

Breeding for improved *sh2* seed quality  
and  
UW sweet corn breeding program update.

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## Background

- Selection for improved germination and seedling vigor in supersweets.
- Selected in two supersweet and one sugary populations for four or five cycles.
- Can we make gain?
- What other changes occur?

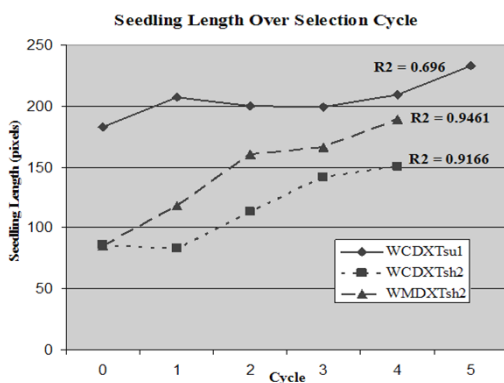


## Background

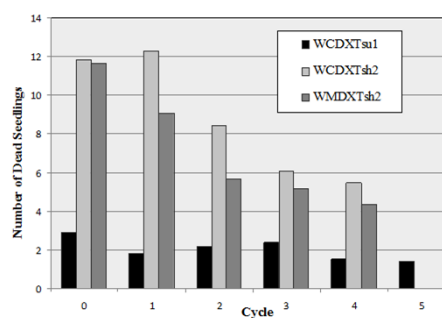
- Selected for vigorous seedlings and against number of dead seeds.
- Used controlled environments for selection.
- Evaluated
  - plant performance in the field.
  - Germination and seedling vigor in growth chamber.
  - Changes in endosperm carbohydrates



## Results



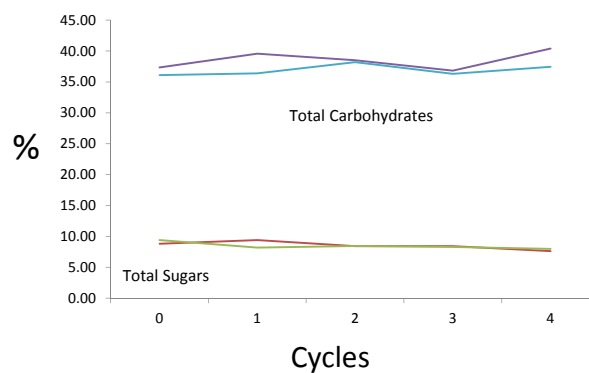
Decline in number of dead seeds in response to selection for increased seedling length under cold temperatures



Number of dead kernels (20 kernels planted)



No changes in carbohydrates



## Summary

- Rapid improvement in
  - Seedling vigor
  - Seed viability
- No decrease in sugar content.
- No increase in total carbohydrates.
- Improvement in seed quality made without loss in eating quality.



## UW Sweet Corn Breeding Update

### Objectives:

Offer educational opportunities for undergraduate and graduate students

Generate new information on sweet corn

### Breeding improved sweet corn:

Developing inbreds and hybrids with improved germination, pest resistance, flavor, and agronomic performance

- emphasis on tropical by temperate germplasm.

Developing ultra high quality using new endosperm combinations



2012 – A good year to select against things





Wisconsin sh2 inbreds for release in 2011  
(highlighted hybrids have non-sweet germplasm)

	06003b	07051
04036V	07013	07061a
04037V	07020a	07061b
05032a	07020b	07165R
05051	07021a	07166R
05066a	07029	07167R
05070a	07030	07168R
05081a	07033	07170R
05081b	07034a	07174R
06002	07034b	



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