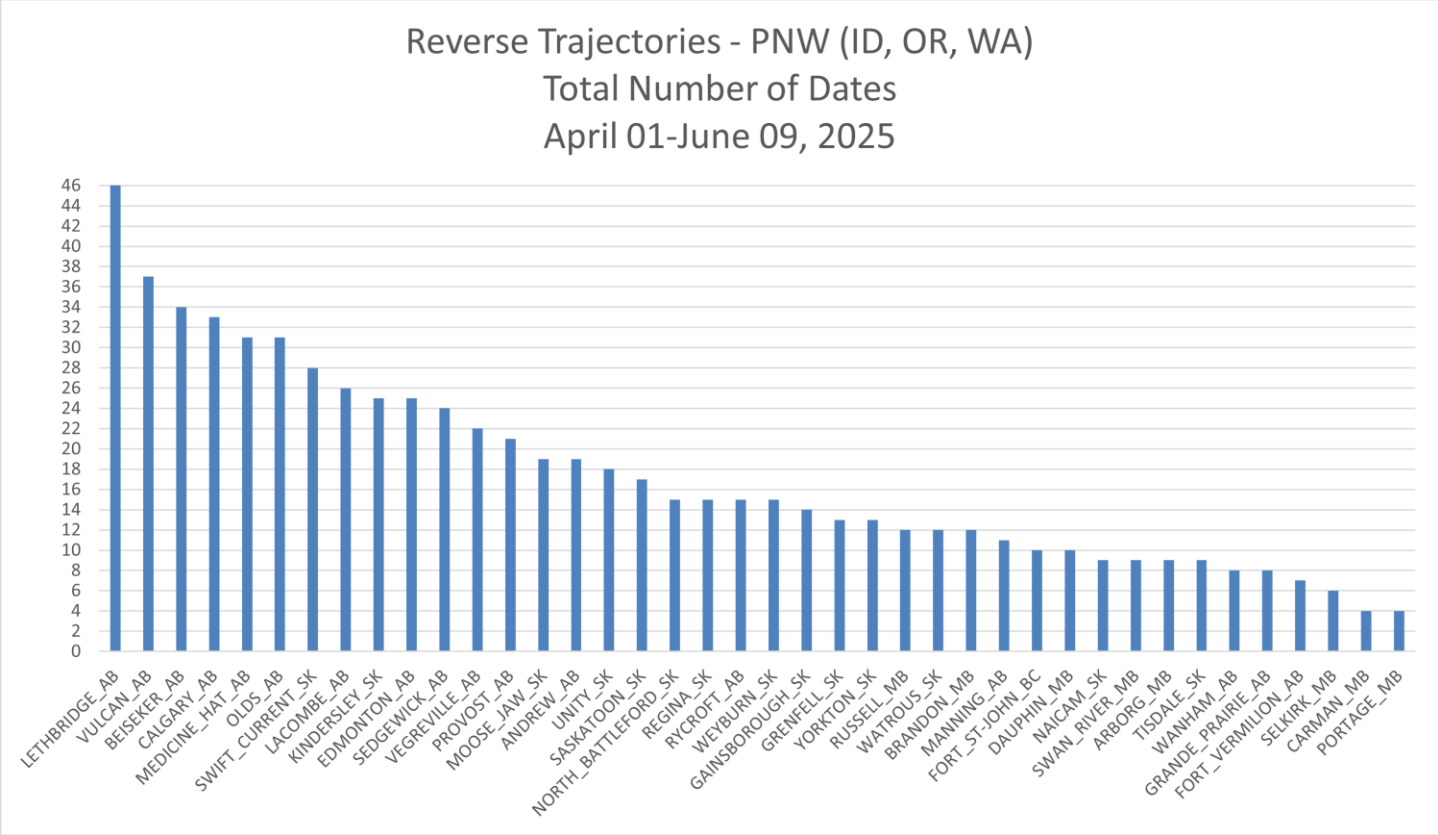



**Figure 7. Reverse trajectory locations and number of events, for reverse trajectory events originating from the Pacific Northwest region of the USA, April 1 – June 9, 2025.**

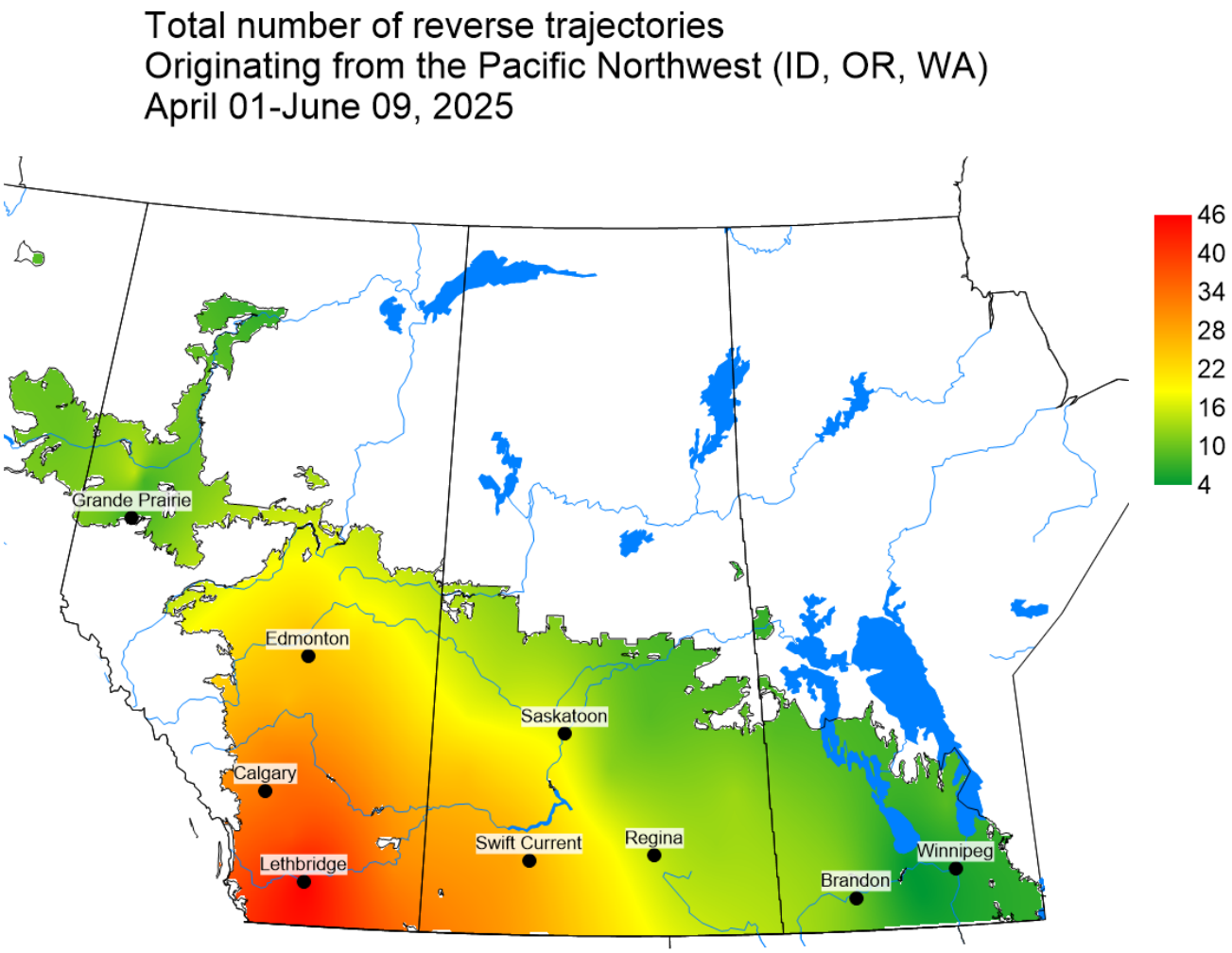



**Figure 8. Total number of dates with reverse trajectories originating from the Pacific Northwest region of the USA that have crossed the prairies between April 1 – June 9, 2025.**

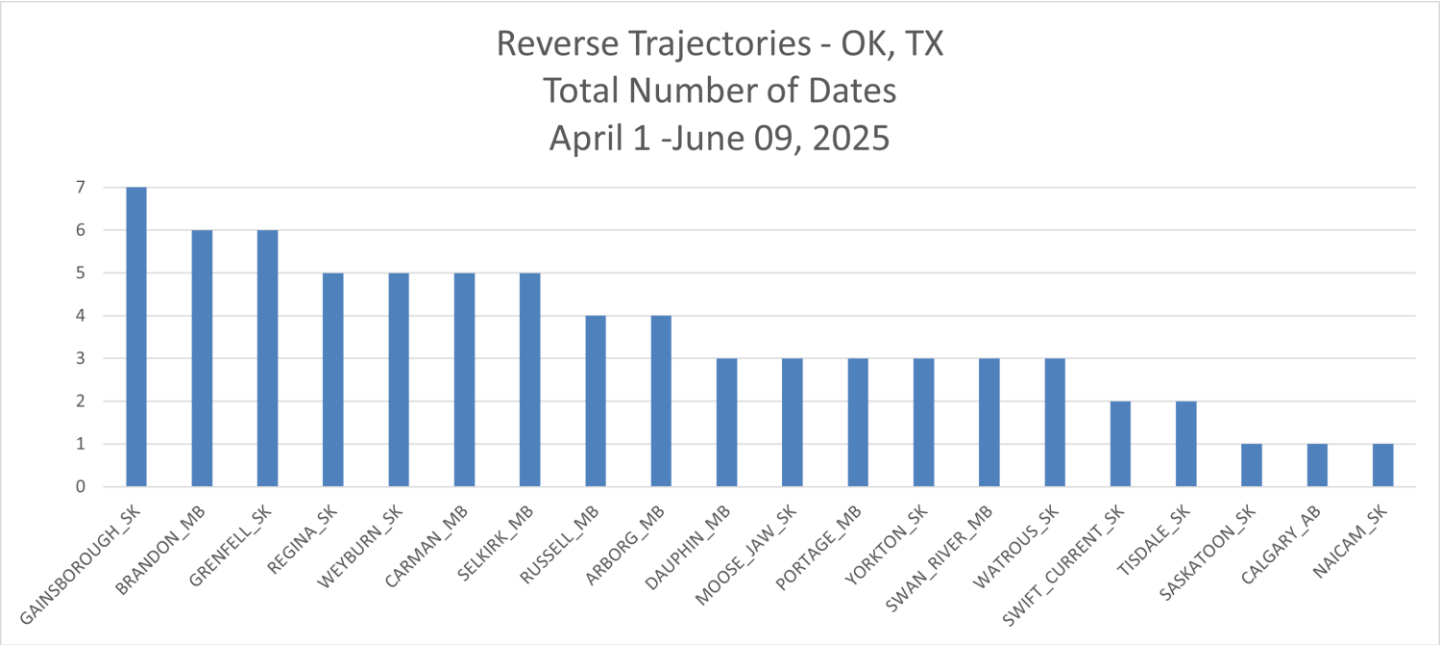



**Figure 9. Reverse trajectory locations and number of events, for reverse trajectory events originating from Oklahoma and Texas, USA, April 1 – June 9, 2025.**

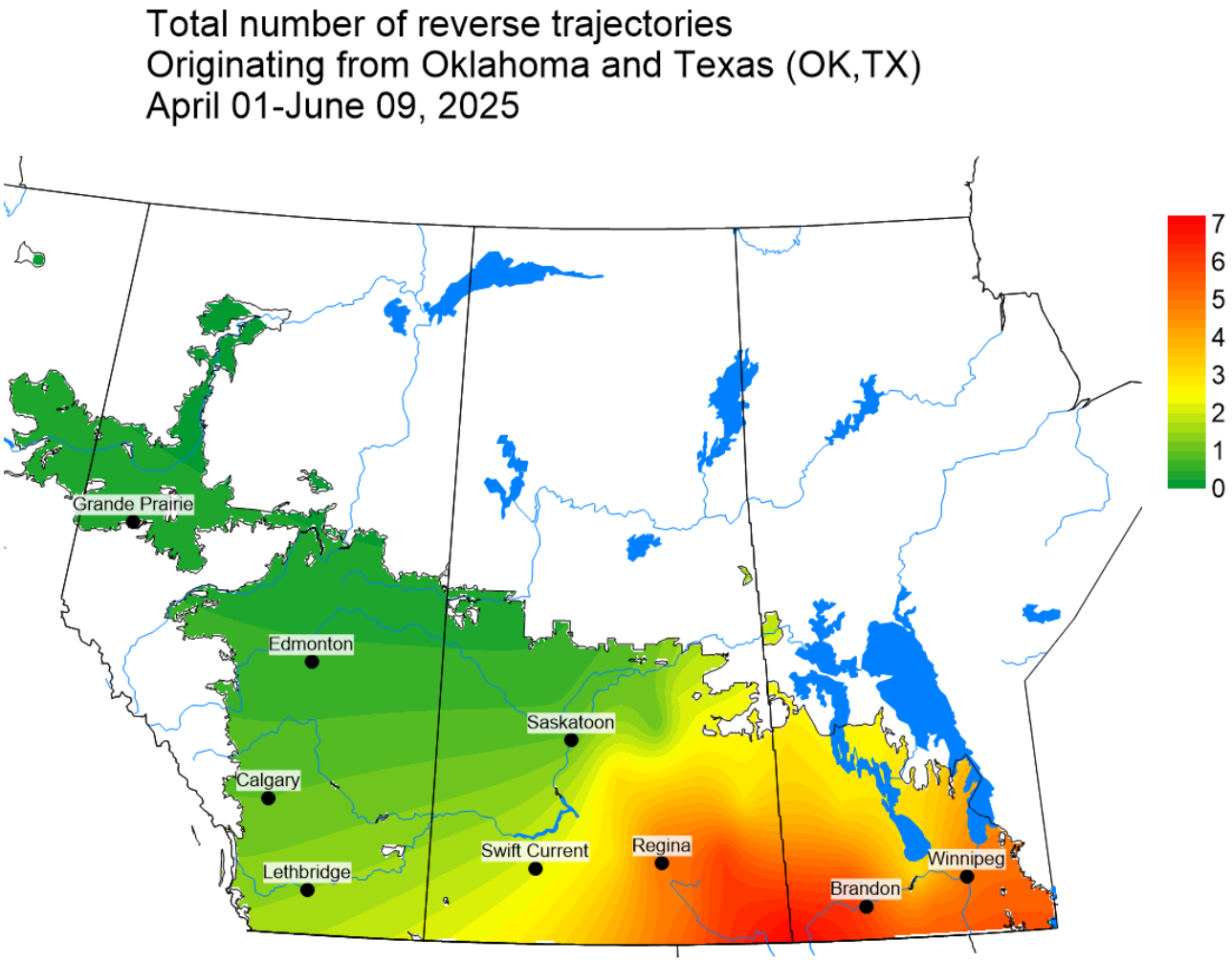



**Figure 10. Total number of dates with reverse trajectories originating from Texas and Oklahoma, USA that have crossed the prairies between April 1 – June 9, 2025.**

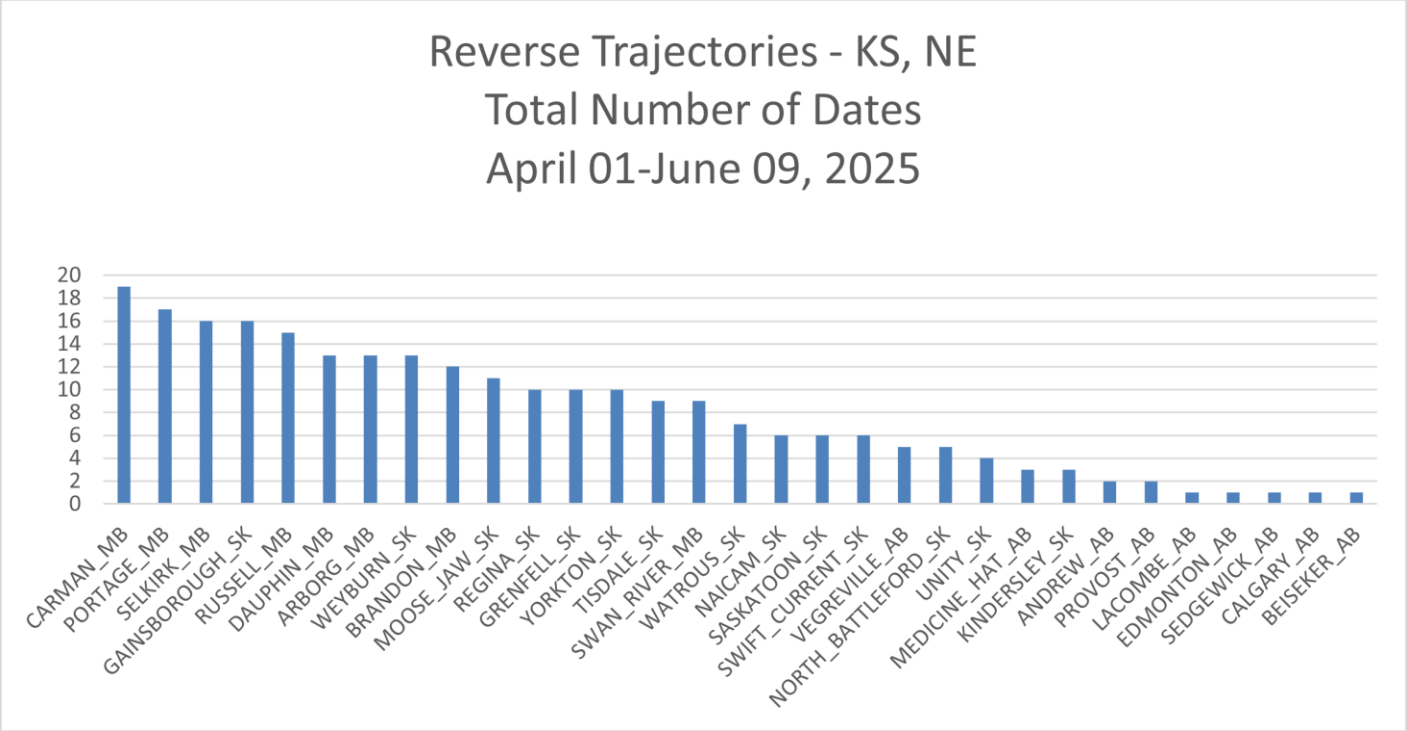



**Figure 11. Reverse trajectory locations and number of events, for reverse trajectory events originating from Kansas and Nebraska, USA, April 1 – June 9, 2025.**

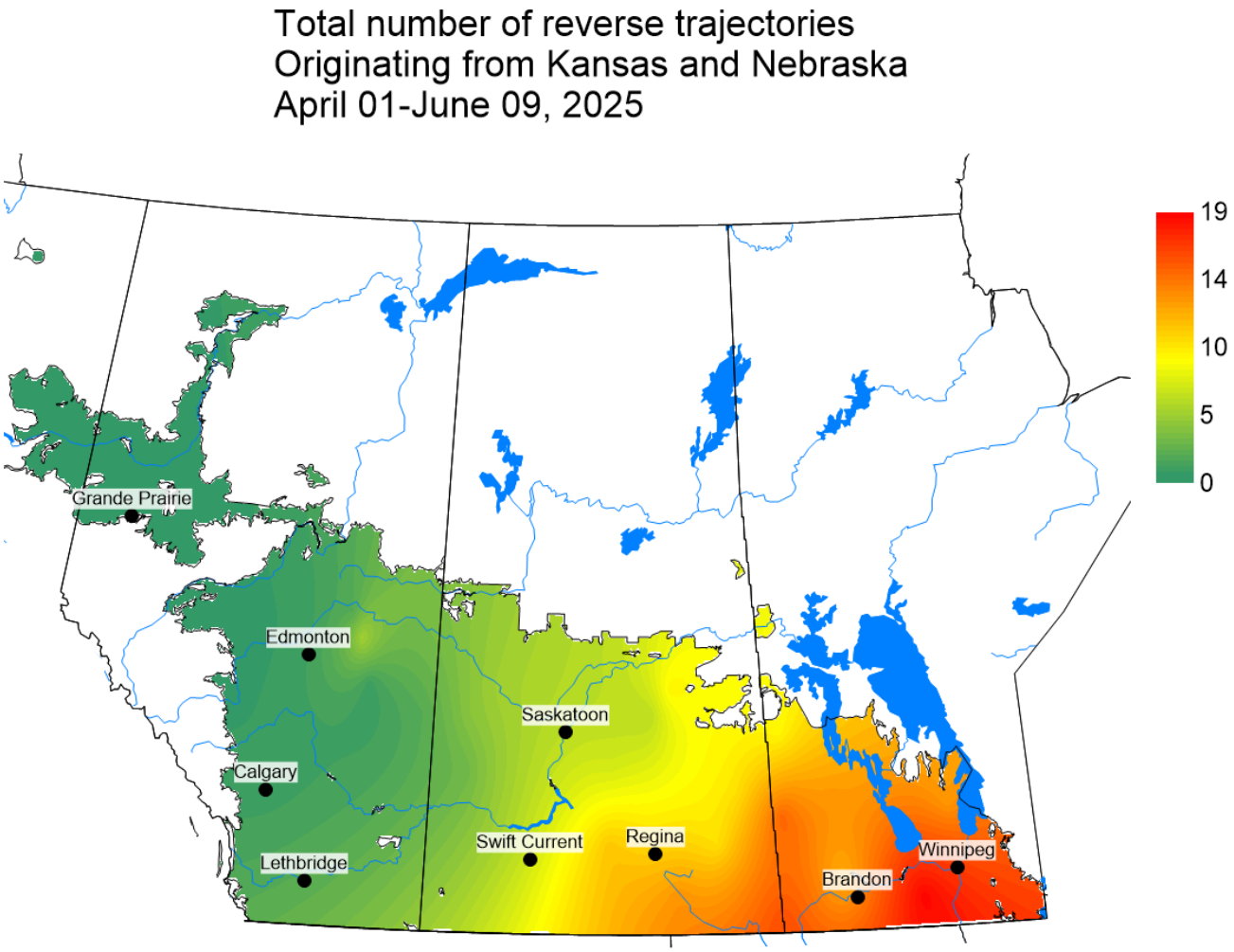



**Figure 12. Total number of dates with reverse trajectories originating from Kansas and Nebraska, USA that have crossed the prairies between April 1 – June 9, 2025.**

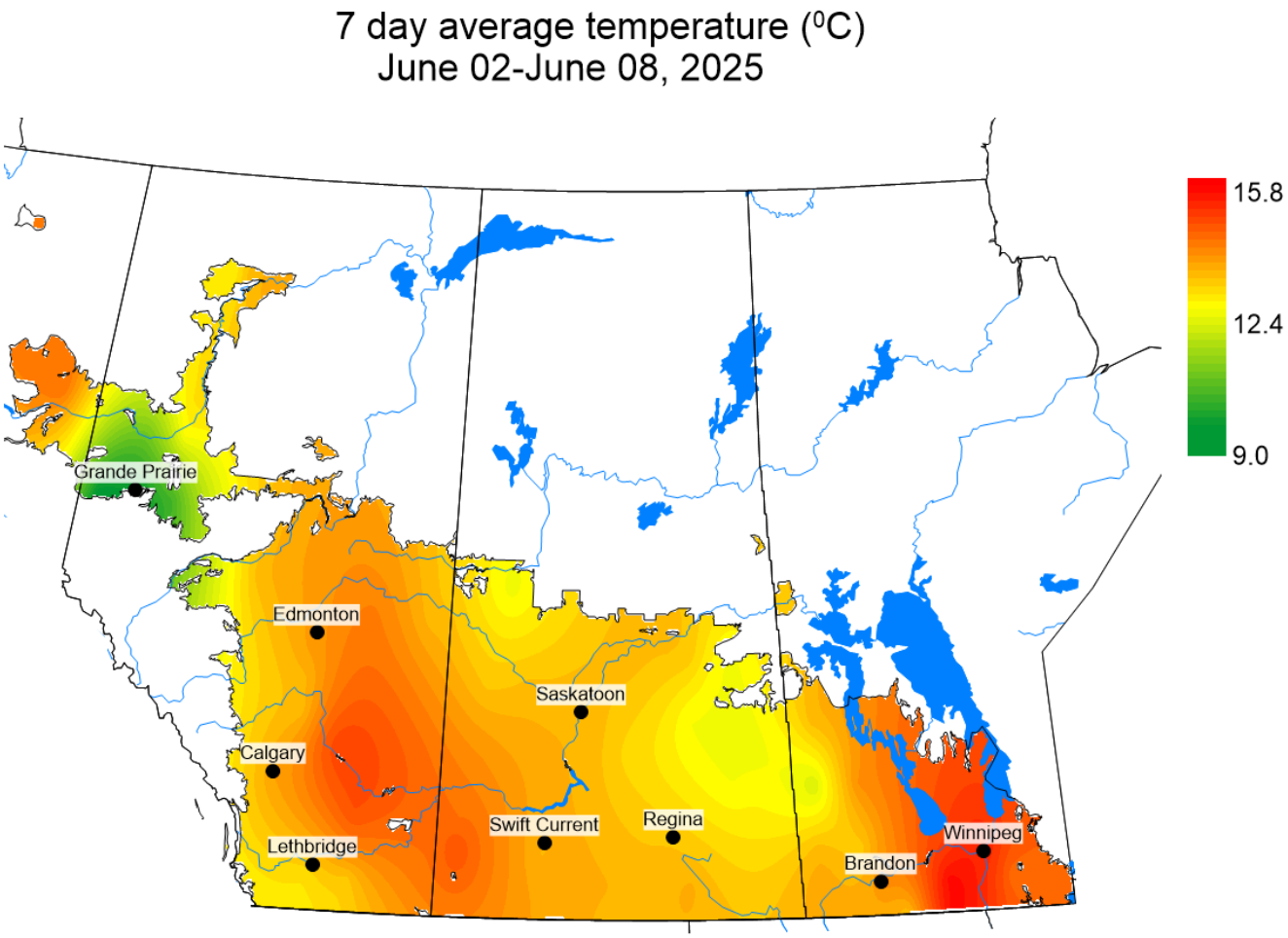



**Figure 13. Seven day average temperature (°C), Prairie region, June 2-8, 2025.**

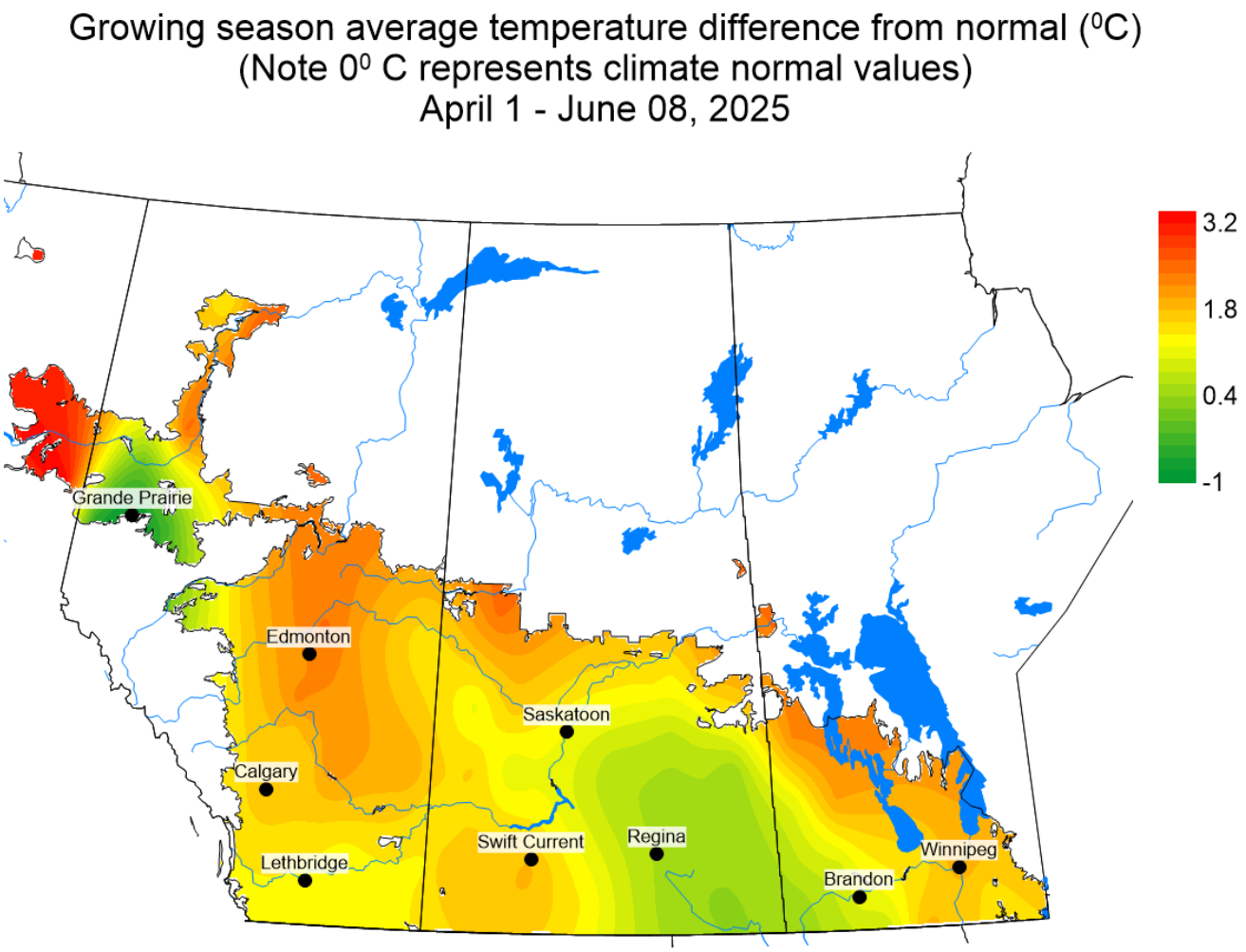



**Figure 14. Growing season average temperature (°C) difference from normal, Prairie region, April 1 – June 8, 2025.**

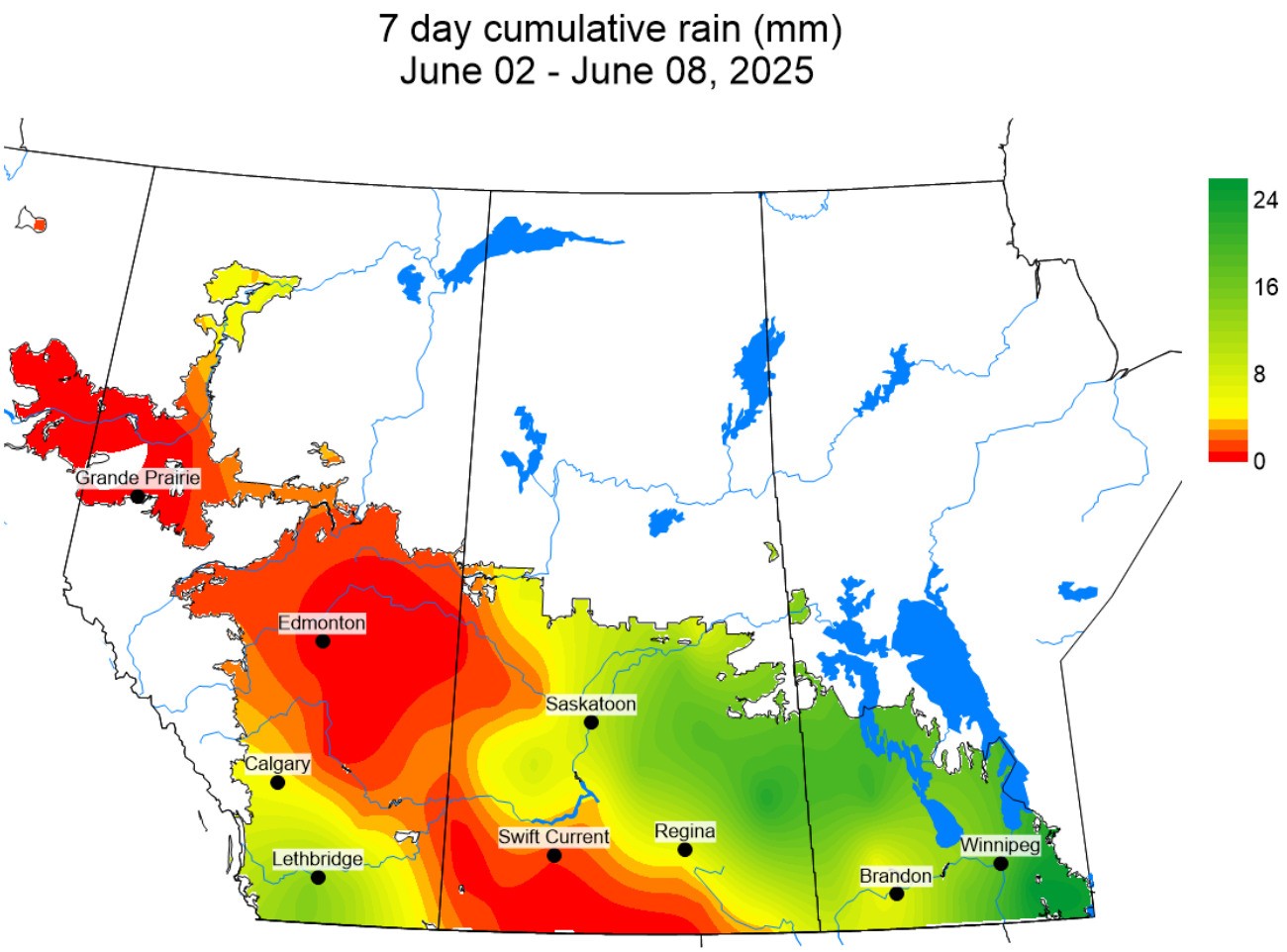



**Figure 15. Seven day accumulated rainfall (mm), Prairie region June 2-8, 2025.**

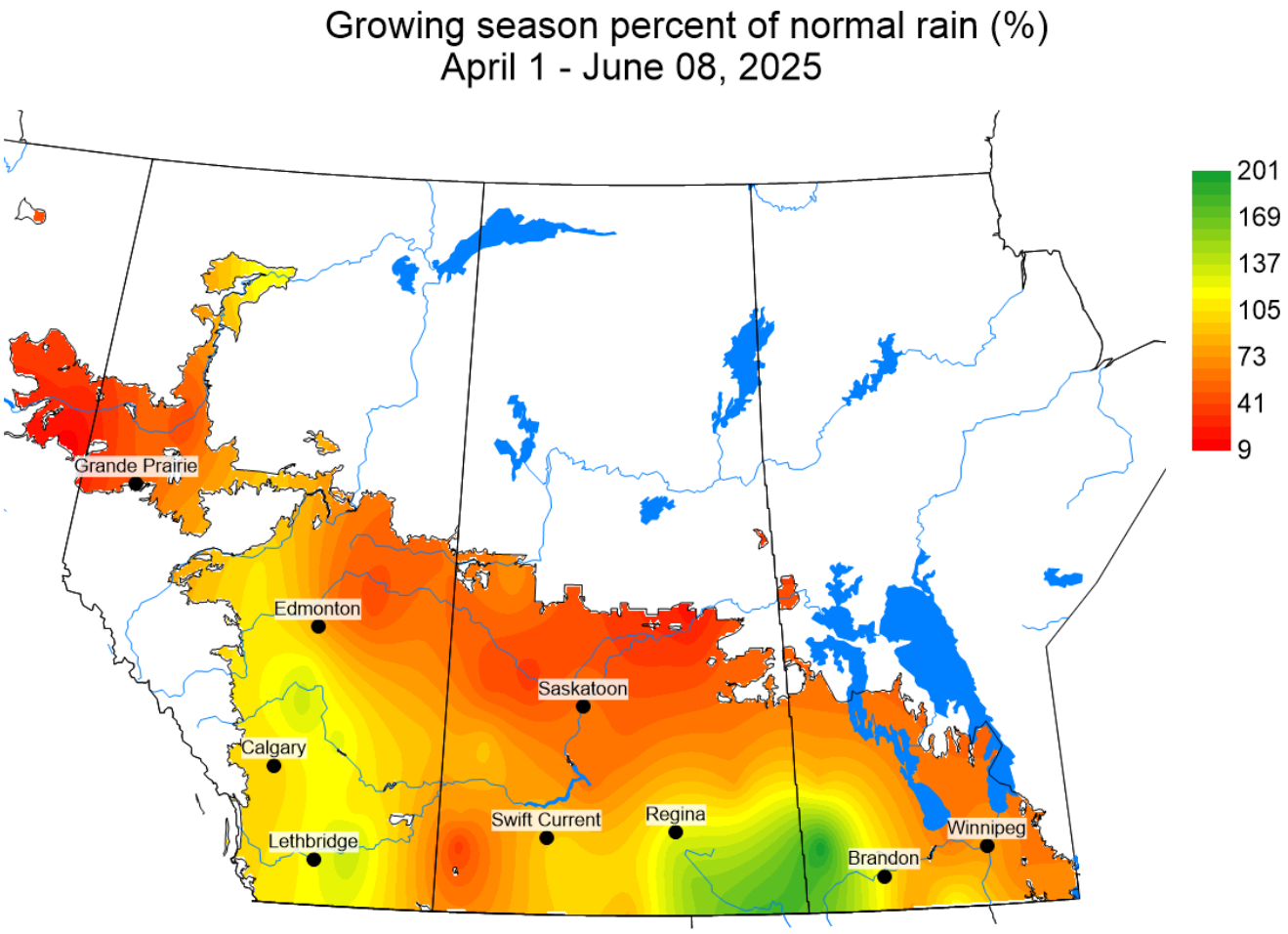



**Figure 16. Growing season accumulated rainfall (mm) percent of normal, Prairie region April 1 – June 8, 2025.**

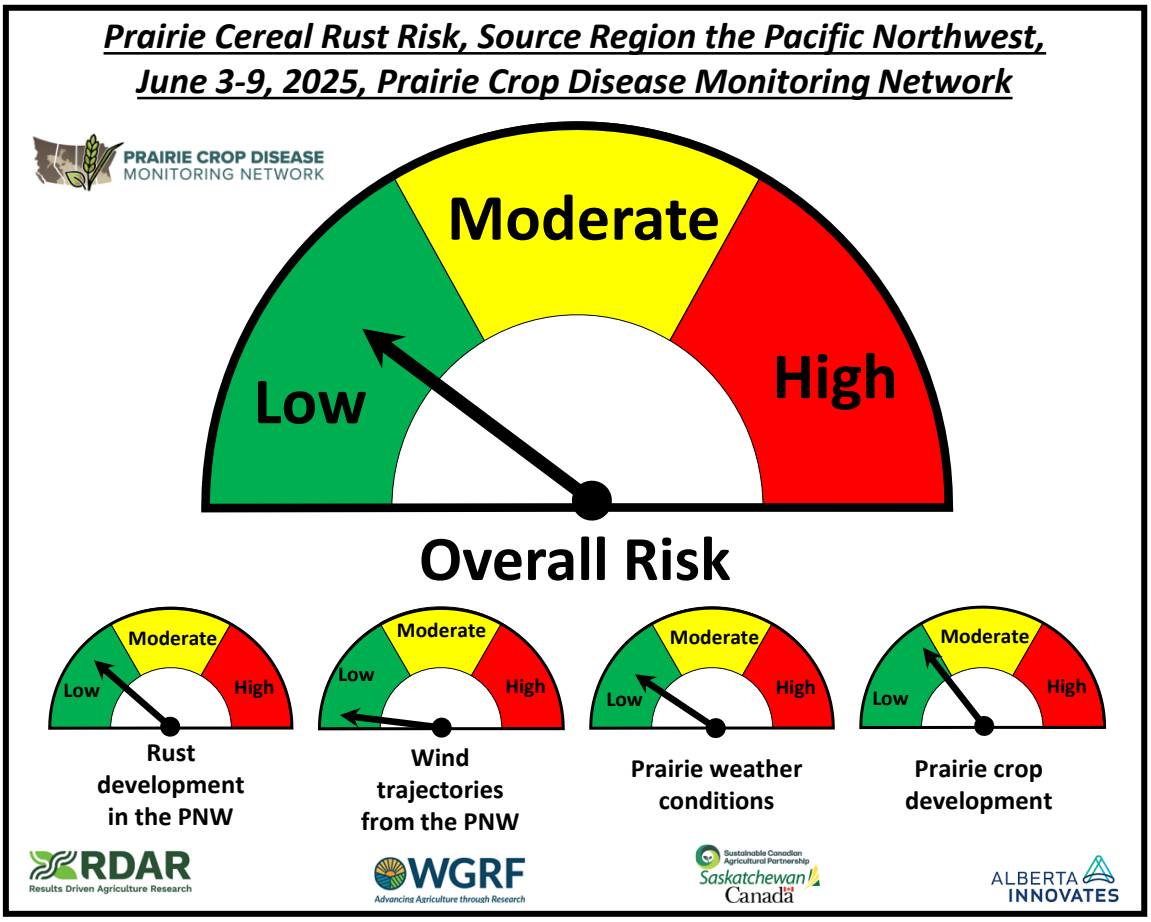



**Figure 17. Prairie cereal risk speedometers for stripe rust from the Pacific Northwest, June 3-9, 2025.**

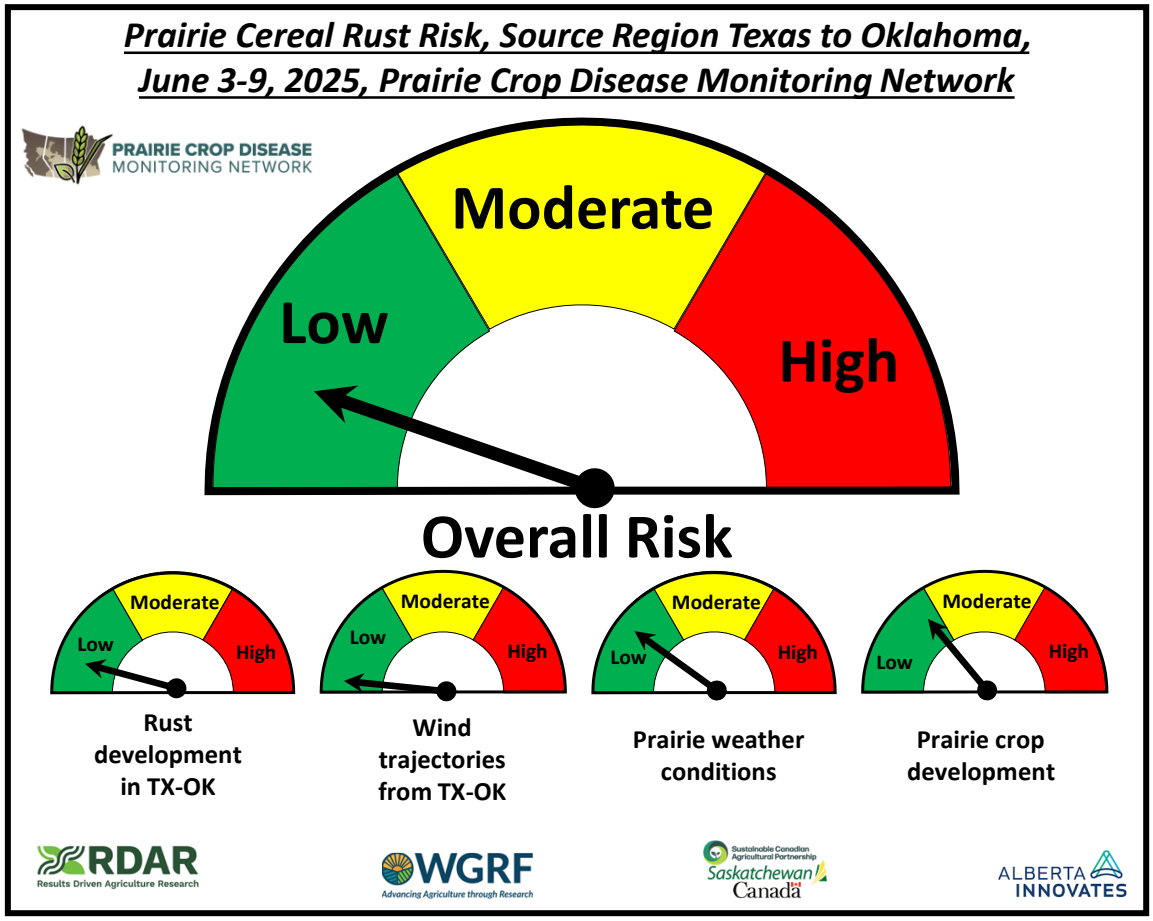



**Figure. 18. Prairie cereal risk speedometers for stripe/leaf rust from the Texas to Oklahoma region, June 3-9, 2025.**

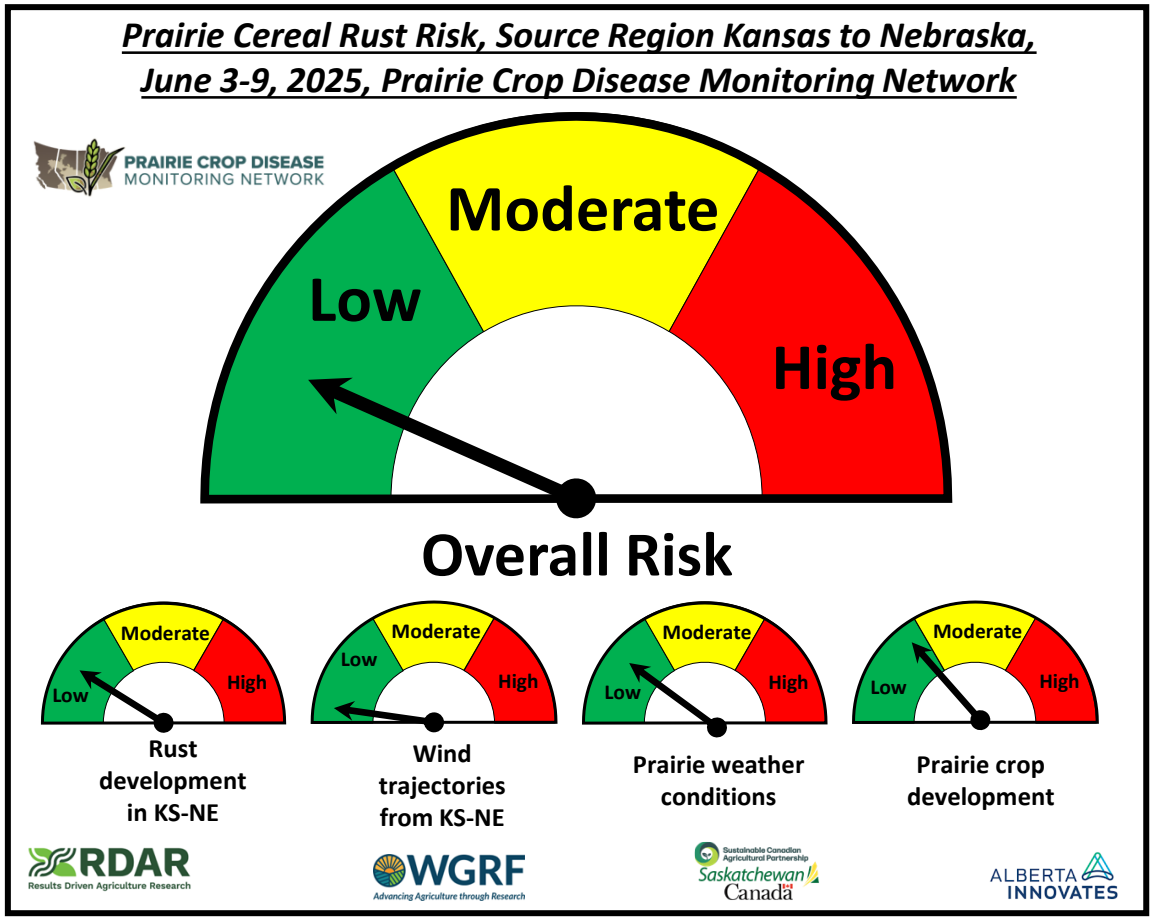



**Figure. 19. Prairie cereal risk speedometers for stripe/leaf rust from the Kansas/Nebraska region, June 3-9, 2025.**