

**RATIONALE:** Airborne pollen is typically sampled with either a Burkard or Rotorod collector, which are very different from one another. Each method has bias.<sup>1</sup> NAB stations do not address this inconsistency. A true measurement should be independent of the instrument and user performing the test.

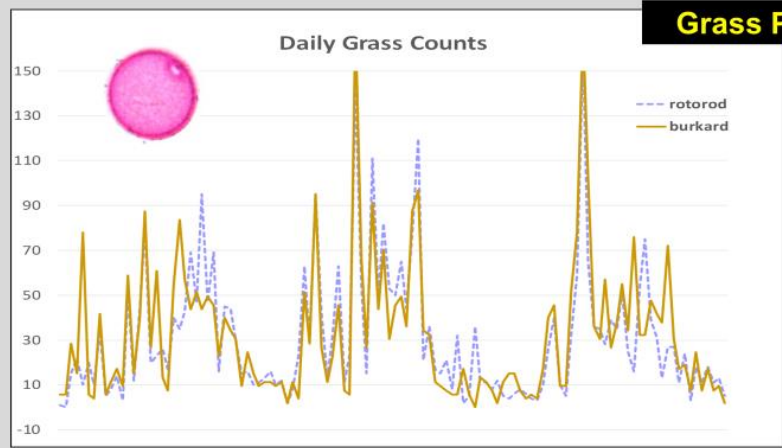
**•STUDY:** We investigated whether suitable correction factors could be identified to standardize pollen count records. Daily pollen counts for grass and ragweed at the Omaha NAB station (2016 – 2018) were obtained with side by side samplers. Burkard counts were performed by one analyst; Rotorod by another analyst. The data set consisted of 120 data pairs. Days were excluded if either sampler had no counts.

**FINDINGS:** We observed that pollen fluctuations were not tracked consistently. For grass pollen the samplers yielded similar results, but not for ragweed. Standardization of counts will require a better understanding of the factors influencing sampler performance<sup>1,2</sup>. We noted that 2017 ragweed data differed markedly from the other two years.

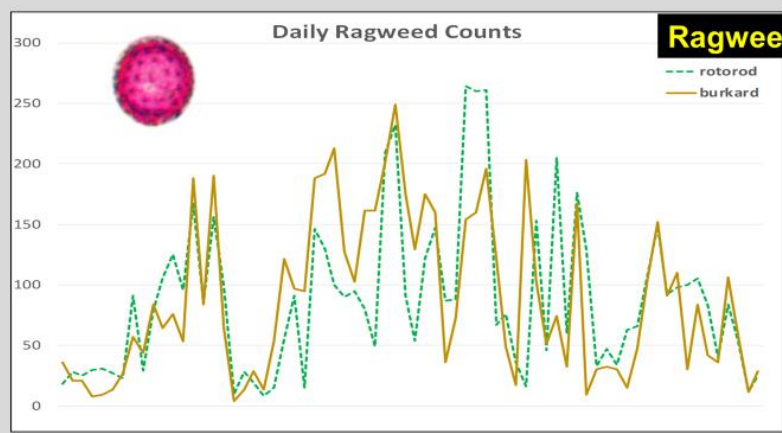
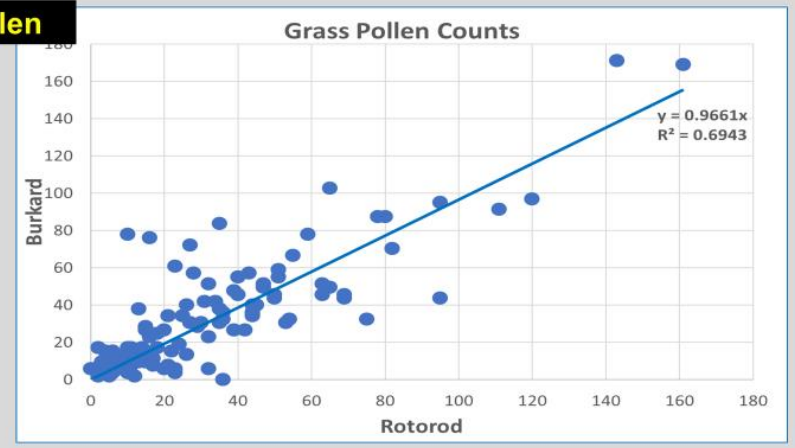
Methods



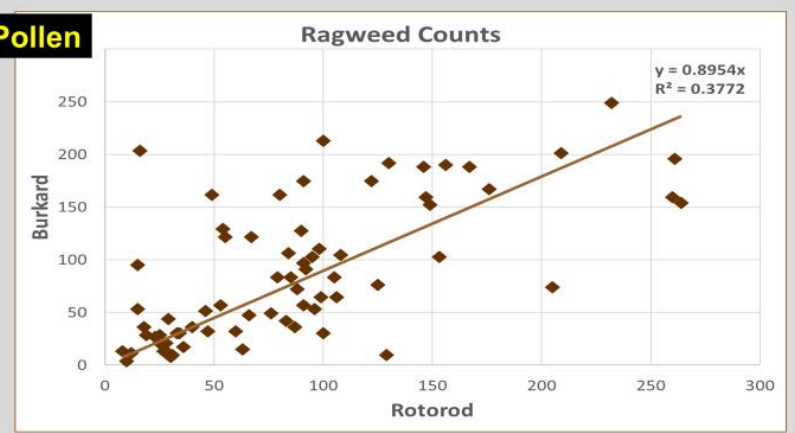
**Pollen Count Standardization for Burkard & Rotorod Samplers**  
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Grass Pollen



Ragweed Pollen



Conclusions

- Correction factors appear to be pollen type specific.
- Atmospheric conditions effect sampler performance differently.

Selected References

- 1.Frenz D. "Comparing Pollen & Spore Counts Collected with the Rotorod Sampler & Burkard Spore" J. Allergy Asthma & Immunol. V83, pp 341-347, Nov. 1999
- 2.Peel R, et al "Relative Efficiencies of the Burkard & Rotorod Samplers for Poaceae & Urticaceae Pollen under Field Conditions" Ann. Agri. & Envir. Med. V21, #4, pp 645-752, 2014.