2025 National Sunflower Production Survey – Insects (*and Birds*)

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U.S. DEPARTMENT OF AGRICULTURE

NSA Survey Insect Evaluations

1 . In-field assessments

- Observations of symptoms or insects (Dectes)
- Scored as incidence (% of plants)

2. Seed samples

- Shipped to USDA-ARS in Fargo
- X-ray imaging of seeds (weevil, caterpillar)
- Dehulling and inspection (*Lygus* bugs)

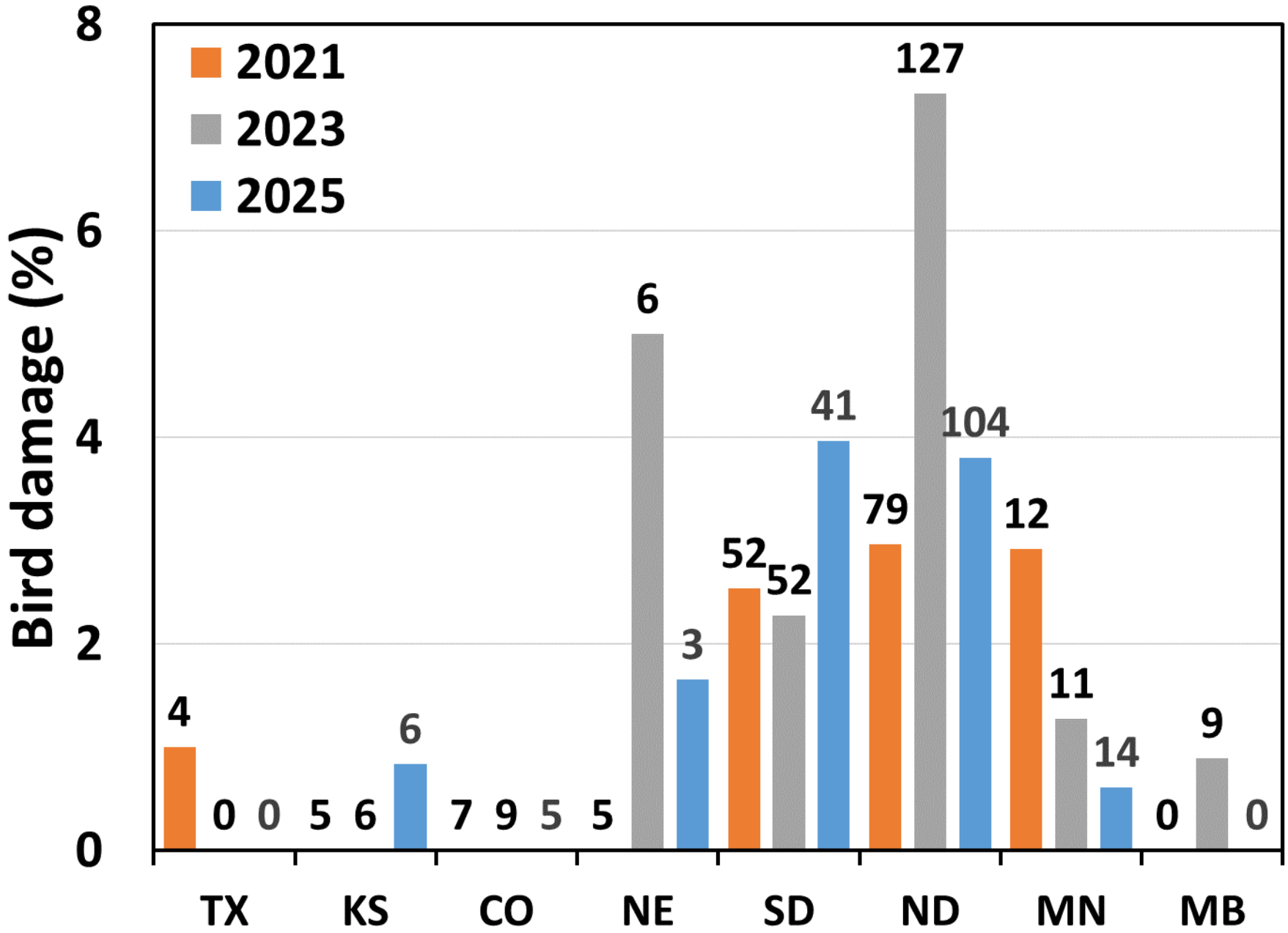
In-Field Assessments

- Sunflower midge, bud moth, seed maggot
- Deform heads, easy to confuse w/ other causes
- Dectes stem borer (larva in stem)

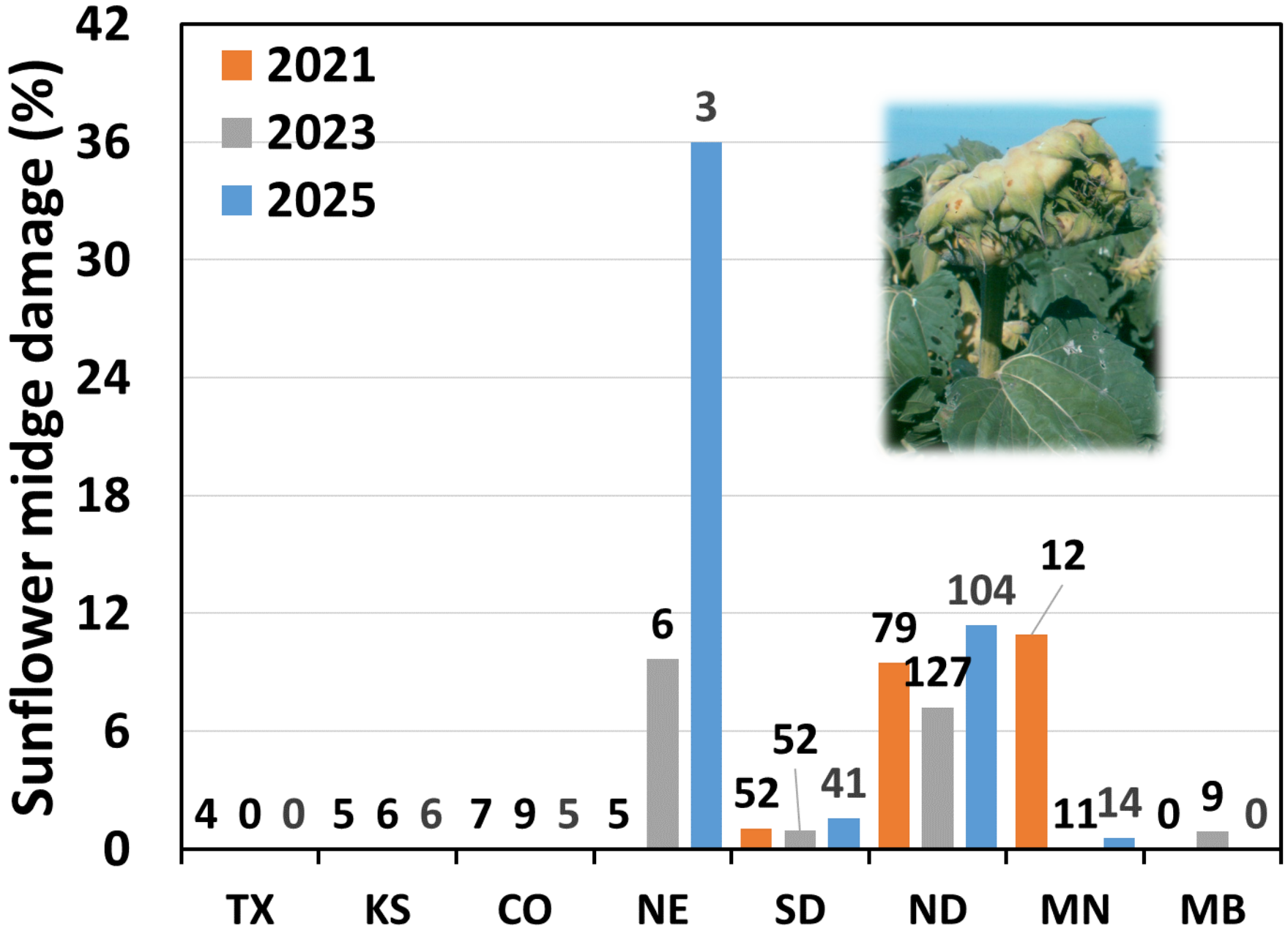
- Insects, incidence ≠ severity
- Bird losses (%) estimated directly

- Data on all slides from prior NSA surveys (https://www.sunflowernsa.com/ Research) or Prasifka et al. (unpublished data)

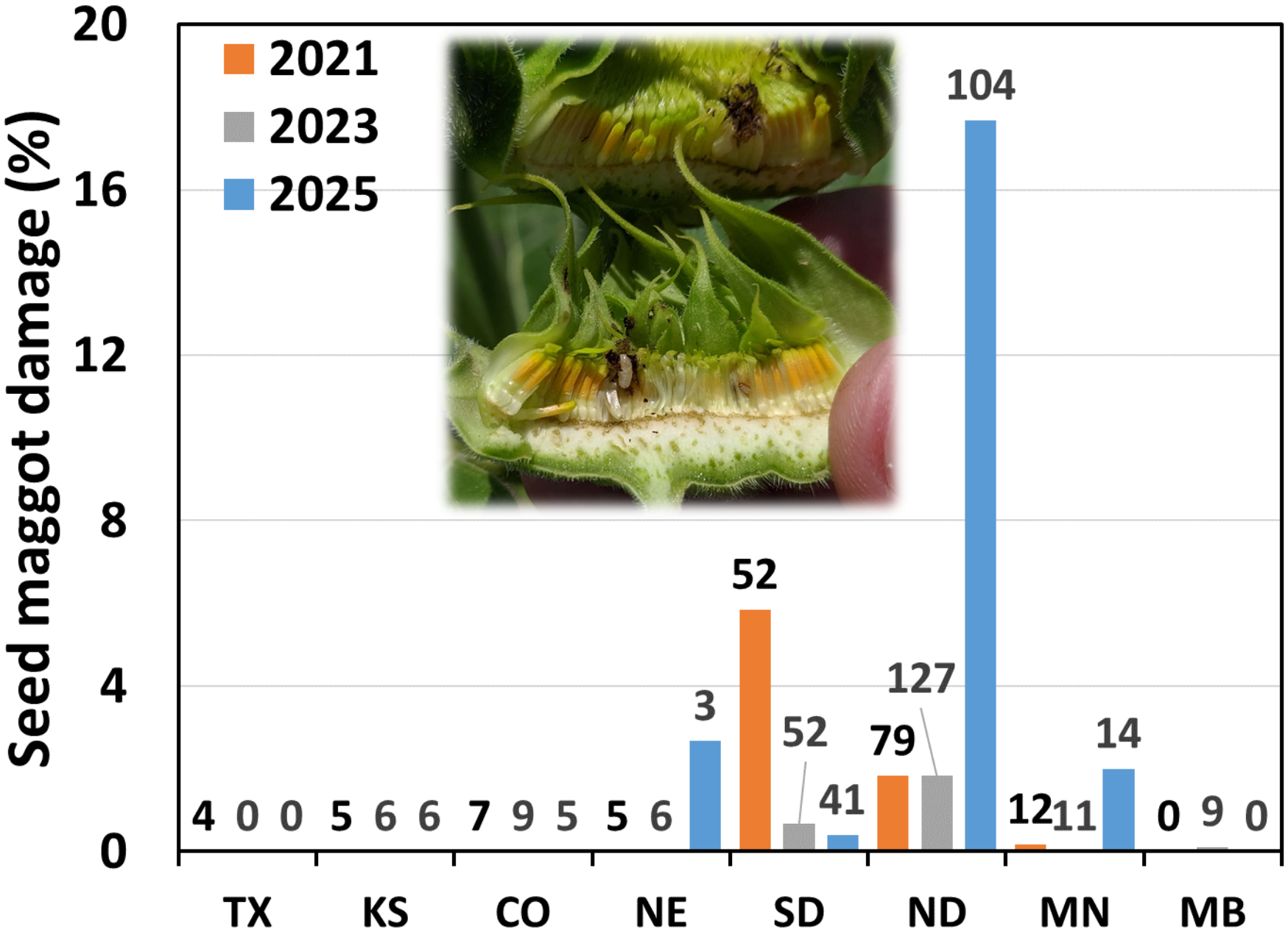
In-Field Assessments - Birds



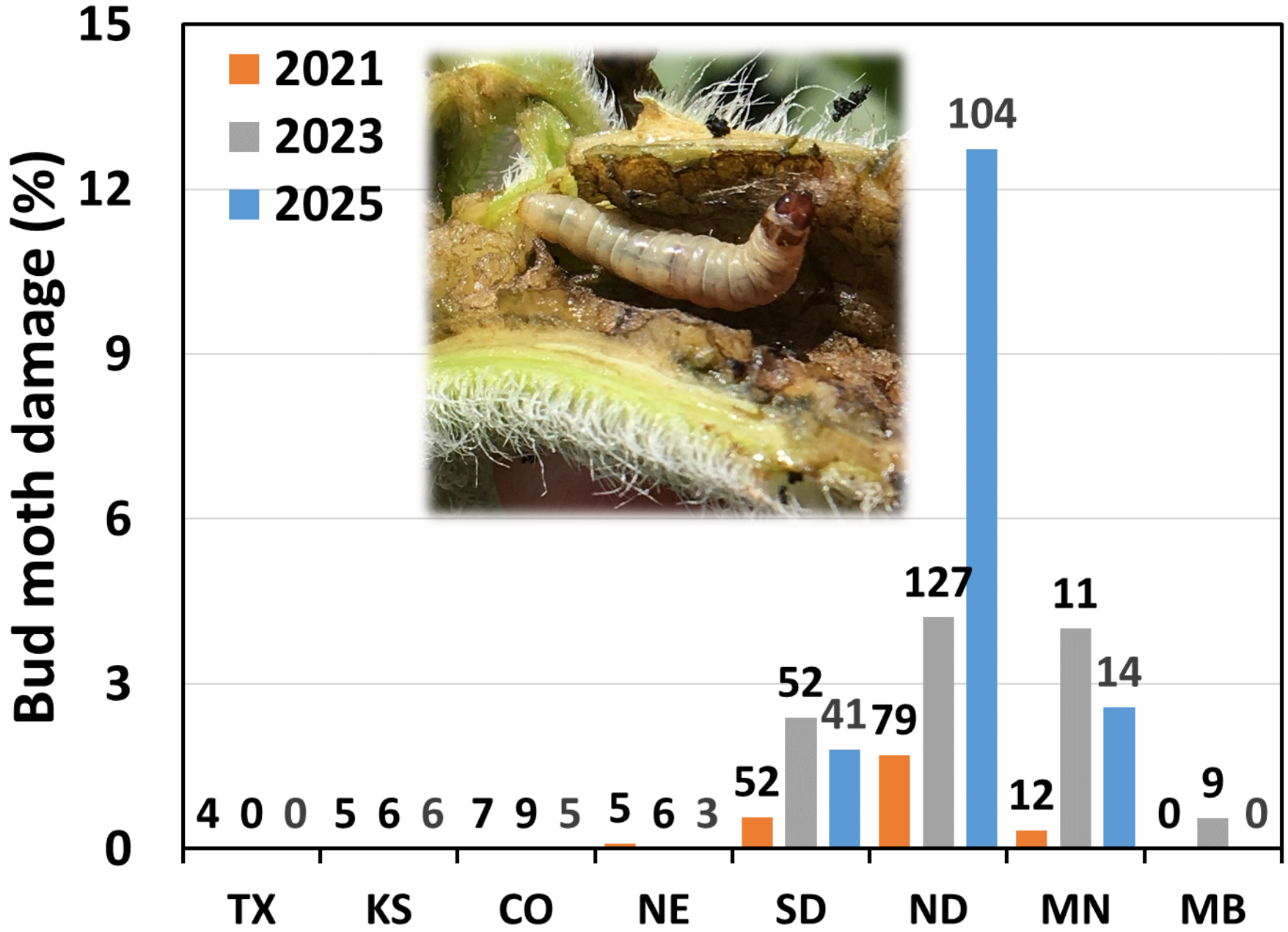
In-Field Assessments - Midge



In-Field Assessments - Seed Maggot



In-Field Assessments - Bud Moth



In-Field Assessments - Dectes

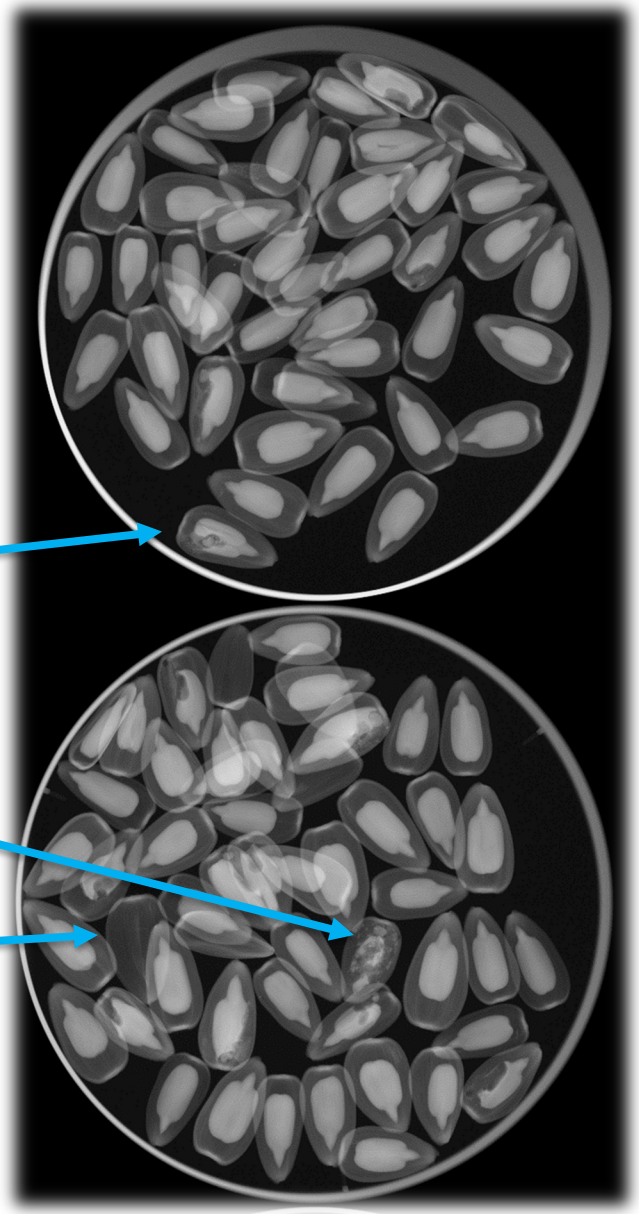
In-Field Assessments – Summary

- Birds [ND] 84 of 104 < 5%, but Divide Co. (52%), Mercer Co. (58%)
- Secondary pests mostly similar to ‘21, ’23
- Those + birds mostly absent south of Dakotas

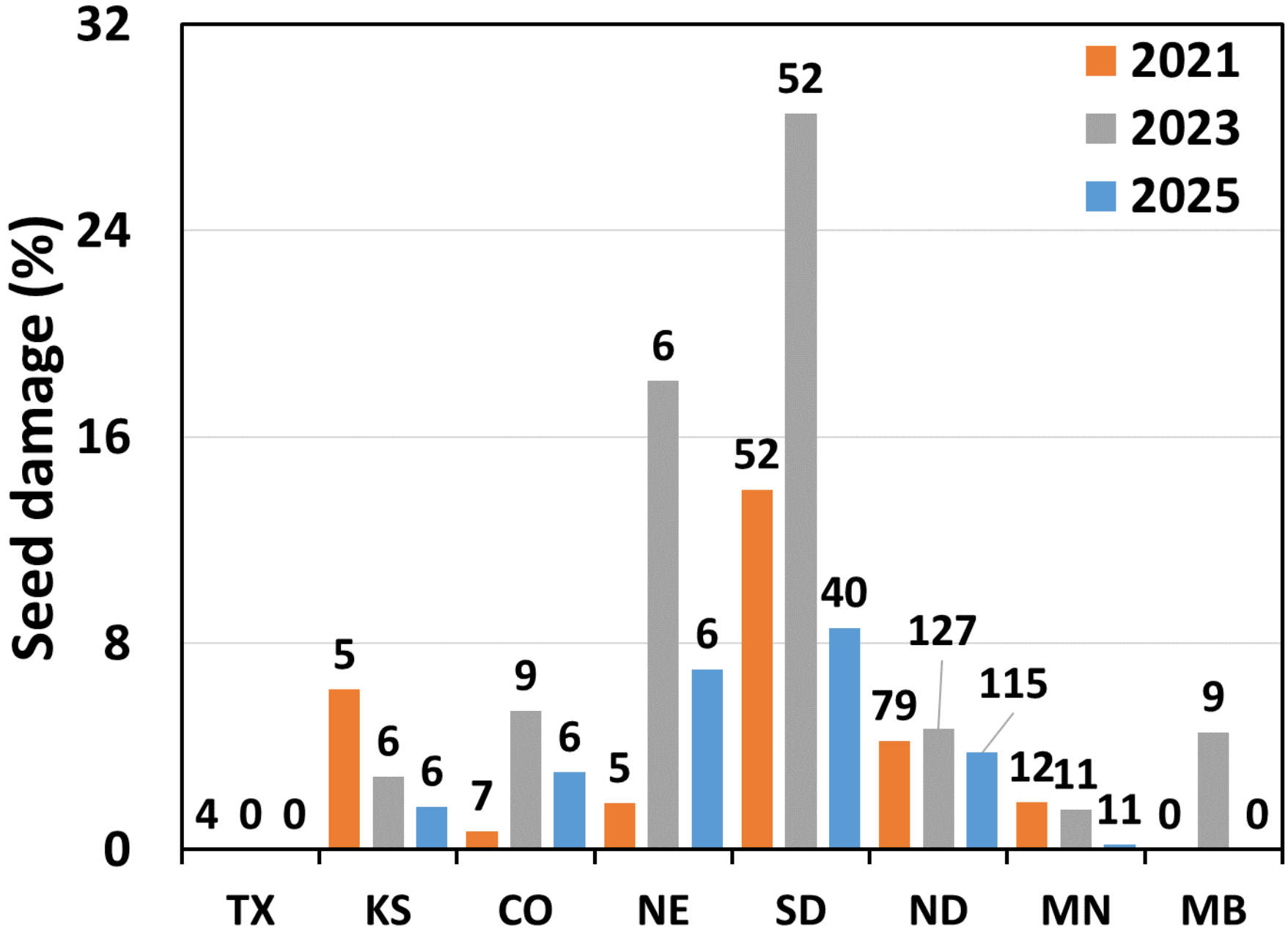
- Apparent ‘new problems’
  - Midge in NE (10% --> 36%) = 1 field with 72% estimate?
  - Seed maggot in ND (2% --> 18%) = maybe, about 1/4 fields with 15%+
  - Bud moth in ND (4% --> 13%) = maybe, about 1/7 with 15%+…
  - But only 1 of 15 (bud moth fields) listed insects as top yield concern, did not appear related to yield

Seed Samples – X-rays

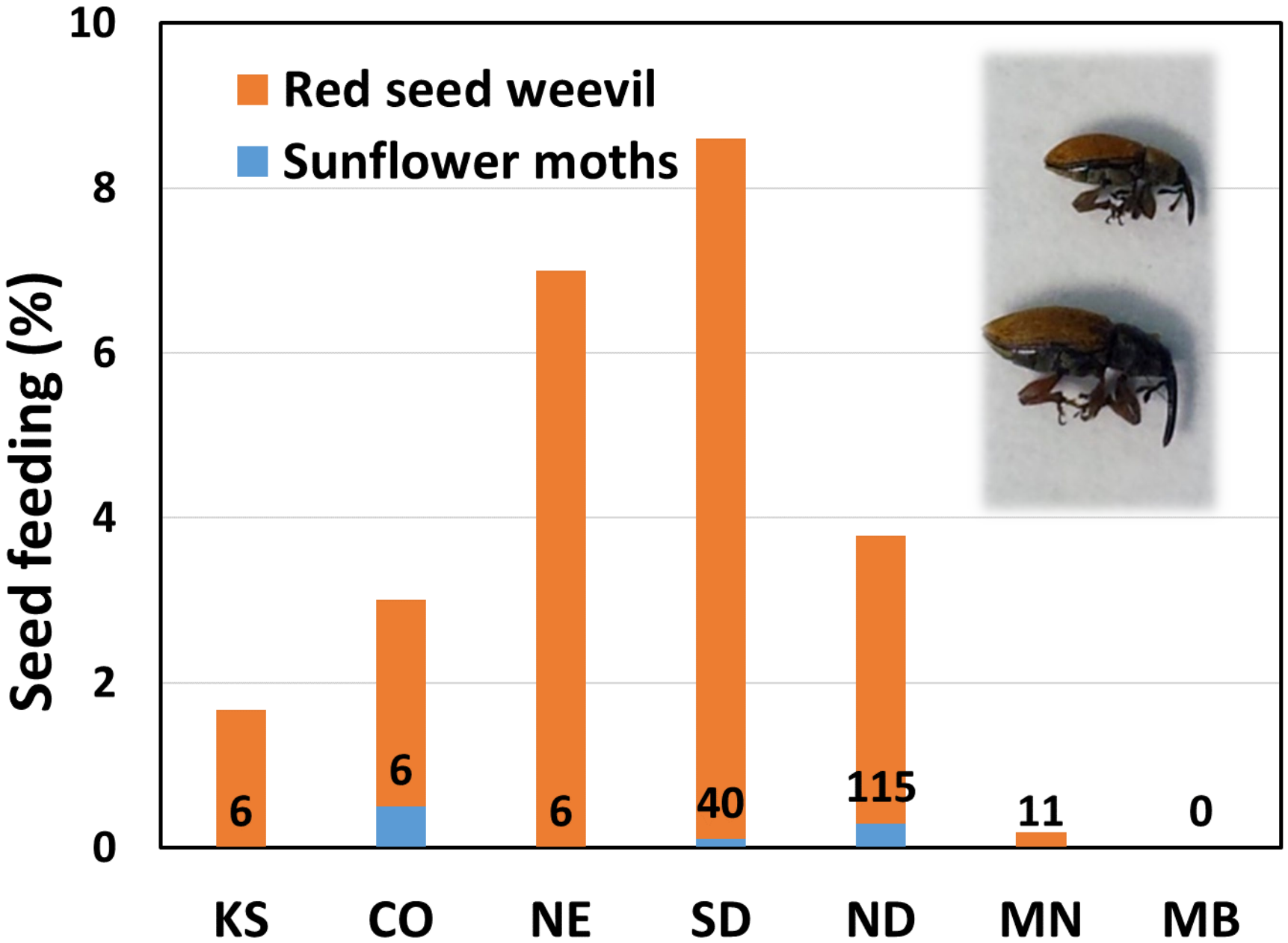
- Red sunflower seed weevil
- Banded sunflower moth
- Sunflower moth
- <u>Percent damaged seed</u>
- Weevil VS caterpillar (?)
- Unfilled seed



Seed Samples – 2021, 2023, 2025 X-rays

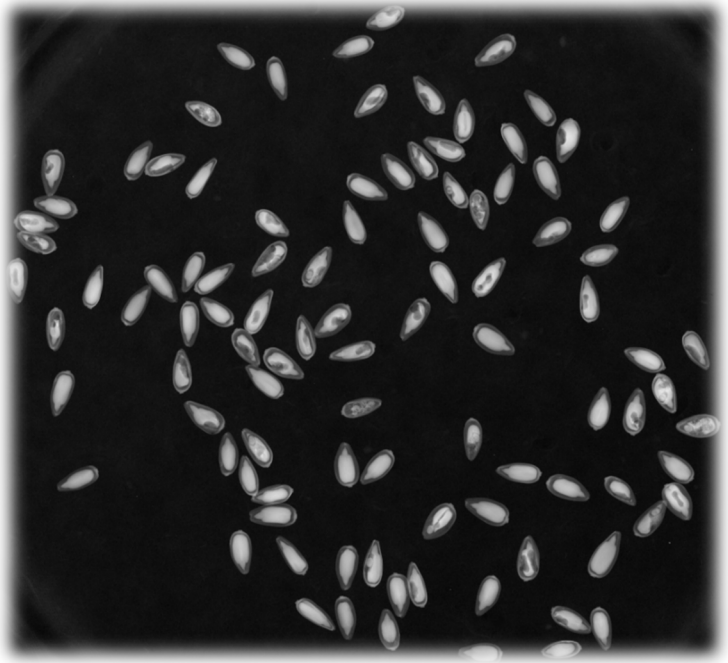


Seed Samples – 2025 By Insect Type

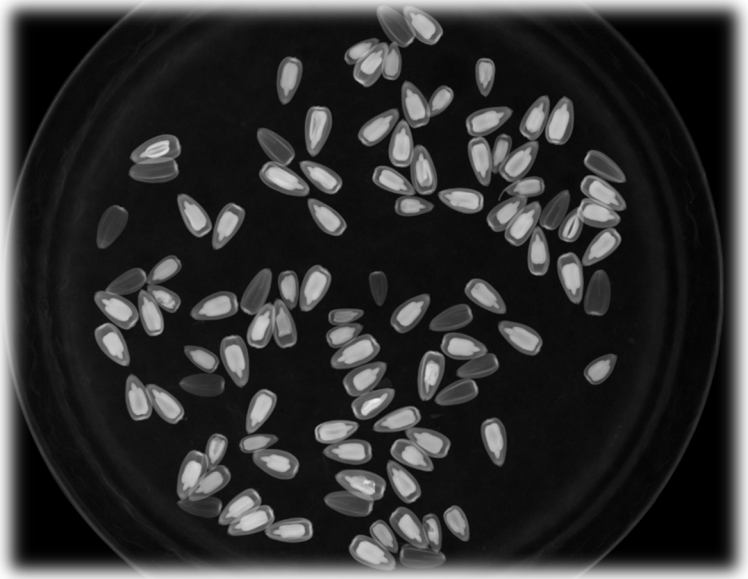


Seed Samples – 2025 X-rays

- SD still ‘under threat’ by weevils
- Fields with ≥ 10% damage
- ND: 12/115 (10%)
- SD: 12/40 (30%)
- Same grower, fields from 1–32%



- Unfilled seed (ND)

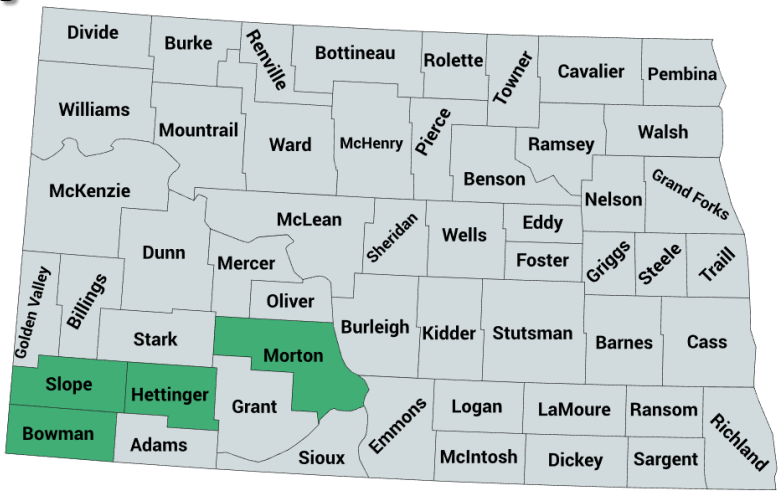


Seed Samples – Lygus & Summary

- Lygus (brown spot) damage low (0.33%)
- Unfilled seed ≈ 2.0%, but 11 / 185 fields at >10%
- Drop in high-damage (> 20%) fields

  <1% (2019), >12% (2021), >15% (2023), <4% (2025)
- <u>Seed damage down:</u> 7.2%---> 10.5---> 4.6% (2025)

Seed Samples – Summary



- SD weevils lower, but still too high

- <u>SW ND counties (2025) weevil damage</u>

  Morton, Hettinger, Bowman, Slope ≈ 15% (n=11)

  All other ND fields ≈ 2% damage (n=93)

- <u>SW ND counties (2023) weevil damage</u>

  Morton, Hettinger, Bowman, Slope ≈ 5% (n=15)

  All other ND fields ≈ 5% damage (n=111)

Acknowledgements and Questions

- Zach Tarble (USDA)
- National Sunflower Association
- Ana Carcedo (NDSU)

- Questions?