



SPUDSCOOP

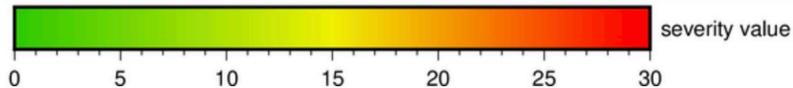
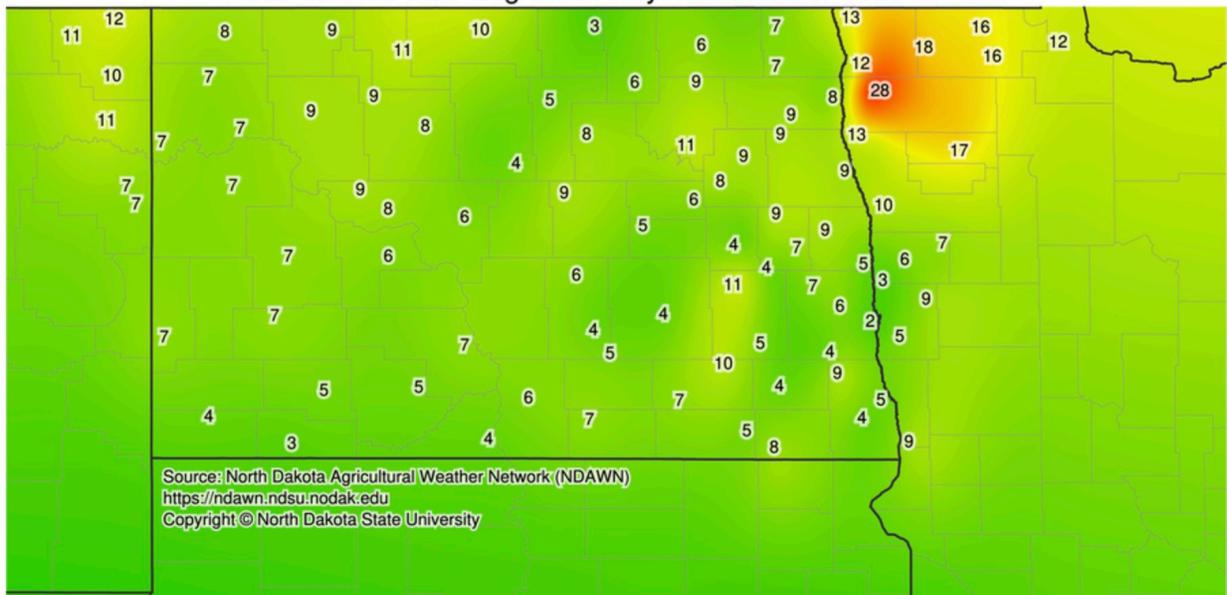
3 July 2020

NDSU Extension and University of Minnesota are excited to introduce a growing season newsletter that will combine information for potato growers. Welcome to Spud Scoop.

Blightline

Welcome to the NDSU Potato Blightline for July 3, 2020. Late blight has not been reported in ND, MN or MB. Accumulated late blight severity values are accumulating due to the recent rain. When severity values exceed the threshold value of 15, conditions for late blight have accumulated enough for late blight infection to occur if inoculum is present. Severity values in extreme NW MN are close to or above the late blight threshold value and should be scouted more frequently, especially in areas that remain wet for longer periods, such as along shelterbelts and in low areas. Severity values accumulate most rapidly during cool wet weather. We recommend growers to scout fields for late blight, apply a protectant fungicide just prior to row closure and send suspect late blight samples or photos to us for positive identification.

Accumulated Late Blight Severity Values as of 2020-07-02



[NDSU Potato Late Blight Hotline](#)

Herbicide Injury

by Andy Robinson

The number of herbicide injury problems in potato have been more commonplace. Injury from herbicides can be a result of soil carryover, herbicide residues in seed, or exposure of plants to herbicides. At this time of year, drift or tank contamination are concerns for herbicide injury. Symptoms of in-season exposure can be manifested as misshapen leaves, yellowing of leaves, elongated leaflets and cracking or malformed tubers. This poster demonstrates various herbicide injury symptoms, but will not demonstrate all symptoms. Determining if injury is caused by an herbicide or another source will be important in managing and marketing potatoes. If you would like a copy of the poster, you can download it at z.umn.edu/herbicide or pick one up at the NPPGA office or contact Andy Robinson at Andy.Robinson@ndsu.edu. Additionally, the July/August issue of the Valley Potato Grower will have version of this poster that can be removed.

EXTENSION

Herbicide Injury in Potatoes

| Amino Acid Synthesis Inhibitors 2, 9 | | | | | Growth Regulators 4 | | | |
|--------------------------------------|----------|----------|-------------|------------|---------------------|---------|--------|------------|
| Halosulfuron | Imazamox | Imazapyr | Flumetsulam | Glyphosate | Picloram | Dicamba | 2, 4-D | Clopyralid |
| | | | | | | | | |
| | | | | | | | | |

| Cell Membrane Disrupters 14 | | | |
|-----------------------------|-------------|-----------|-----------|
| Saflufenacil | Flumioxazin | Fomesafen | Fomesafen |
| | | | |

| Photo System II Inhibitors 5, 6, 7 | | | Long Chain Fatty Acid Inhibitor 15 | | Pigment Inhibitors 13, 27 | | Nitrogen Metabolism 10 |
|------------------------------------|---------|------------|------------------------------------|-------------|---------------------------|------------|------------------------|
| Bromoxynil | Linuron | Metribuzin | Dimethenamid-P | Metolachlor | Clomazone | Mesotrione | Glufosinate |
| | | | | | | | |

This work was supported by the Northern Plains Potato Grower Association and the Minnesota Area II Potato Grower Council. Copyright 2018, University of Minnesota Extension. All rights reserved. No part of this publication may be reproduced, stored in a retrieval system, or transmitted, in any form or by any means, without the prior written permission of the University of Minnesota Extension. For more information, contact Andy Robinson at Andy.Robinson@ndsu.edu. This publication was prepared in cooperation with the Northern Plains Potato Grower Association. Photo credit: Andy Robinson, University of Minnesota Extension.

Aphid Alert

by Ian MacRae

Greetings - Happy Independence Day!

There was no mail on Friday July 03, we'll keep our eyes open for trap catches that arrive on Monday that should be in this report and update this report.

Traps in 4 locations have reported weekly captures and vector numbers are low to this point but there's no mail on Friday July 03 so we expect more on Monday. Trap capture overall was very low with few aphids being recovered in traps. Only 3 vector aphids were recovered (2 in Lisbon and 1 in Perham) meaning PVY Risk Index remains low. Keep scouting, younger larvae are more susceptible to insecticides than are older larvae or adult beetles.

If you have a field where Colorado Potato Beetle aren't being controlled by insecticides, please let us know. We'd like to get samples of that population to test for insecticide resistance. Contact Ian MacRae at 218-280-9887.

As always, keep on scouting!

Scouting for aphids in potatoes:

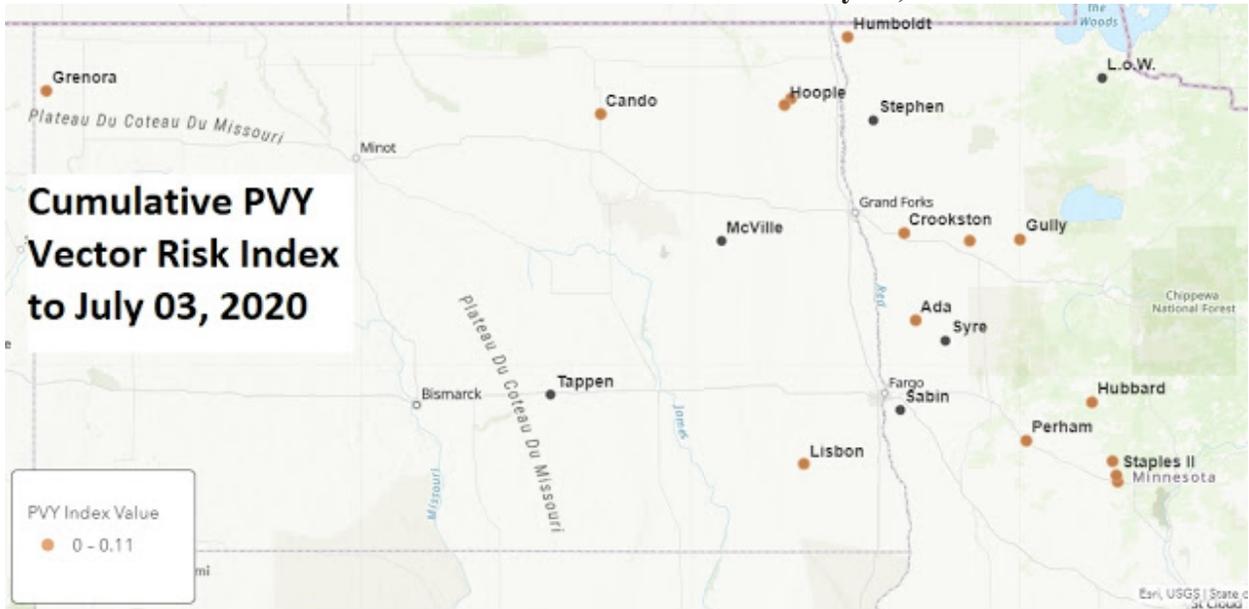
- Select leaves from the lower to mid canopy. Start at the edge of the field.
- Lower, older leaves will have more established colonies and aphids prefer the balance of nutrients found here; aphids are rarely found on leaves in the upper canopy.
- Avoid leaves on the ground or in contact with the soil.
- In seed potatoes there is only a threshold for PLRV (10 aphids/100 leaves), reactive application of insecticides an effective control for PVY.
- The use of feeding suppressing insecticides, such as pymetrozine (Fulfill®) or flonicamid (Beleaf®) and refined crop oils, such as Aphoil and JMS Stylet Oil, at or prior to field colonization by aphids may reduce the transmission of PVY within fields. Some other insecticides, such as clothianidin (Belay®), imidacloprid (Admire Pro® or Provado®), and spirotetramat (Movento®), have also been demonstrated to reduce the transmission of PVY.
- In table stock potatoes, a treatment threshold of 30 aphids /100 leaves should deter yield loss due to aphid feeding.

The PVY Risk Index Index

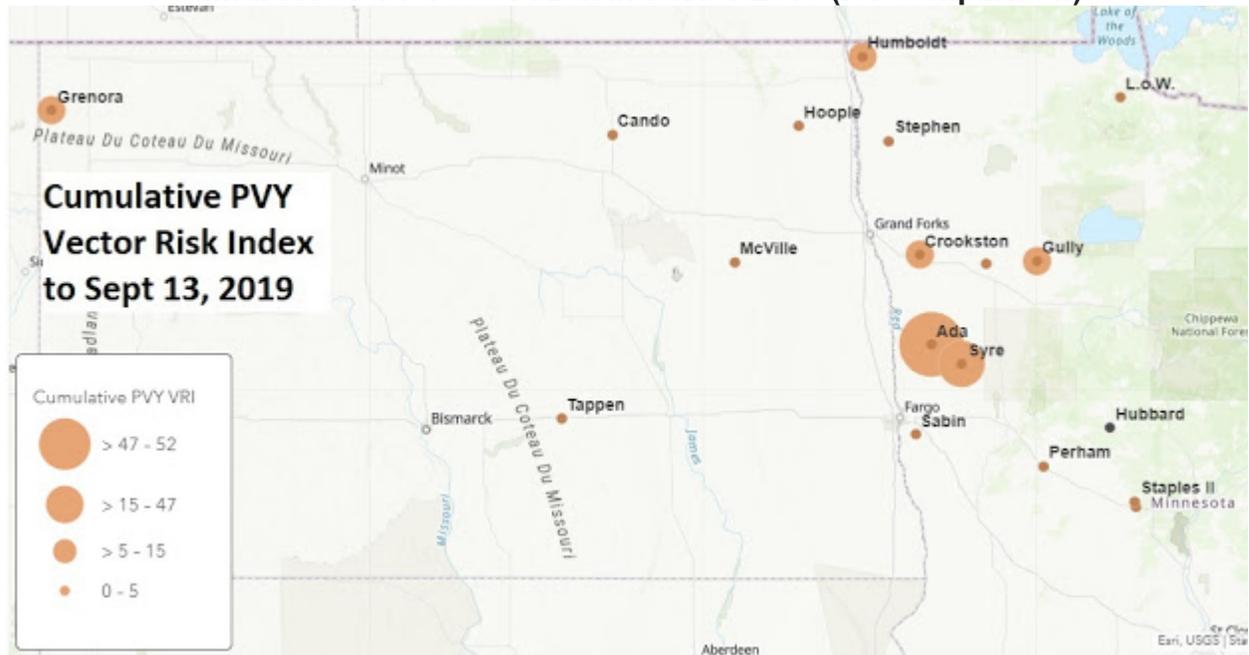
Not all species of aphid are equally efficient at transmitting PVY, some are better than others (green peach being the most efficient vector of PVY). So, the total number of aphids in a trap don't necessarily reflect just how much vector pressure there is at that location. The PVY Vector Risk Index compares aphid numbers, incorporating their relative vector efficiency compared to the Queen of PVY vectors (green peach aphid!). Using averaged reference comparisons from the literature, we multiply the number of each aphid species captured by its efficiency compared to Green Peach Aphid to more accurately depict risk posed by the species being trapped. We then sum the totals. The PVY-VRI values are presented on the tables below but also on maps comparing current cumulative risk to the total risk from the sample sites of last year (to compare with your local winter grow out results).

Check out all the trap data at:
aphidalert.blogspot.com

Cumulative PVY Vector Risk Index to July 03, 2020.



Cumulative PVY Vector Risk Index for 2019 (for comparison)



Aphid Species Capture and PVY Vector Risk Index for the week ending July 03, 2020

| Location | Date ID | Week of | Green peach aphid | Soybean aphid | Bird cherry oak aphid | Corn leaf aphid | English grain aphid | Green bug | Peanut aphid | Sunflower aphid | Thistle aphid | Turnip aphid | Cottonmelon aphid | Pea aphid | Foxglove aphid | Cowpea aphid | Black bean aphid | Buckthorn aphid | Daniellia hop aphid | Cannabis Aphid | Sugarbeet root aphid | Identified non-vector | Total # captured | Total vectors | PVY Vector Risk Index | |
|-----------|---------|---------|-------------------|---------------|-----------------------|-----------------|---------------------|-----------|--------------|-----------------|---------------|--------------|-------------------|-----------|----------------|--------------|------------------|-----------------|---------------------|----------------|----------------------|-----------------------|------------------|---------------|-----------------------|---|
| | | | Ada | 29-jun | 3-Jul | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ballard | 29-jun | 3-Jul | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Cardo | 29-jun | 3-Jul | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Crookston | 29-jun | 3-Jul | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Crystal | 29-jun | 3-Jul | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Erskine | 29-jun | 3-Jul | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Grenora | 29-jun | 3-Jul | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Gully | 29-jun | 3-Jul | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Hoople | 29-jun | 3-Jul | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Hubbard | 29-jun | 3-Jul | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Humboldt | 29-jun | 3-Jul | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| L.O.W. | 29-jun | 3-Jul | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Libson | 29-jun | 3-Jul | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| McVie | 29-jun | 3-Jul | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Perham | 29-jun | 3-Jul | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Sabin | 29-jun | 3-Jul | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Staples | 29-jun | 3-Jul | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Stephen | 29-jun | 3-Jul | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Syre | 29-jun | 3-Jul | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Tappen | 29-jun | 3-Jul | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

Cumulative Aphid Species Capture and PVY Vector Risk Index to July 03, 2020.

| Row Label | Sum of Green peach | Sum of Soybean aphid | Sum of Bird cherry | Sum of Corn leaf | Sum of English grain | Sum of Green bug | Sum of Potato aphid | Sum of Sunflower aphid | Sum of Thistle aphid | Sum of Turnip aphid | Sum of Cotton/melon | Sum of Pea aphid | Sum of Foxglove aphid | Sum of Cowpea aphid | Sum of Black bean | Sum of Buckthorn aphid | Sum of Daniellia Hop | Sum of Cannabis Aphid | Sum of Sugarbeet root aphid | Sum of Identified non-vector | Sum of Total # capture | Sum of Total Vectors | Sum of PVY Vector | | |
|--------------------|--------------------|----------------------|--------------------|------------------|----------------------|------------------|---------------------|------------------------|----------------------|---------------------|---------------------|------------------|-----------------------|---------------------|-------------------|------------------------|----------------------|-----------------------|-----------------------------|------------------------------|------------------------|----------------------|-------------------|-------------|------|
| Ada | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| Ballard | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| Cardo | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| Crookston | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0.06 | |
| Crystal | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| Erskine | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| Grenora | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| Gully | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | |
| Hoople | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| Hubbard | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| Humboldt | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 2 | 0.1 |
| L.O.W. | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| Libson | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| McVie | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| Perham | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 2 | 0.11 |
| Sabin | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Staples | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Stephen | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Syre | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Tappen | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Grand Total | 0 | 1 | 1 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 13 | 0 | 7 | 0.32 | |