# PRAIRIE WIND TRAJECTORY AND CEREAL RUST RISK REPORT for May 13-19, 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. In Dr. Chen's update as of May 7, 2025, he indicated continued observations of stripe rust in research plots albeit at low levels, while Dr. Chen noted this is about one month later versus 2024 (https://striperust.wsu.edu/2025/05/09/stripe-rust-update-may-7-2025/). Dr. Chen's fungicide recommendations remain the same as those from the April 18, 2025 update, i.e. fungicide application is suggested on susceptible to moderately susceptible varieties at the time of spring herbicide applications, especially where stripe rust severity or incidence is 5% or more. (https://striperust.wsu.edu/2025/04/18/stripe-rust-update-april-18-2025/). However, he does indicate that current and forecast weather conditions are favourable for further stripe rust development, which could then pose a threat to Prairie wheat crops. Dr. Chen also noted in his May 7 report that stripe rust has appeared in the PNW, as well as Texas, Oklahoma and Kansas.

ii. Dr. Chen's most recent update on May 21, 2025 indicates that stripe rust has further developed 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. Note 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.

iii. In the second USDA-ARS Cereal Disease Laboratory (CDL) report for 2025, Dr. Oluseyi Fajolu (CDL, St. Paul, Minnesota) reported moderate levels 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).

iv. The USDA-ARS Cereal Disease Laboratory post maps showing observations of stripe and leaf rust in the USA and maps as of May 22, 2025 are shown in Figures 1a and 1b, respectively for the PNW region.

v. **As of May 22, 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 several 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.**

vi. 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. 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 Bulletin #2, there have been no further reports of oat crown rust.

iv. 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).

v. 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).
vi. The USDA-ARS Cereal Disease Laboratory post maps showing observations of stripe and leaf rust in wheat and crown rust in oat in the USA and the maps as of May 22, 2025 are shown in Figures 2-4, respectively.
vii. **As of May 22, 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.** However, further rust development may increase this risk although winter wheat crops are mostly headed and into the grain filling stages, although 8% of the Texas winter wheat crop has been harvested (https://quickstats.nass.usda.gov/results/4522C4A4-0332-3E6C-8059-63DD4F9915F2 and https://quickstats.nass.usda.gov/results/96095099-9082-3FFF-8DFC-277C2D6A6F8A, respectively). Note that as crops mature over the next 2-4 weeks, 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 the state, 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 indicates that three more stripe observations were made, 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 22, 2025 are shown in Figure 5 (https://wheat.agpestmonitor.org/stripe-rust/). Note only some states appear to be using this reporting tool.
v. 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.
vi. **As of May 22, 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, if cooler, wetter weather occurs over the next 7-21 days the risk of stripe rust inoculum coming from these USA regions could increase.

## 2. Reverse trajectories (RT)

a. Since May 1, 2025 the majority of reverse trajectories that have crossed the prairies have originated from the Pacific Northwest (Idaho, Oregon and Washington) (Figures 6-11).

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=434, Figure 6). Most of these trajectories passed over Alberta and Saskatchewan (Figure 7). For the week of May 13-19, 2025 there have been a total of 32 reverse trajectories that passed through the prairie region over 25 locations, which is down from 117 from May 6-12, 2025 (Table 1). LETHBRIDGE and VULCAN, AB each had a total of three trajectories during this period, while the remaining 23 locations in Table 1 had 1-2 trajectories.

   i. **As of May 19, 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 the Prairie region of Canada.**

c. **Oklahoma and Texas** – Since April 1, 2025, 50 reverse trajectories, originating over Oklahoma and Texas were reported to cross the prairies, mainly in Manitoba and eastern Saskatchewan (Figure 8). Most of these trajectories passed over Manitoba and central to eastern Saskatchewan (Figure 9). This past week (May 13-19) a total of 13 trajectories occurred for three Prairie locations down from 24 trajectories that were predicted to pass over 20 locations from May 6-12, 2025 (Table 2). SELKIRK, MB had five trajectories, while GRENFELL and TISDALE, SK each had four trajectories (Table 2).

   i. **As of May 19, 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 154 reverse trajectories, originating from Kansas and Nebraska have crossed the prairies, primarily Manitoba and Saskatchewan (April 1 – May 12, 2025) (Figure 10). Most of these trajectories passed over Manitoba and central to eastern Saskatchewan (Figure 11). Last week (May 13-19) a total of 16 trajectories over seven locations passed through the Prairies, which was down from 37 reverse trajectories for May 6-12, 2025 (Table 3). REGINA and TISDALE, SK, and SWAN RIVER, MB each had four trajectories during this period, while the remaining four locations had 1-2 trajectories (Table 3).

   i. **As of May 19, 2025, there is a low risk associated with the KS/NE region being a significant source of wind trajectories for dispersal of the stripe rust pathogen into the Prairie region of Canada.**

## 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 in the tillering stage to stem elongation stages (https://www.gov.mb.ca/agriculture/crops/seasonal-reports/crop-report-archive/pubs/crop-report-2024-05-21.pdf).

b. Spring wheat – Across the prairie region spring wheat has either been planted or will be over the next few weeks with percentages of crops seeded ranging from around 46% up to 95% depending on the province and region (https://open.alberta.ca/dataset/2e0c96ee-50bf-4891-8f16-224233f372ce/resource/70fac38d-4da2-4d6d-89d2-fca3190d7f22/download/agi-tedab-alberta-crop-report-2025-05-13-abbreviated-report.pdf; https://publications.saskatchewan.ca/api/v1/products/126049/formats/147949/download; https://www.gov.mb.ca/agriculture/crops/seasonal-reports/crop-report-archive/pubs/crop-report-2024-05-21.pdf).

c. This past week (May 13-19, 2025) the average temperature across the Prairies ranged from around 5 to 14 °C, with the warmest areas being in SE Manitoba, central to eastern Alberta, north of Edmonton, west central Saskatchewan, and the north and east Peace River region of Alberta (Figure 12).

d. Growing season temperatures (April 1-May 19, 2025) have been slightly above average for large areas of the Prairies, although the BC Peace was up to 4°C above normal for this period, while areas in eastern and SE Saskatchewan and western Manitoba, and the south Peace River region of Alberta have been closer to normal temperatures (Figure 13).

e. Accumulated rainfall over the past week (May 13-19, 2025) was variable with large areas of central to northern Saskatchewan and east central to northern Alberta and the Peace region being drier (Figure 14).

However, north of Calgary down to the Lethbridge region, south central to SE Saskatchewan and central to western Manitoba were wetter.

f. Growing season rainfall from April 1 to May 9, 2025 has been below normal across much of the Prairie region, with north of Calgary to the Lethbridge region of Alberta, south central to SE Saskatchewan and southwestern Manitoba having higher than normal rainfall (Figure 15).

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. **Pacific Northwest** – There were lower numbers of reverse wind trajectories that passed over the PNW region and into the prairies from May 13-19, while stripe rust development continues, but is generally lower versus 2024, although further development may occur over the next several weeks. Prairie winter wheat crops have resumed growth, while much of the spring wheat crop has just been seeded or will be seeded over the next two weeks. **Overall, as of May 19, 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 16).

b. **Texas-Oklahoma corridor** – There were low numbers of reverse wind trajectories that passed over the TX/OK region and into the prairies, while development of stripe and leaf rust of wheat are continuing, although levels are generally low. Prairie winter wheat crops have resumed growth, while much of the spring wheat crop has just been seeded or will be seeded over the next two weeks. **Overall, as of May 19, 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 17).

c. **Kansas-Nebraska corridor** – There were low numbers of reverse wind trajectories that passed over the KS/NE region from May 13-19, 2025 and into the prairies, with limited reports of cereal rust currently. Prairie winter wheat crops have resumed growth, while much of the spring wheat crop has just been seeded or will be seeded over the next two weeks. **Overall, as of May 19, 2025 the risk of stem, leaf, stripe, and crown rust appearance from the Kansas-Nebraska corridor is limited and scouting for these diseases in the Prairies is not urgent** (Figure 18).

d. 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.

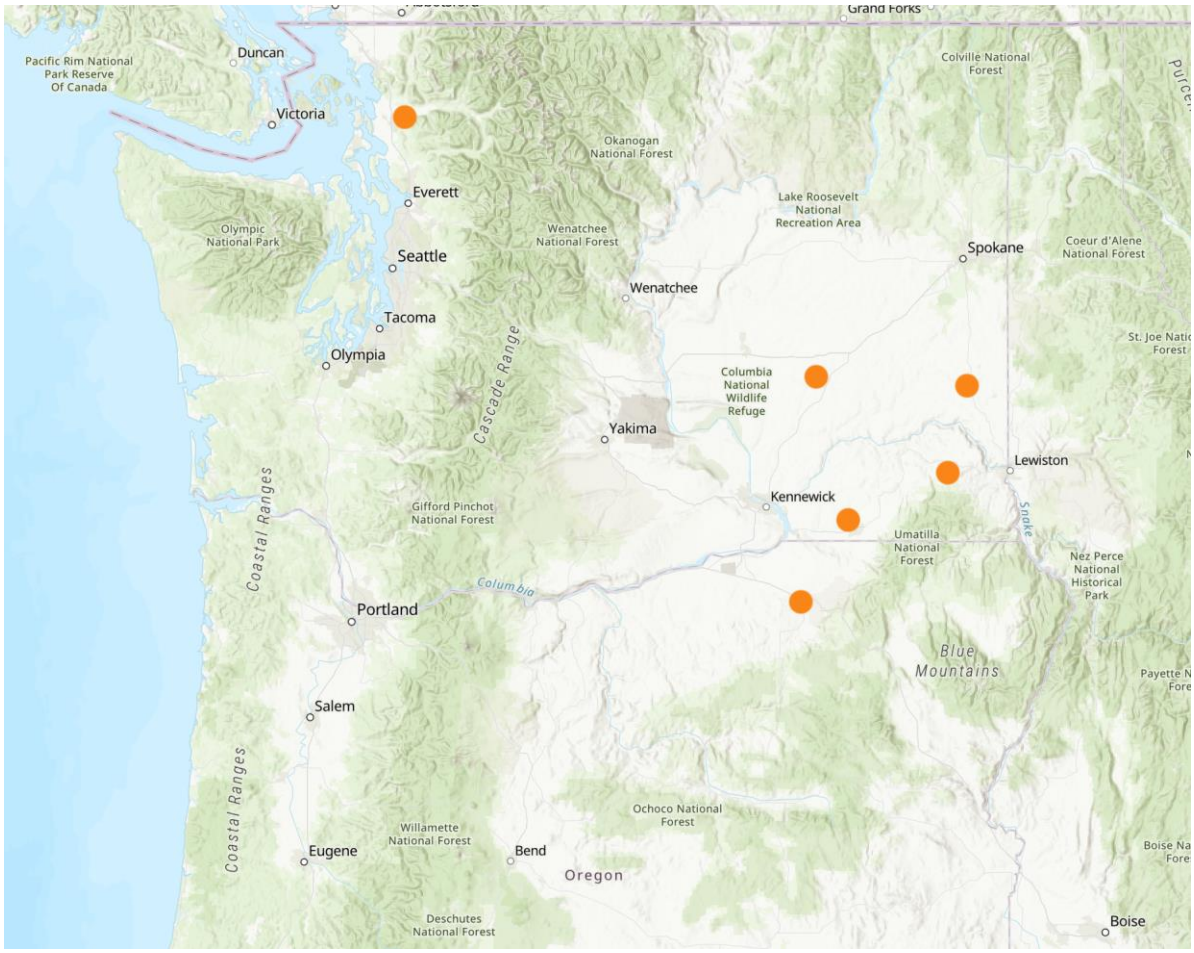


**Figure 1a. Pacific Northwest stripe rust observations in wheat, USDA-ARS, Cereal Disease Laboratory, Cereal Rust Observation Maps as of May 22, 2025. https://usdaars.maps.arcgis.com/apps/mapviewer/index.html?webmap=7eabb3bc66c045568a406569b731ac6d (note the map is updated as new reports are received).**


**Figure 1b. Pacific Northwest leaf rust observations in wheat, USDA-ARS, Cereal Disease Laboratory, Cereal Rust Observation Maps as of May 22, 2025, https://usdaars.maps.arcgis.com/apps/mapviewer/index.html?webmap=5dedcdc1a86443a09189c2b6e5598c54 (note the map is updated as new reports are received).**

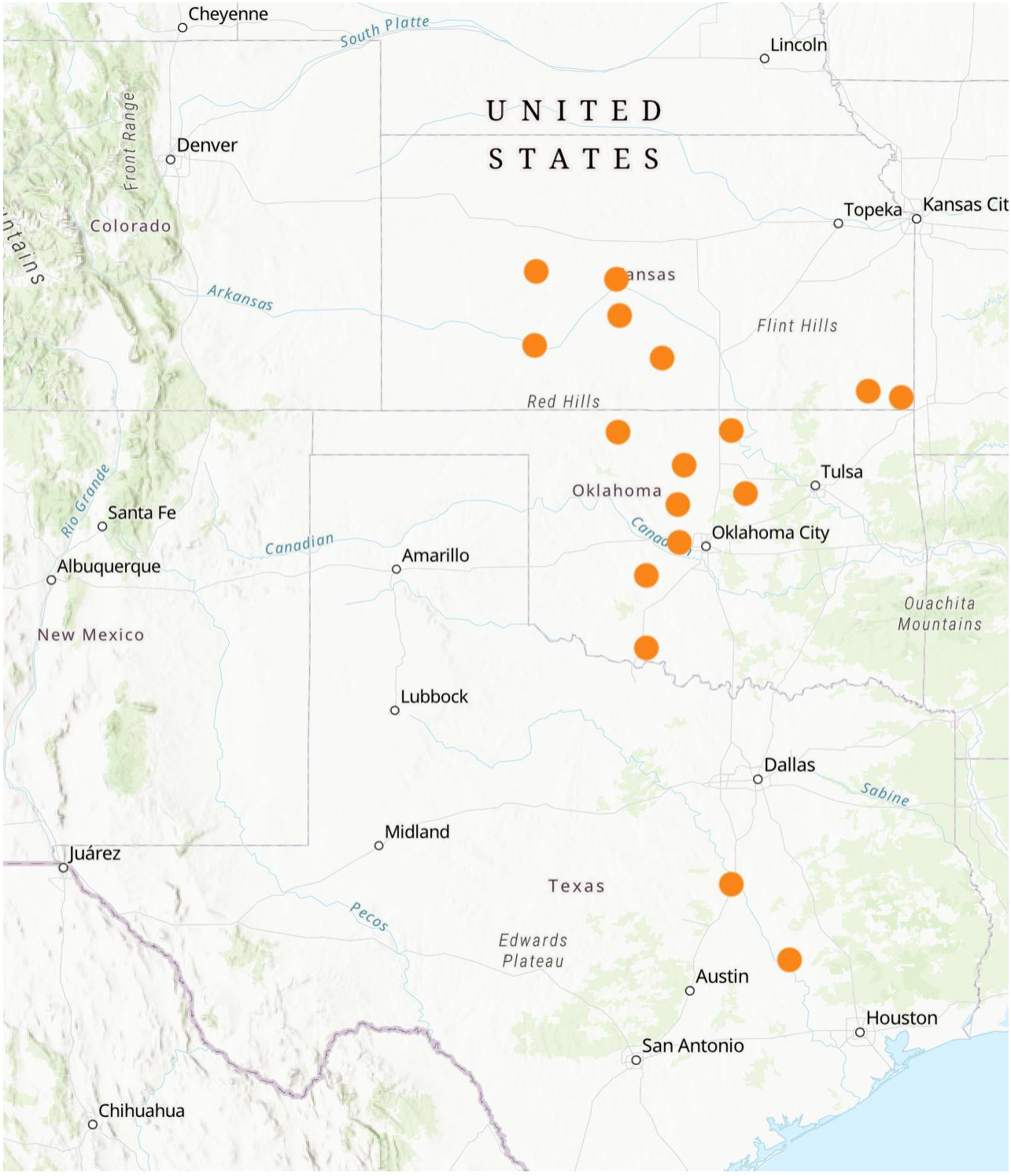


**Figure 2. Texas and Oklahoma stripe rust observations in wheat, USDA-ARS, Cereal Disease Laboratory, Cereal Rust Observation Maps as of May 22, 2025, https://usdaars.maps.arcgis.com/apps/mapviewer/index.html?webmap=7eabb3bc66c045568a406569b731ac6d (note the map is updated as new reports are received).**

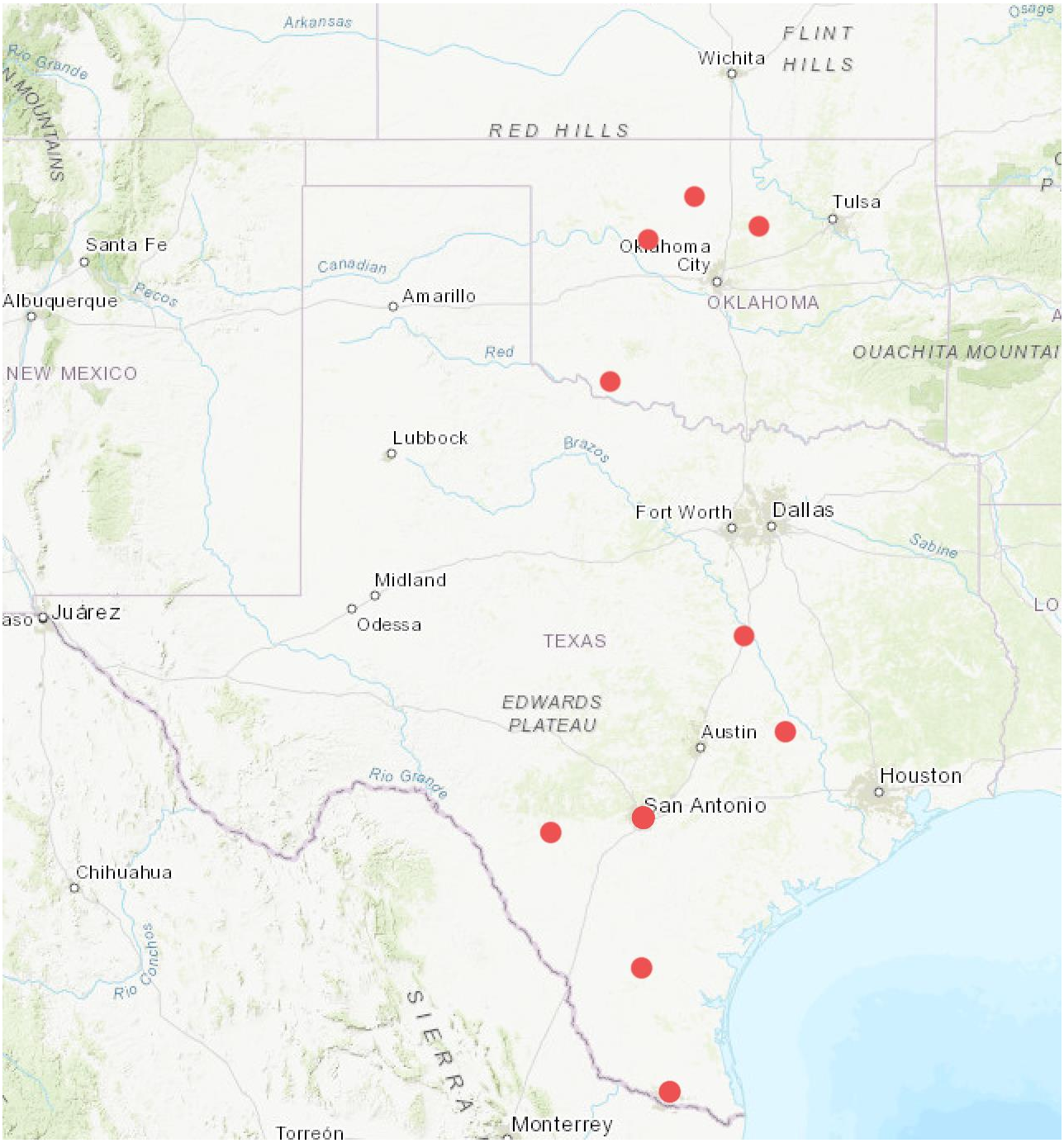


**Figure 3. Texas and Oklahoma leaf rust observations/collections in wheat, USDA-ARS, Cereal Disease Laboratory, Cereal Rust Observation Maps as of May 22, 2025, https://usdaars.maps.arcgis.com/apps/mapviewer/index.html?webmap=5dedcdc1a86443a09189c2b6e5598c54 (note the map is updated as new reports are received).**

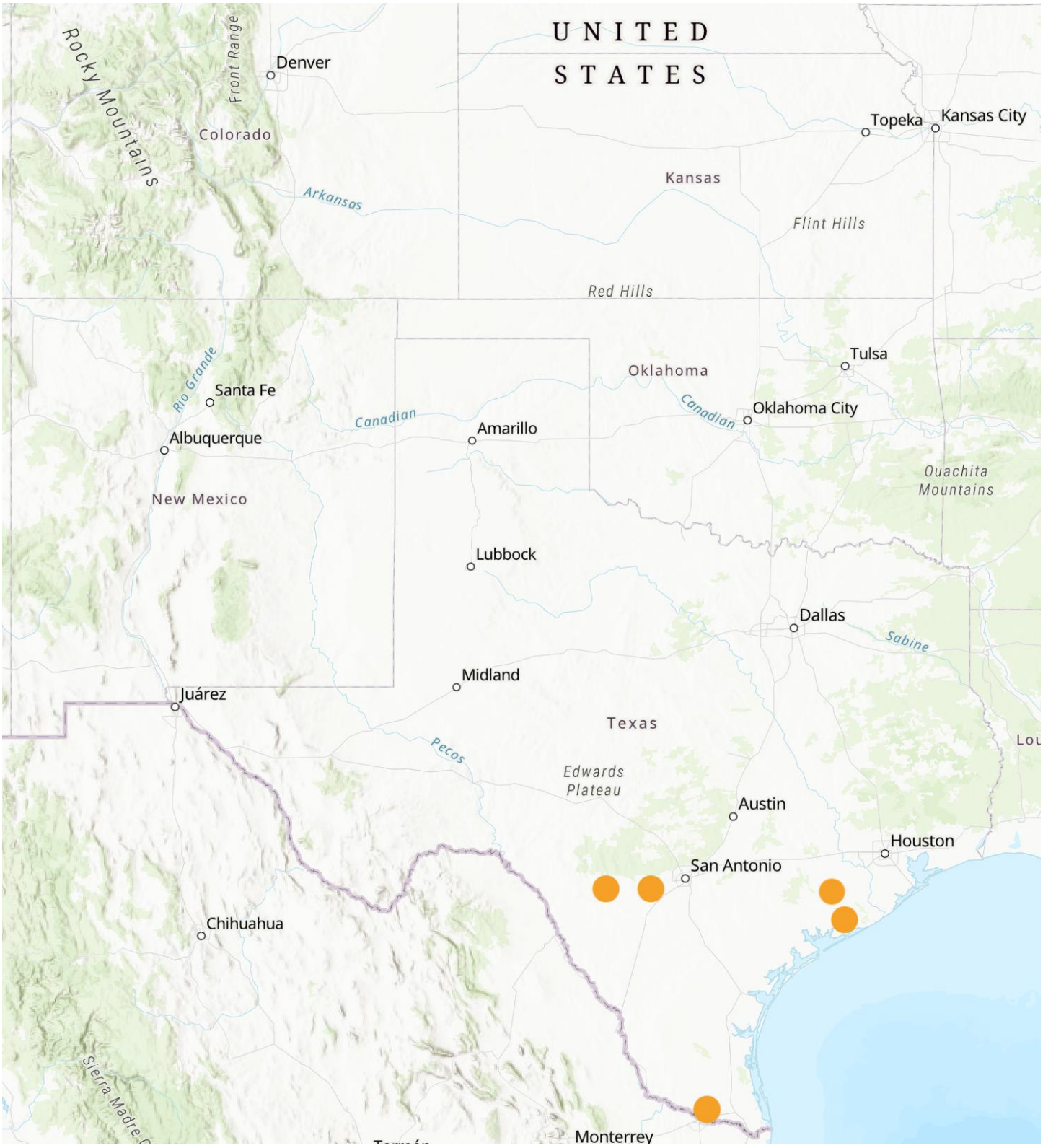


**Figure 4. Texas oat crown rust observations/collections in wheat, USDA-ARS, Cereal Disease Laboratory, Cereal Rust Observation Maps as of May 22, 2025, https://usdaars.maps.arcgis.com/apps/mapviewer/index.html?webmap=a5bae196706b48fa83a8d5e1b344f802 (note the map is updated as new reports are received).**

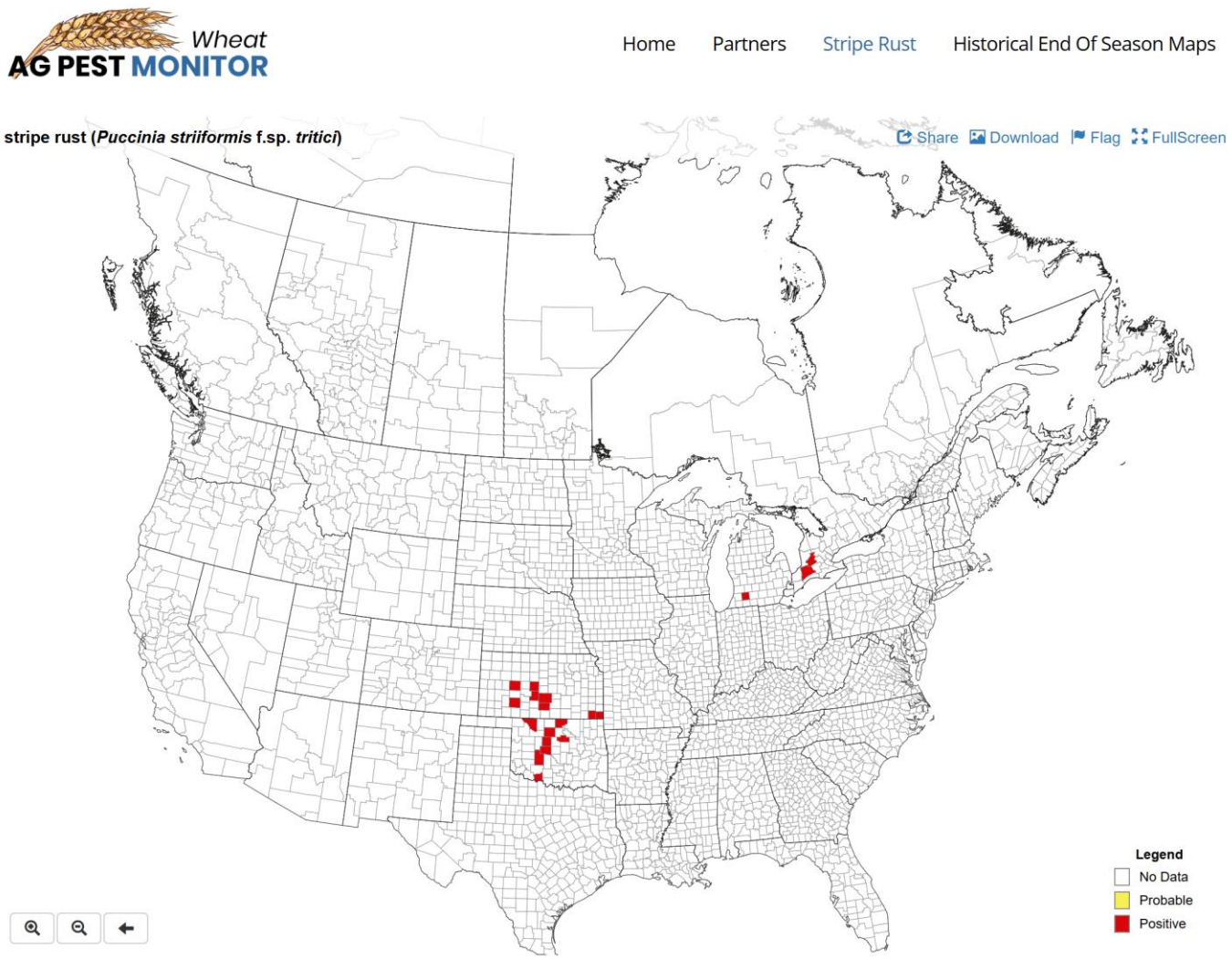


**Figure 5. USA stripe rust observations, as of May 22, 2025, courtesy of AG PEST MONITOR: Wheat, https://wheat.agpestmonitor.org/stripe-rust/.**

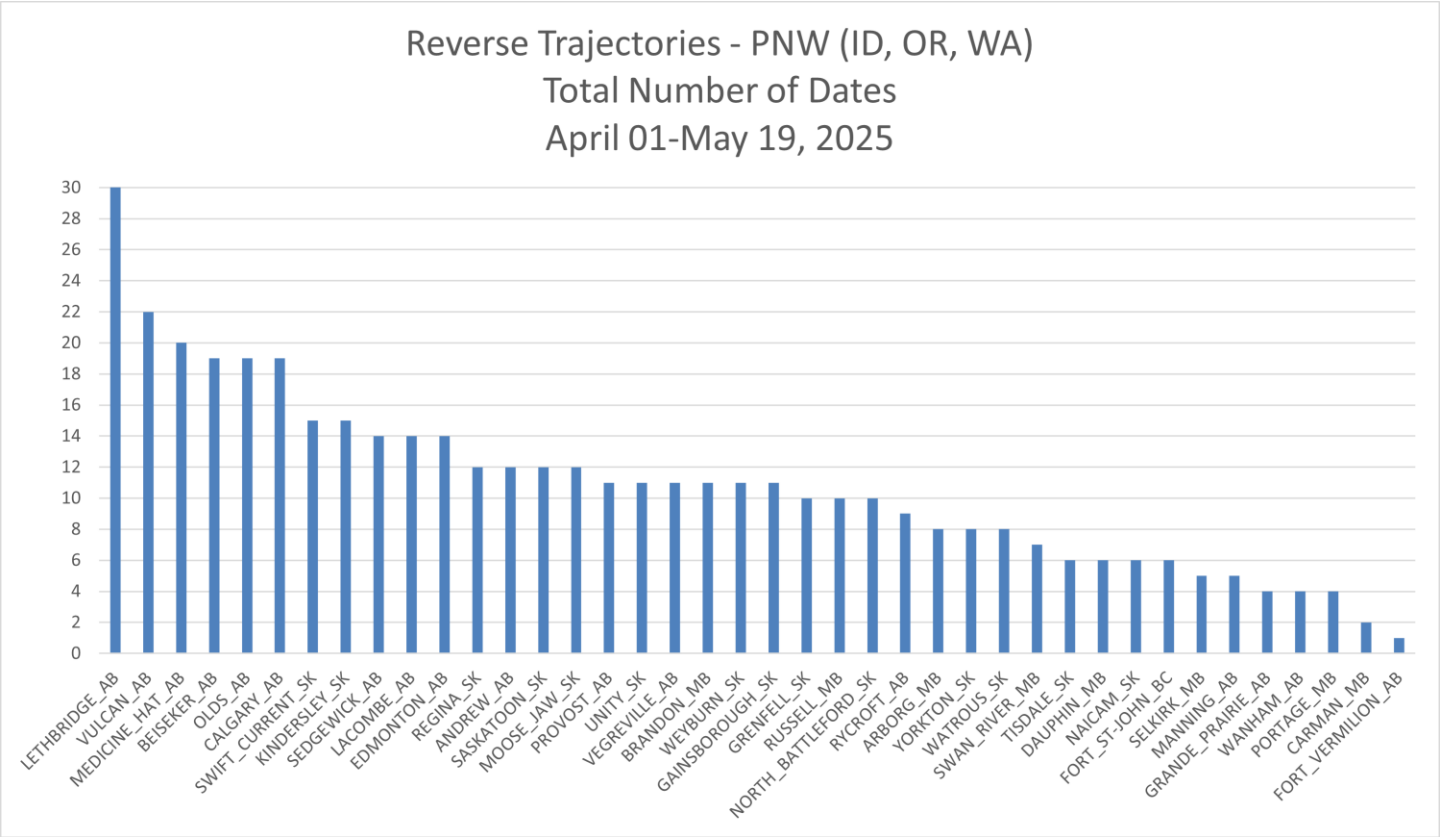


**Figure 6. Reverse trajectory locations and number of events, for reverse trajectory events originating from the Pacific Northwest region of the USA, April 1 – May 19, 2025.**

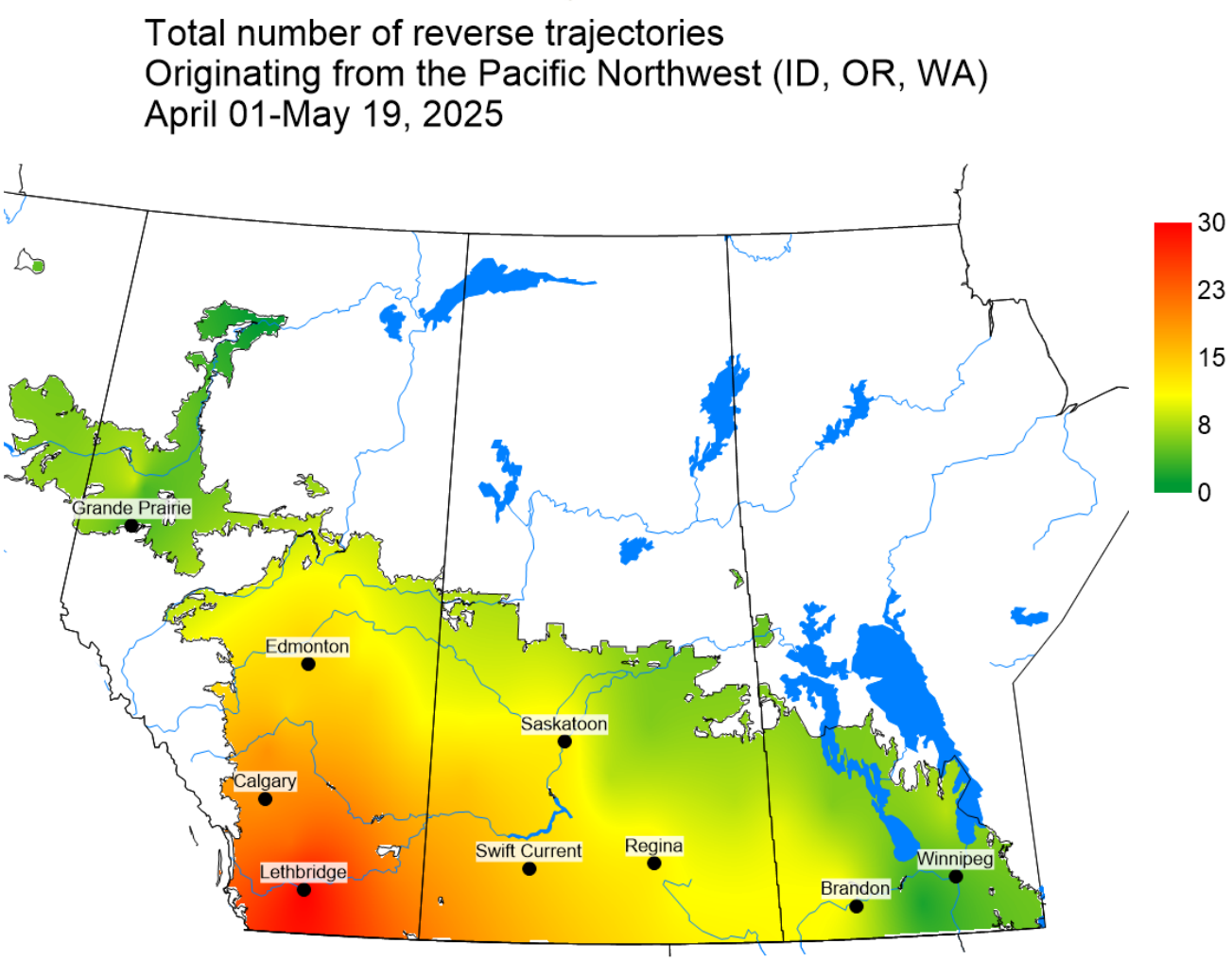


**Figure 7. Total number of dates with reverse trajectories originating from the Pacific Northwest region of the USA that have crossed the prairies between April 1 – May 19, 2025.**

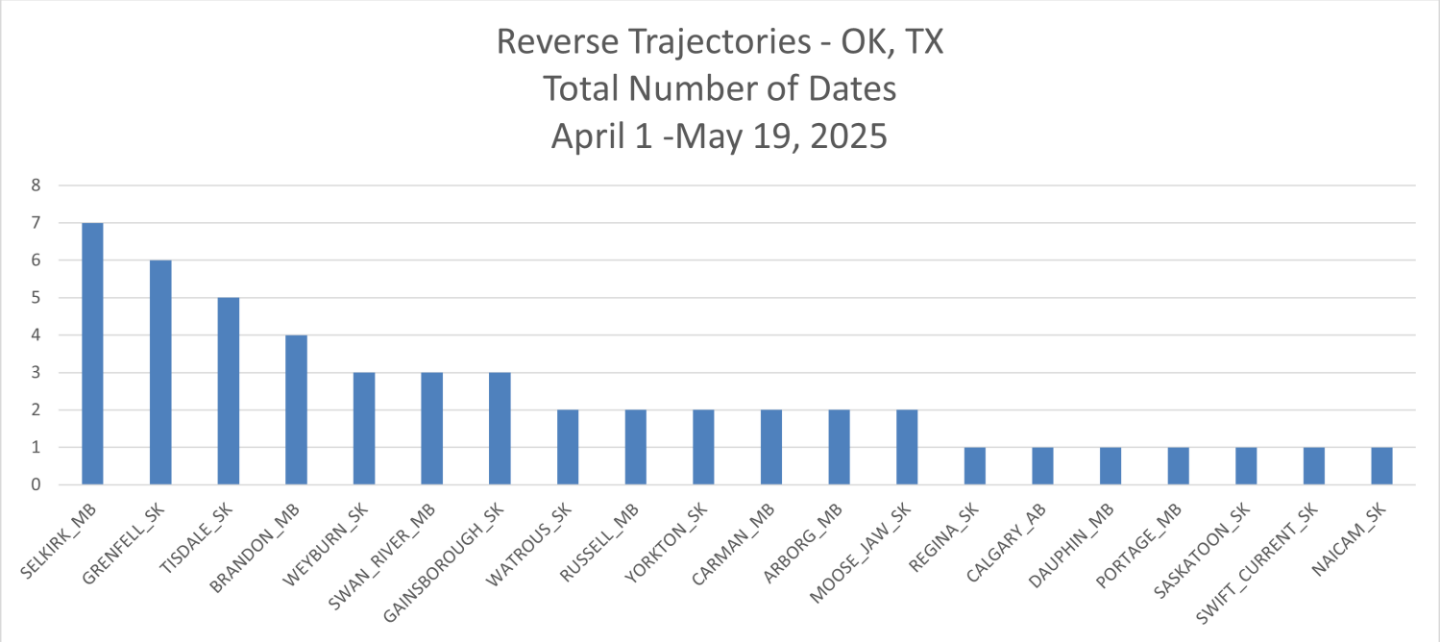


**Figure 8. Reverse trajectory locations and number of events, for reverse trajectory events originating from Oklahoma and Texas, USA, April 1 – May 19, 2025.**

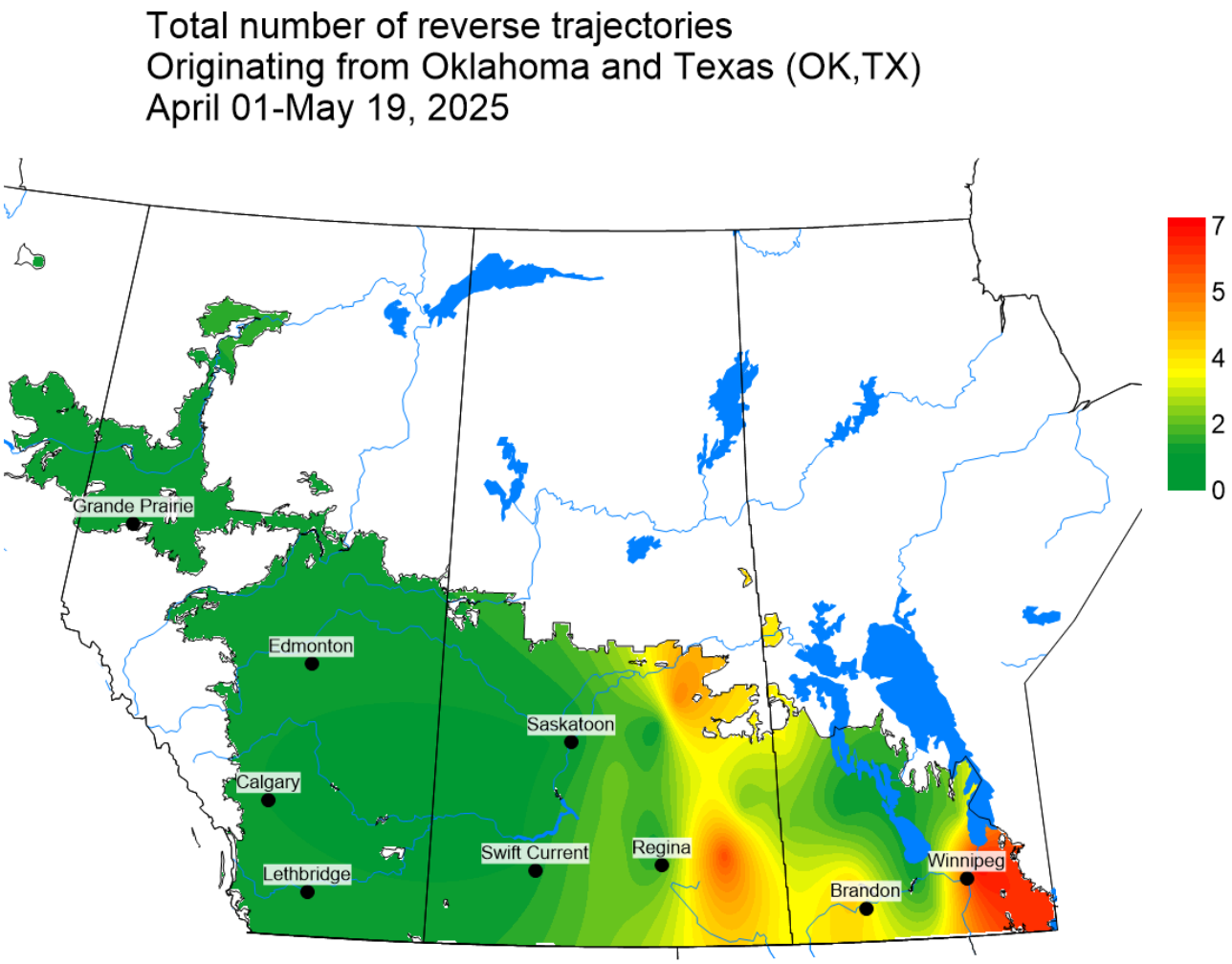


**Figure 9. Total number of dates with reverse trajectories originating from Texas and Oklahoma, USA that have crossed the prairies between April 1 – May 19, 2025.**

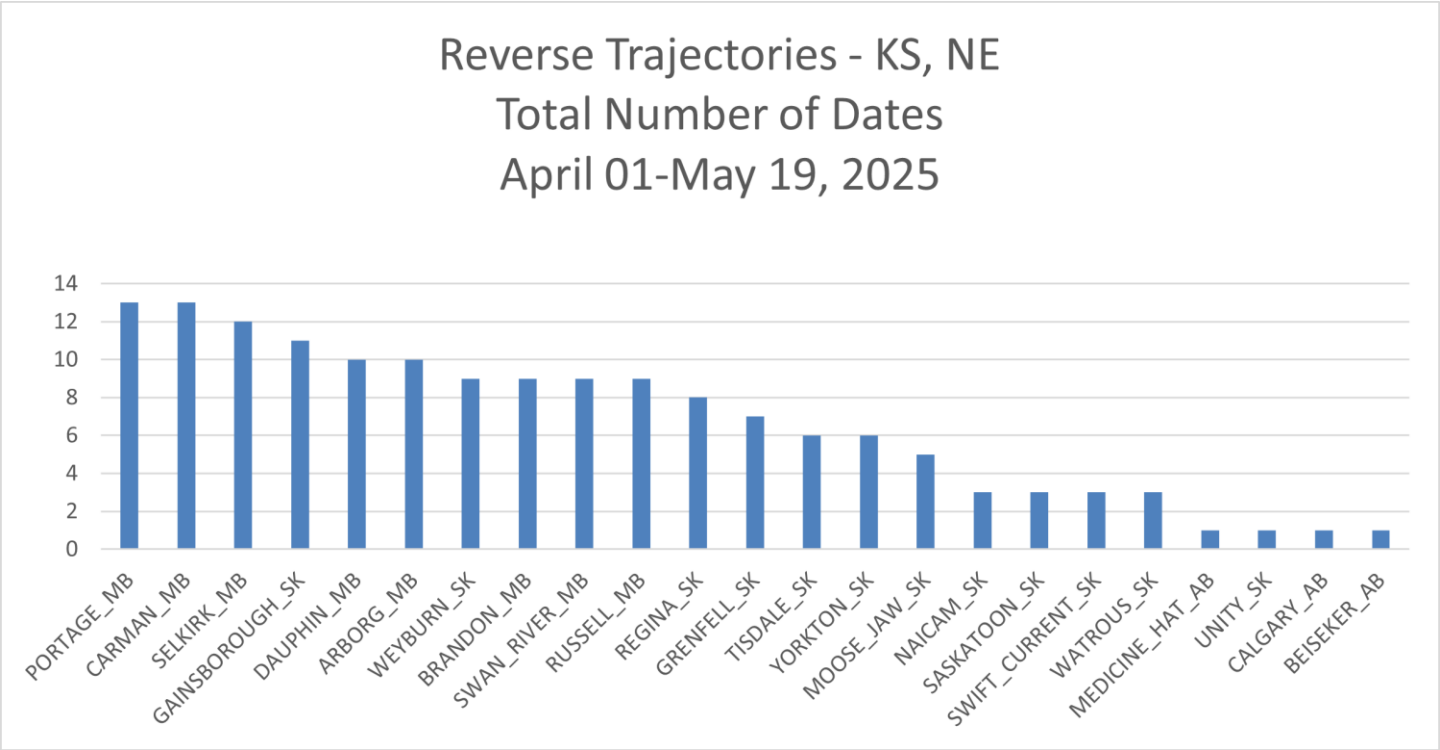


**Figure 10. Reverse trajectory locations and number of events, for reverse trajectory events originating from Kansas and Nebraska, USA, April 1 – May 19, 2025.**

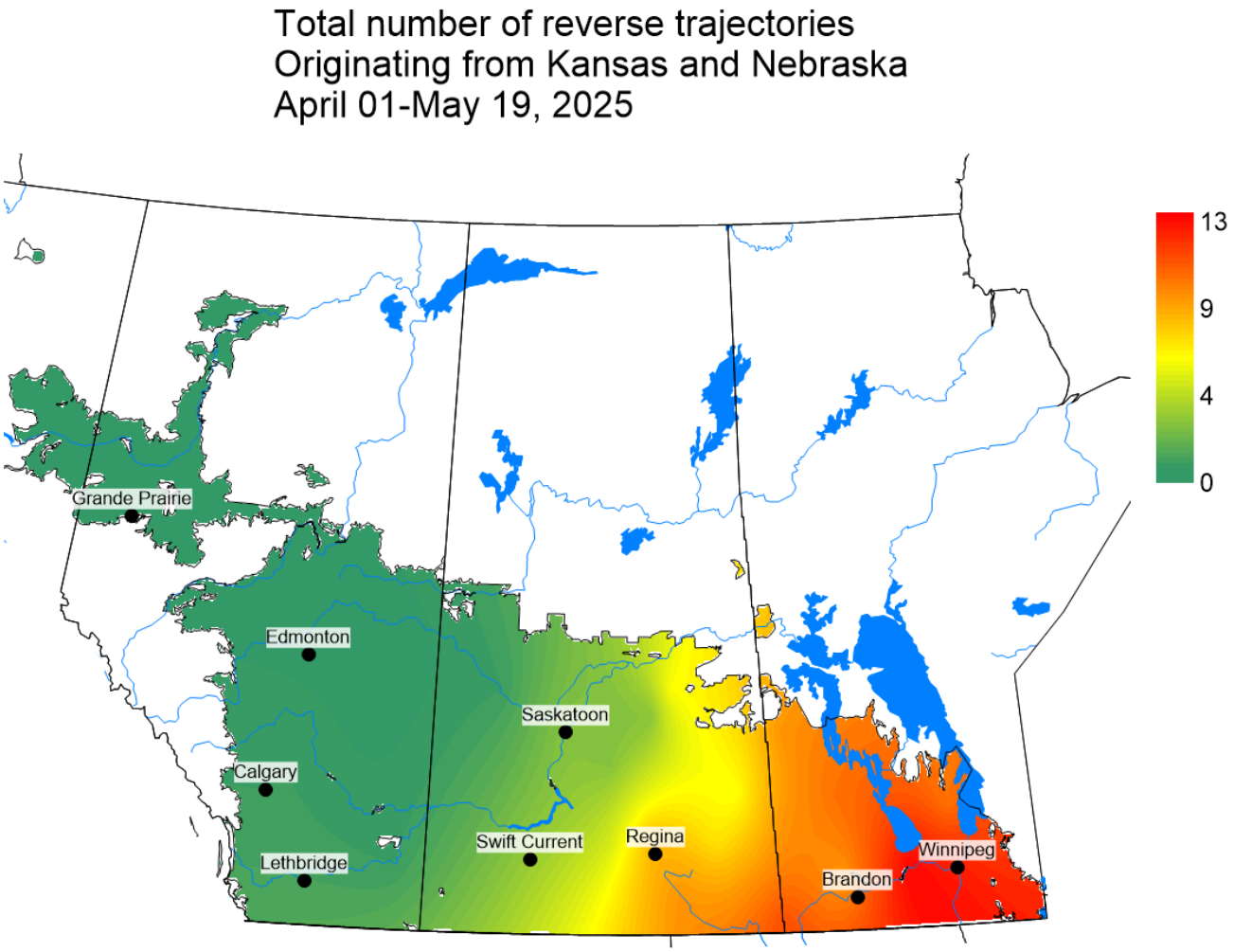


**Figure 11. Total number of dates with reverse trajectories originating from Kansas and Nebraska, USA that have crossed the prairies between April 1 – May 19, 2025.**

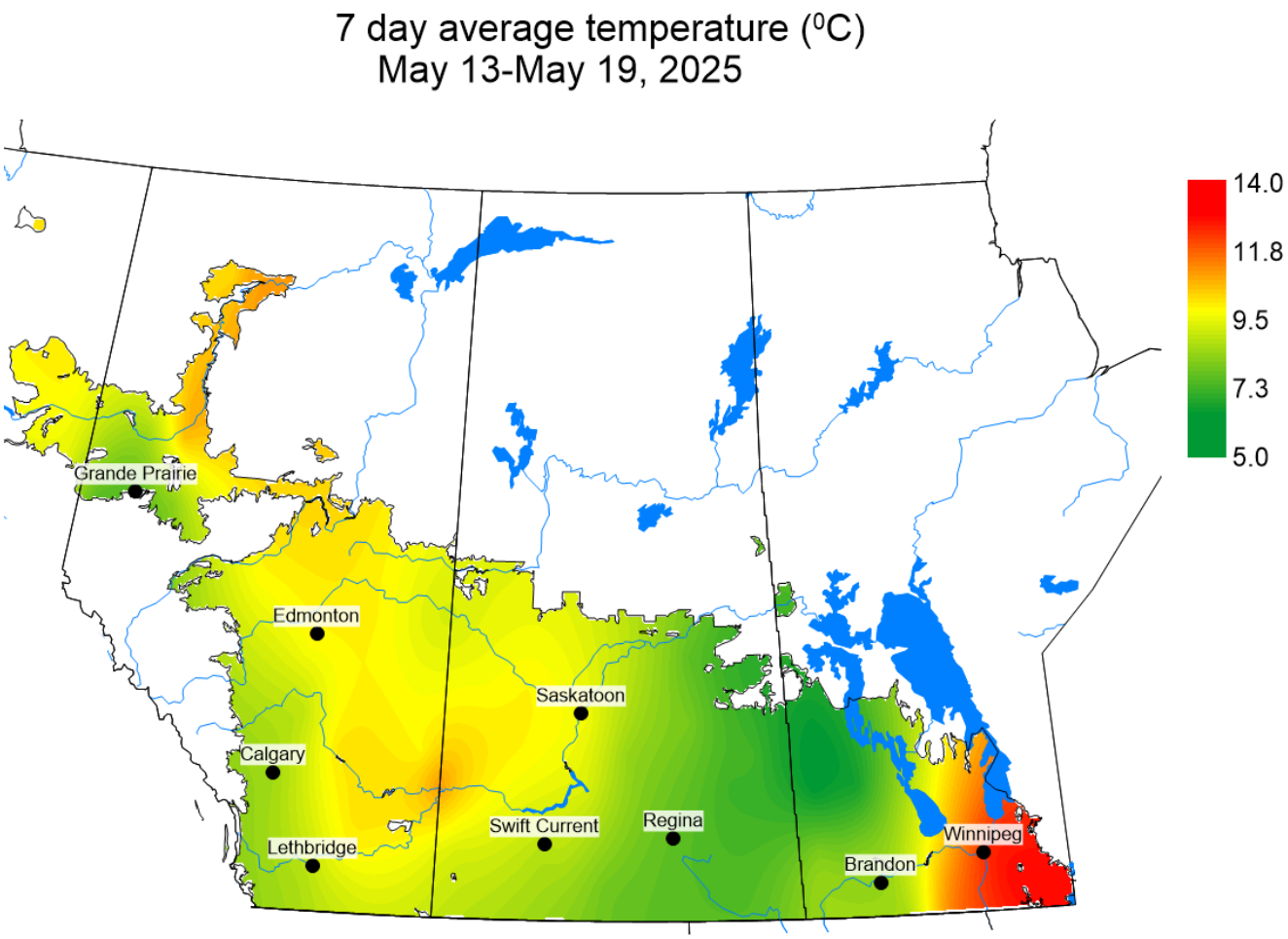


**Figure 12. Seven day average temperature (°C), Prairie region, May 13-19, 2025.**

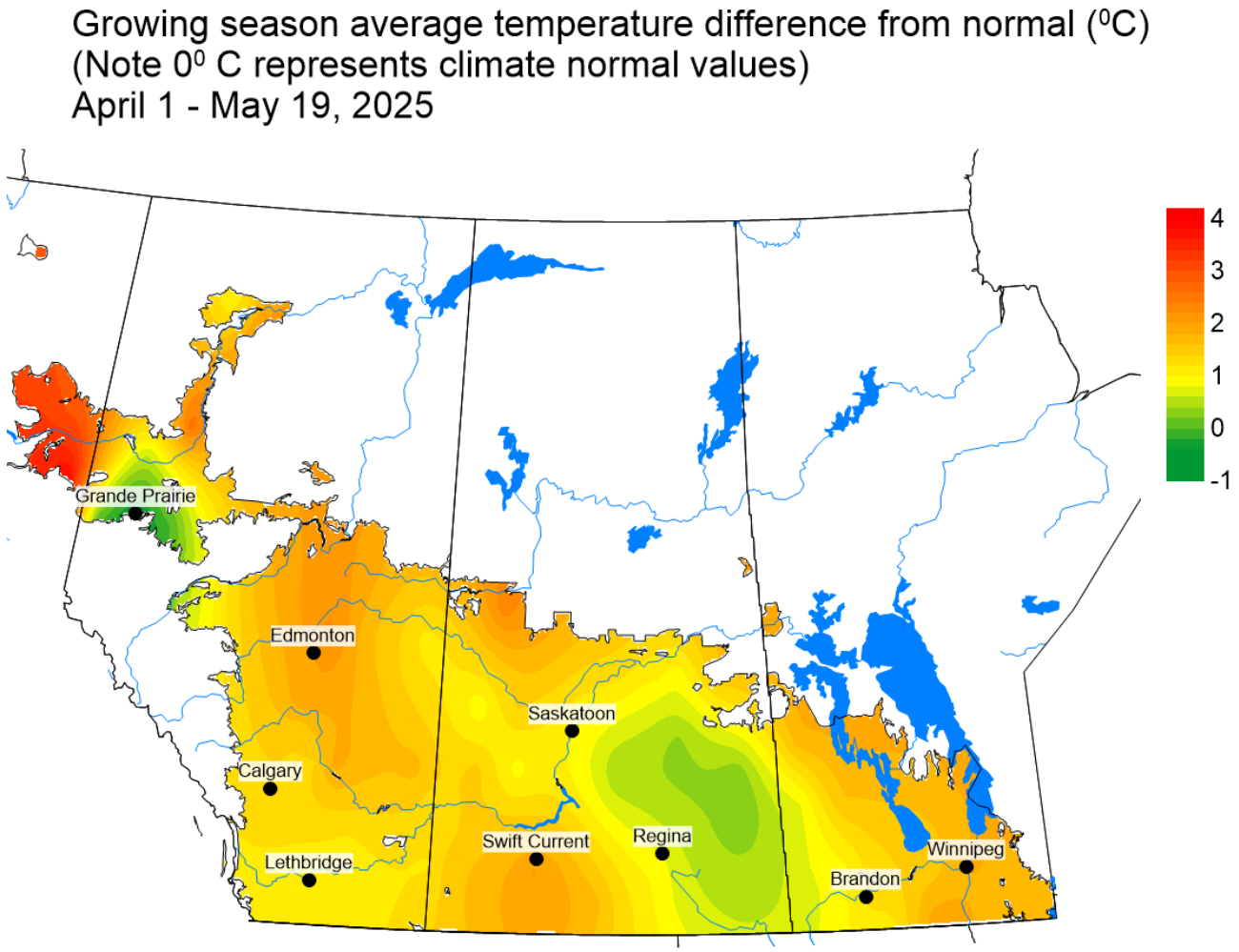


**Figure 13. Growing season average temperature (°C) difference from normal, Prairie region, April 1 - May 19, 2025.**

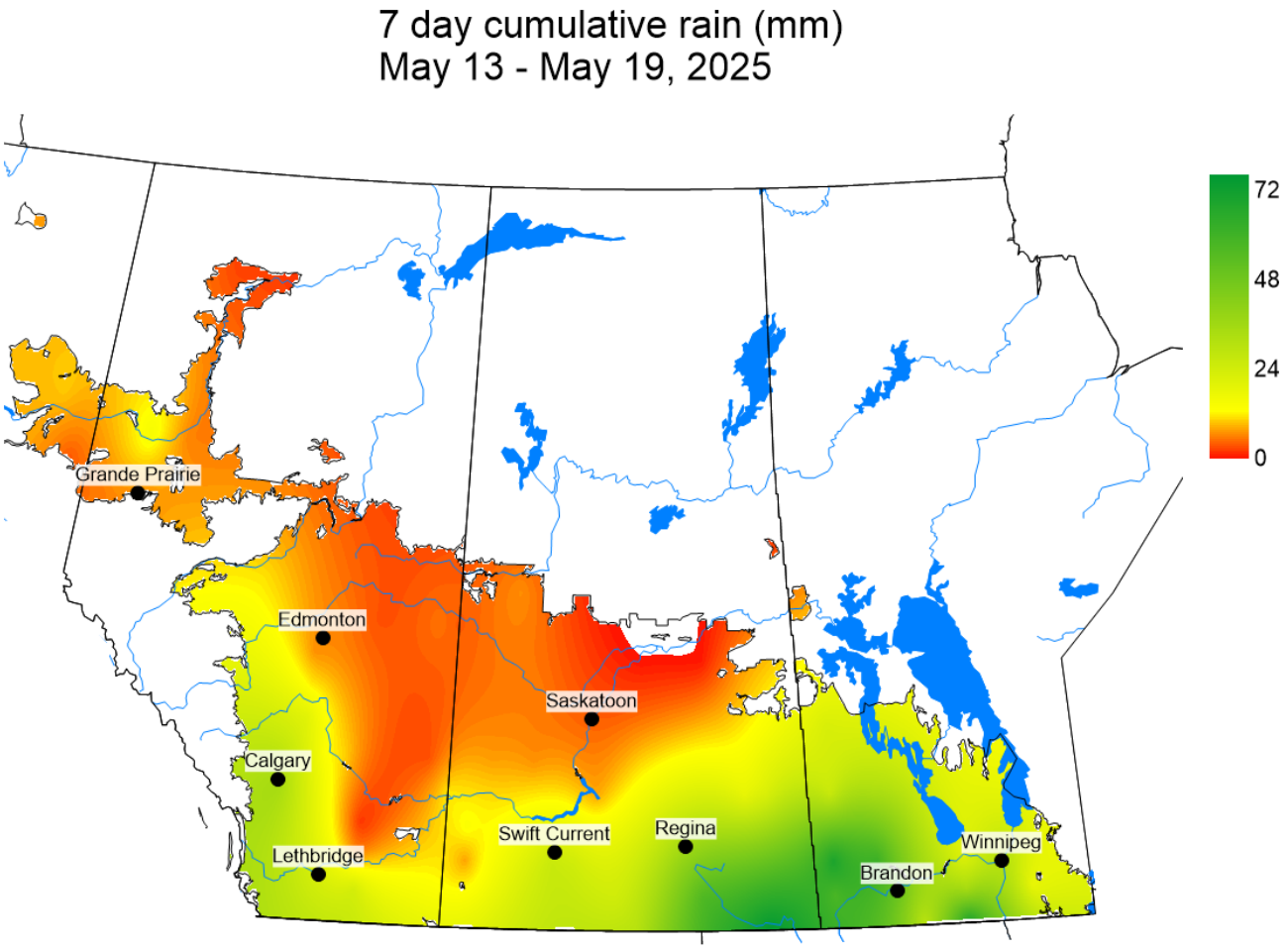


**Figure 14. Seven day accumulated rainfall (mm), Prairie region May 13-19, 2025.**

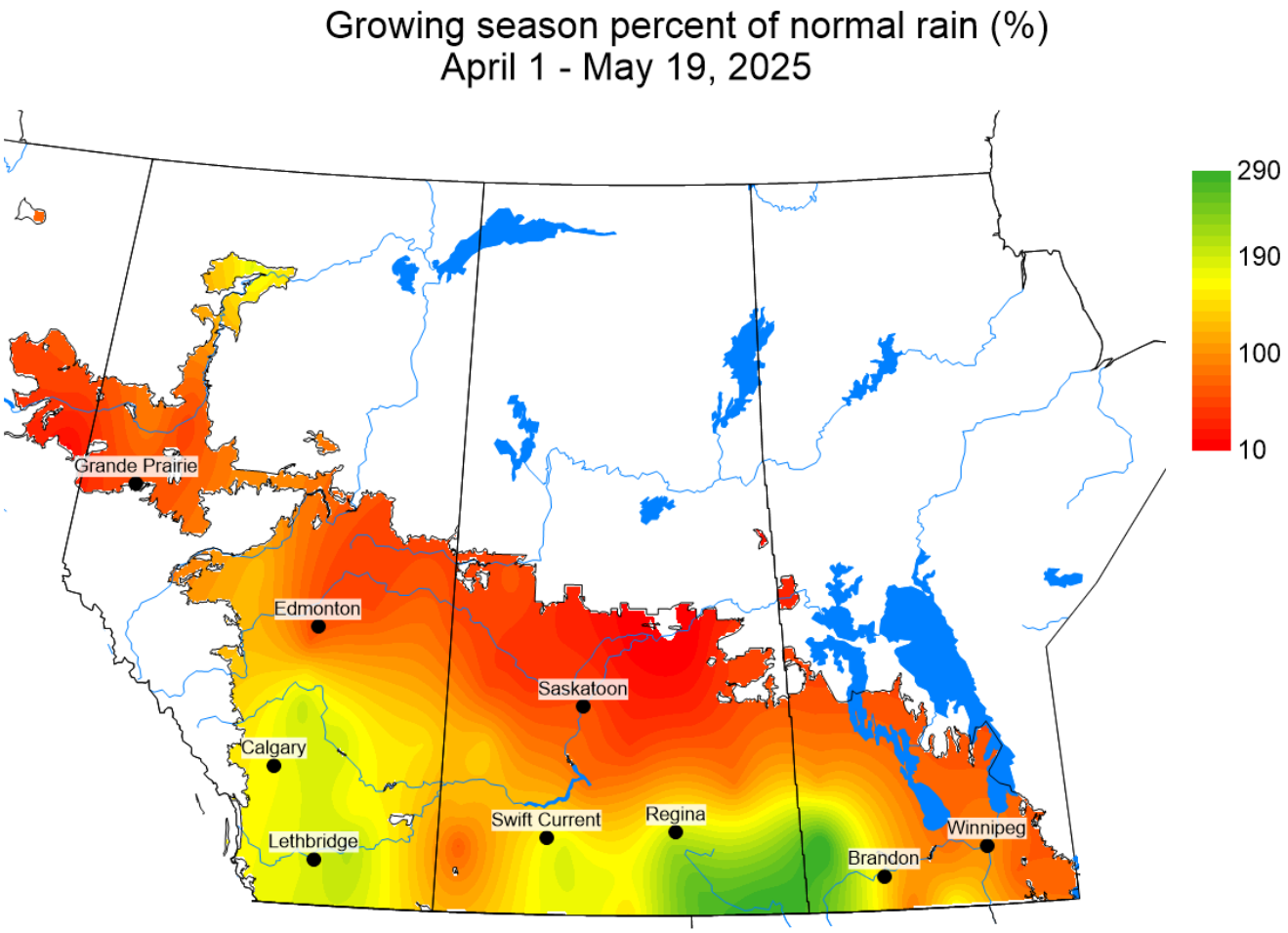


**Figure 15. Growing season accumulated rainfall (mm) percent of normal, Prairie region April 1 - May 19, 2025.**

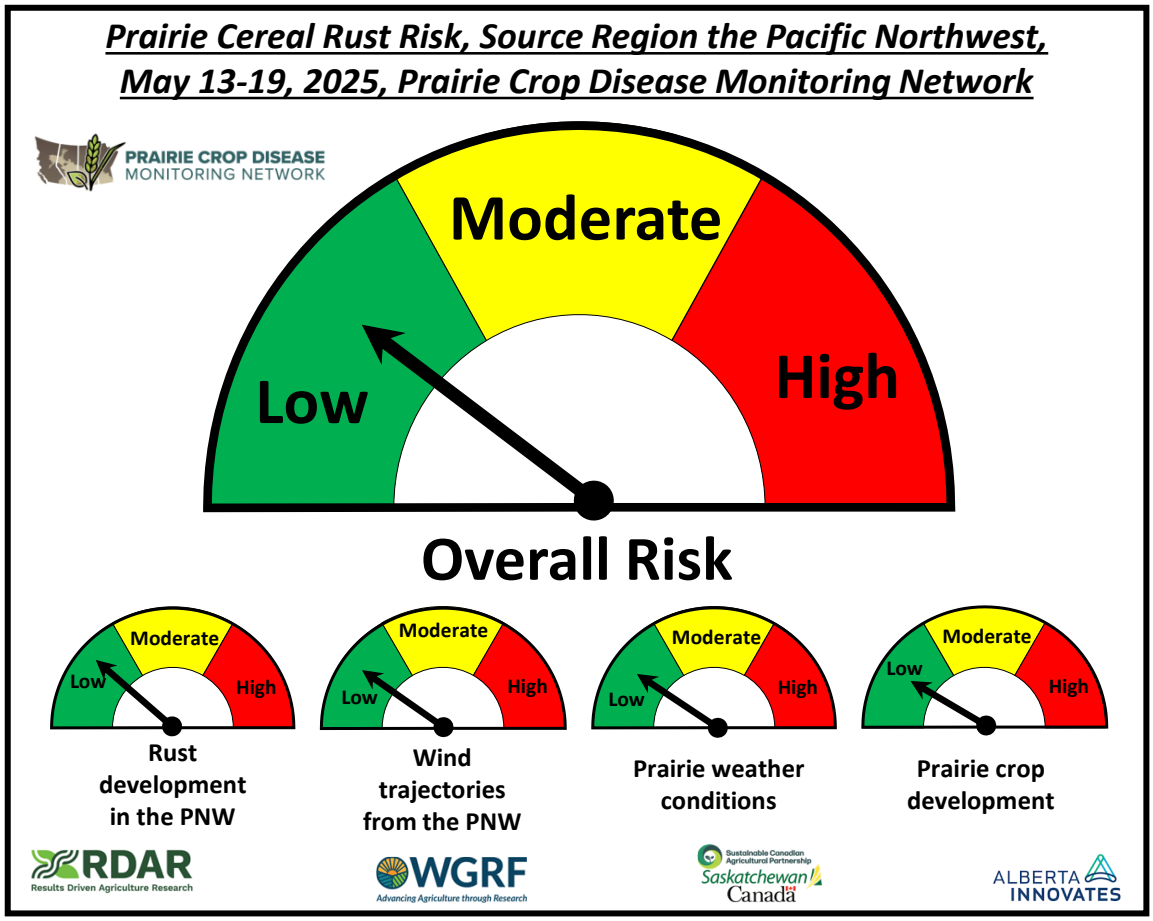


**Figure 16. Prairie cereal risk speedometers for stripe rust from the Pacific Northwest, May 13-19, 2025.**

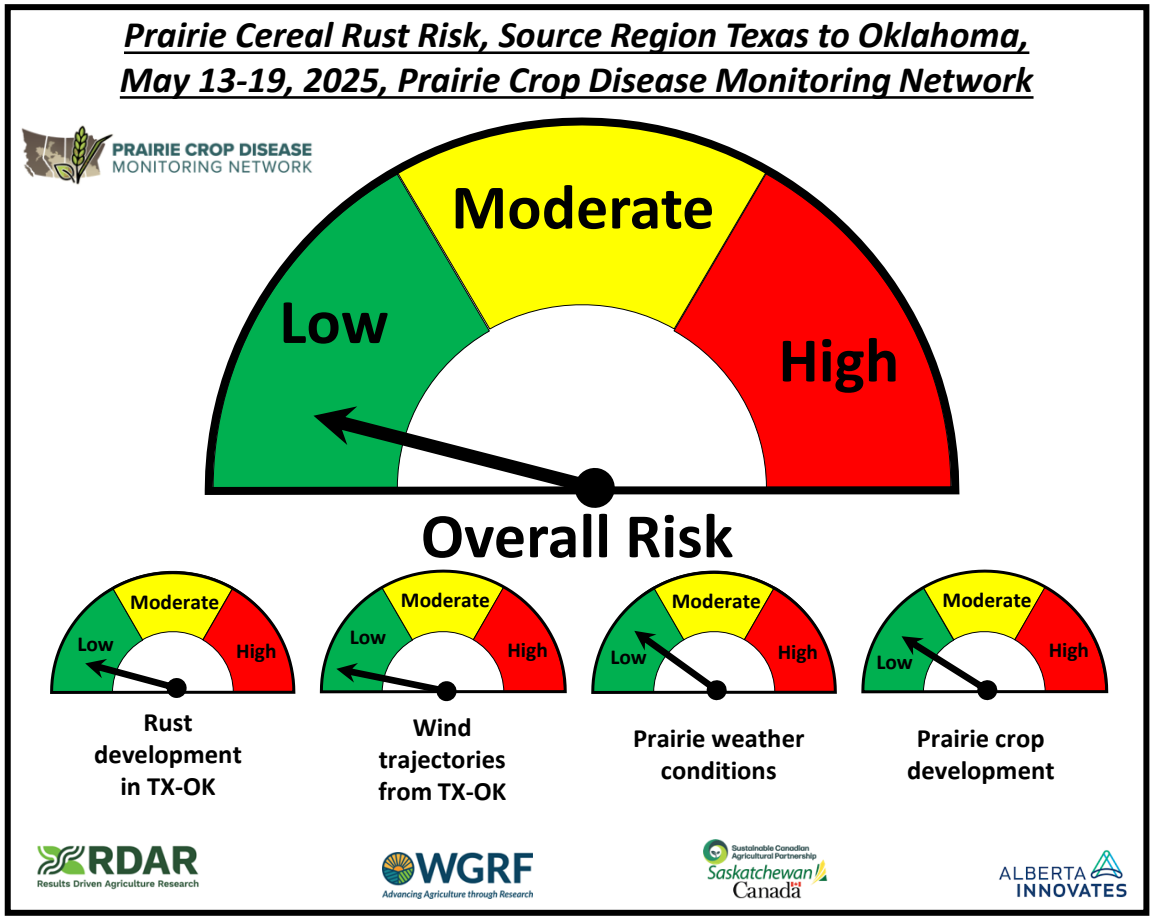


**Figure. 17. Prairie cereal risk speedometers for stripe/leaf rust from the Texas to Oklahoma region, May 13-19, 2025.**

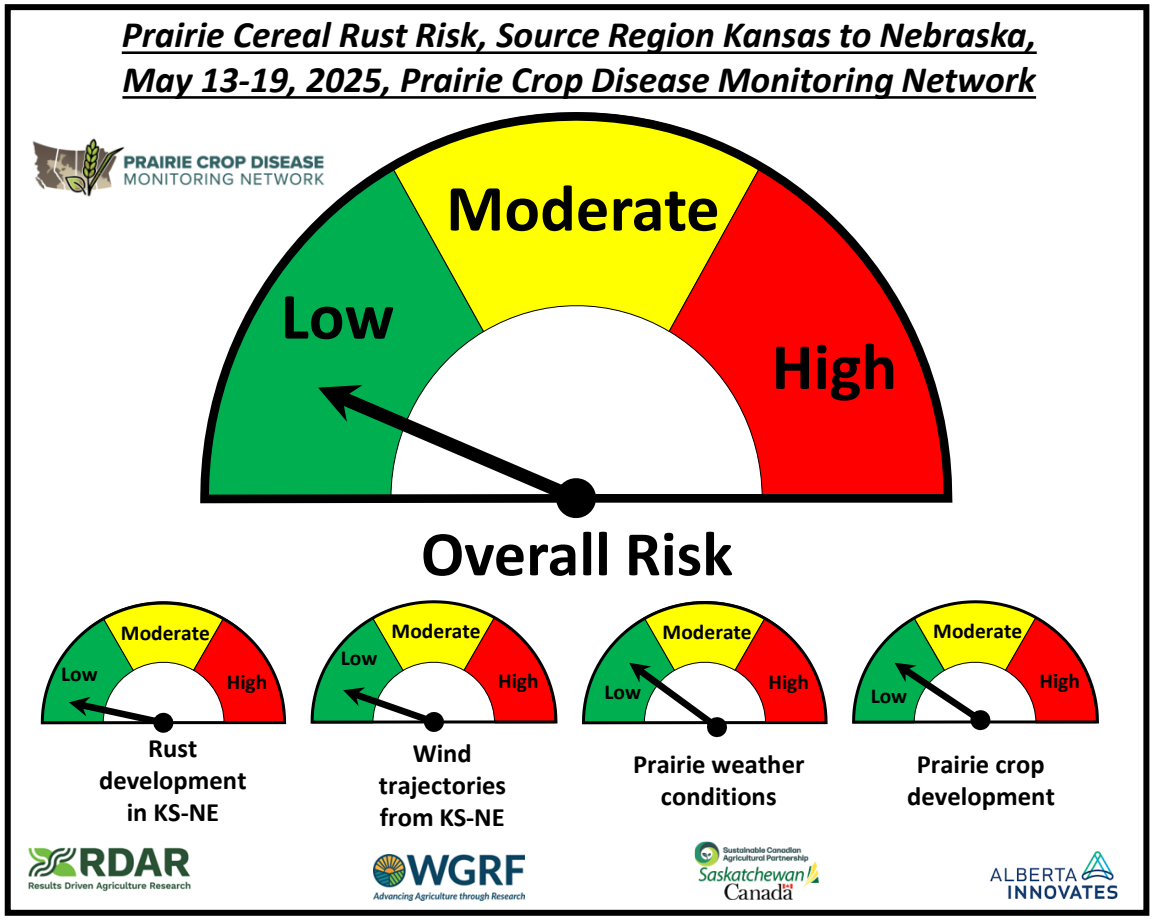


**Figure. 18. Prairie cereal risk speedometers for stripe/leaf rust from the Kansas/Nebraska region, May 13-19, 2025.**

**Table 1. Reverse trajectory locations, arrival dates, and number of events, for reverse trajectory events originating from the Pacific Northwest region of the USA, May 13-19, 2025**

| Location | Province | 13-May-25 | 14-May-25 | 15-May-25 | 16-May-25 | 17-May-25 | 18-May-25 | 19-May-25 | Total trajectories/location |
|---|---|---|---|---|---|---|---|---|---|
| LETHBRIDGE | AB | 0 | 0 | 0 | 0 | 1 | 1 | 1 | **3** |
| VULCAN | AB | 0 | 0 | 0 | 0 | 1 | 1 | 1 | **3** |
| CALGARY | AB | 0 | 0 | 0 | 0 | 0 | 1 | 1 | **2** |
| LACOMBE | AB | 0 | 0 | 0 | 0 | 0 | 1 | 1 | **2** |
| OLDS | AB | 0 | 0 | 0 | 0 | 0 | 1 | 1 | **2** |
| ANDREW | AB | 0 | 0 | 0 | 0 | 0 | 0 | 1 | **1** |
| BEISEKER | AB | 0 | 0 | 0 | 0 | 0 | 0 | 1 | **1** |
| EDMONTON | AB | 0 | 0 | 0 | 0 | 0 | 0 | 1 | **1** |
| GAINSBOROUGH | SK | 0 | 0 | 0 | 0 | 0 | 0 | 1 | **1** |
| GRANDE PRAIRIE | AB | 0 | 0 | 0 | 0 | 0 | 0 | 1 | **1** |
| GRENFELL | SK | 0 | 0 | 0 | 0 | 0 | 0 | 1 | **1** |
| KINDERSLEY | SK | 0 | 0 | 0 | 0 | 0 | 1 | 0 | **1** |
| MEDICINE HAT | AB | 0 | 0 | 0 | 0 | 0 | 1 | 0 | **1** |
| MOOSE JAW | SK | 0 | 0 | 0 | 0 | 0 | 0 | 1 | **1** |
| NAICAM | SK | 0 | 0 | 0 | 0 | 0 | 0 | 1 | **1** |
| PROVOST | AB | 0 | 0 | 0 | 0 | 0 | 0 | 1 | **1** |
| REGINA | SK | 0 | 0 | 0 | 0 | 0 | 0 | 1 | **1** |
| RYCROFT | AB | 0 | 0 | 0 | 0 | 0 | 0 | 1 | **1** |
| SEDGEWICK | AB | 0 | 0 | 0 | 0 | 0 | 0 | 1 | **1** |
| SWIFT CURRENT | SK | 0 | 0 | 0 | 0 | 0 | 1 | 0 | **1** |
| UNITY | SK | 0 | 0 | 0 | 0 | 0 | 0 | 1 | **1** |
| VEGREVILLE | AB | 0 | 0 | 0 | 0 | 0 | 0 | 1 | **1** |
| WATROUS | SK | 0 | 0 | 0 | 0 | 0 | 0 | 1 | **1** |
| WEYBURN | SK | 0 | 0 | 0 | 0 | 0 | 1 | 0 | **1** |
| YORKTON | SK | 0 | 0 | 0 | 0 | 0 | 0 | 1 | **1** |
| **Total trajectories per date** | | **0** | **0** | **0** | **0** | **2** | **9** | **21** | **32** |

**Table 2. Reverse trajectory locations, arrival dates, and number of events, for reverse trajectory events originating from Oklahoma and Texas, USA, May 13-19, 2025.**

| Location | Province | 13-May-25 | 14-May-25 | 15-May-25 | 16-May-25 | 17-May-25 | 18-May-25 | 19-May-25 | Total trajectories/ location |
|---|---|---|---|---|---|---|---|---|---|
| SELKIRK | MB | 1 | 1 | 1 | 1 | 1 | 0 | 0 | **5** |
| GRENFELL | SK | 1 | 1 | 1 | 1 | 0 | 0 | 0 | **4** |
| TISDALE | SK | 1 | 1 | 1 | 1 | 0 | 0 | 0 | **4** |
| **Total trajectories per date** | | **3** | **3** | **3** | **3** | **1** | **0** | **0** | **13** |

**Table 3. Reverse trajectory locations, arrival dates, and number of events, for reverse trajectory events originating from Kansas and Nebraska, USA, May 13-19, 2025.**

| Location | Province | 13-May-25 | 14-May-25 | 15-May-25 | 16-May-25 | 17-May-25 | 18-May-25 | 19-May-25 | Total trajectories/ location |
|---|---|---|---|---|---|---|---|---|---|
| REGINA | SK | 1 | 1 | 1 | 1 | | | | **4** |
| SWAN RIVER | MB | 1 | 1 | 1 | 1 | | | | **4** |
| TISDALE | SK | 1 | 1 | 1 | 1 | | | | **4** |
| GAINSBOROUGH | SK | | | | | | | 1 | **1** |
| MEDICINE HAT | AB | | | | | | | 1 | **1** |
| SWIFT CURRENT | SK | | | | | | | 1 | **1** |
| WEYBURN | SK | | | | | | | 1 | **1** |
| **Total trajectories per date** | | **3** | **3** | **3** | **3** | **0** | **0** | **4** | **16** |