

Sweet Corn Cultivar Trial 2014

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Sweet Corn

Family: Poaceae
or True Grasses



Sweet Corn

A map of North America, including the United States and Mexico, is shown in a light purple color. The map is overlaid on a dark purple background. The title 'Sweet Corn' is written in large, bold, orange letters at the top. Below the title, the word 'Origin:' is written in yellow. The main text, also in yellow, states that most historians believe corn was domesticated in the Tehuacan Valley of Mexico. A small green area in central Mexico, representing the Tehuacan Valley, is circled with a black line.

Origin:

Most historians believe corn was domesticated in the Tehuacan Valley of Mexico.

The Iroquois gave the first recorded sweet corn (called 'Papoon') to European settlers in 1779.

Sweet Corn

Types: SU, SE, SH2

(White, Bi-color, Yellow)



CLIMATE REQUIREMENTS

- Is adapted to a wide range of climates since it is grown in every state of the United States and Mexico (loves hot weather)
- Grown in all kinds of soil, as long as they are well drained.
- Grows rapidly and can utilize large amounts of nitrogen and potash
- Grows well over a wide range of soil reaction from PH 5.5 to PH 7.0

SEEDS

- 120 to 200 seeds/oz, 1,920 to 3,200 seeds/lb
- Round to oblong, Shrunken
- Commercial seed is planted with raw seed using a air planter

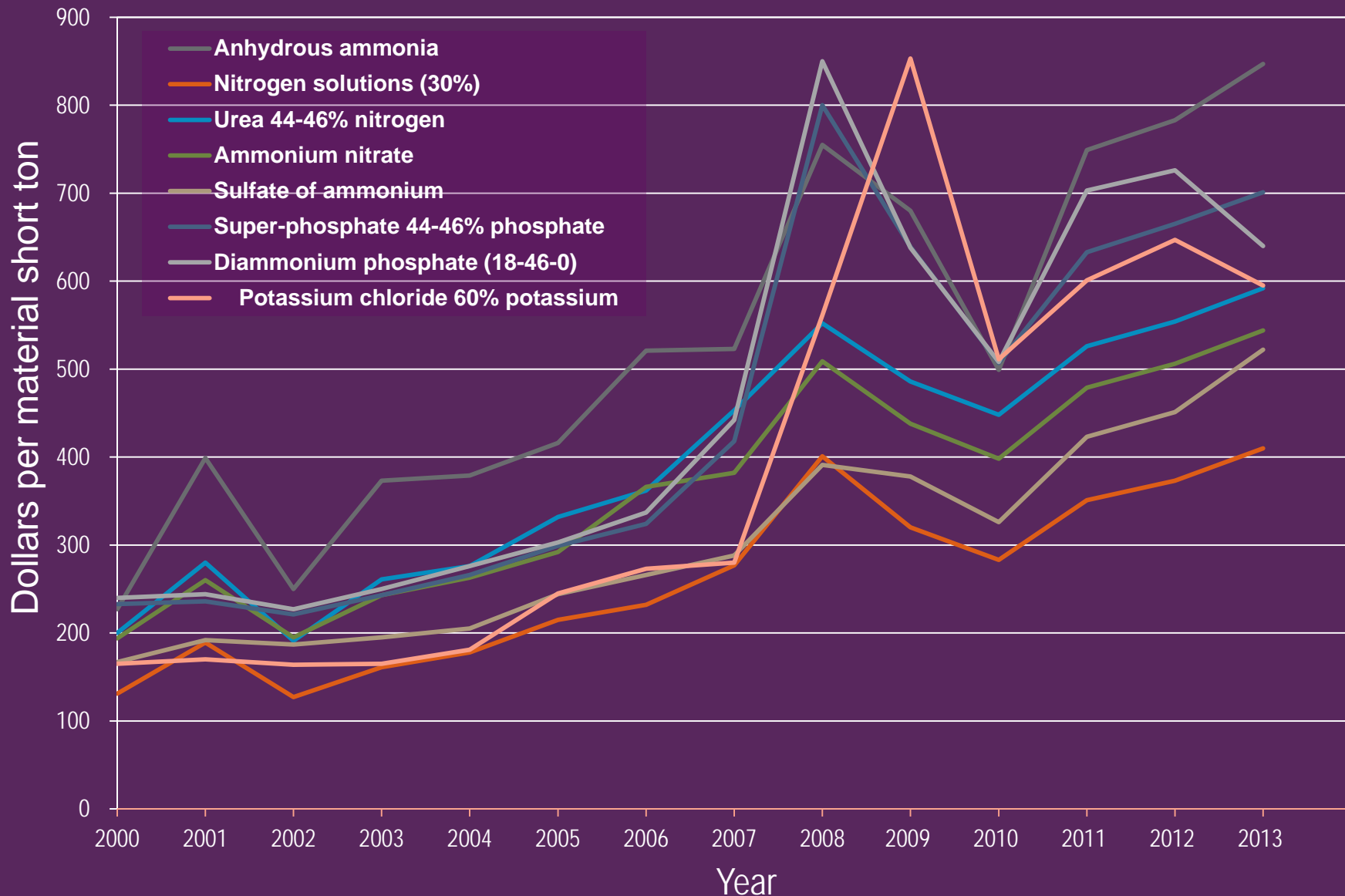


GERMINATION

- Soil temperature range: 60-95 F
- Plant shallow, with light moisture
- Seeds every six to seven inches between seeds within rows, 30 to 36 inches between rows,

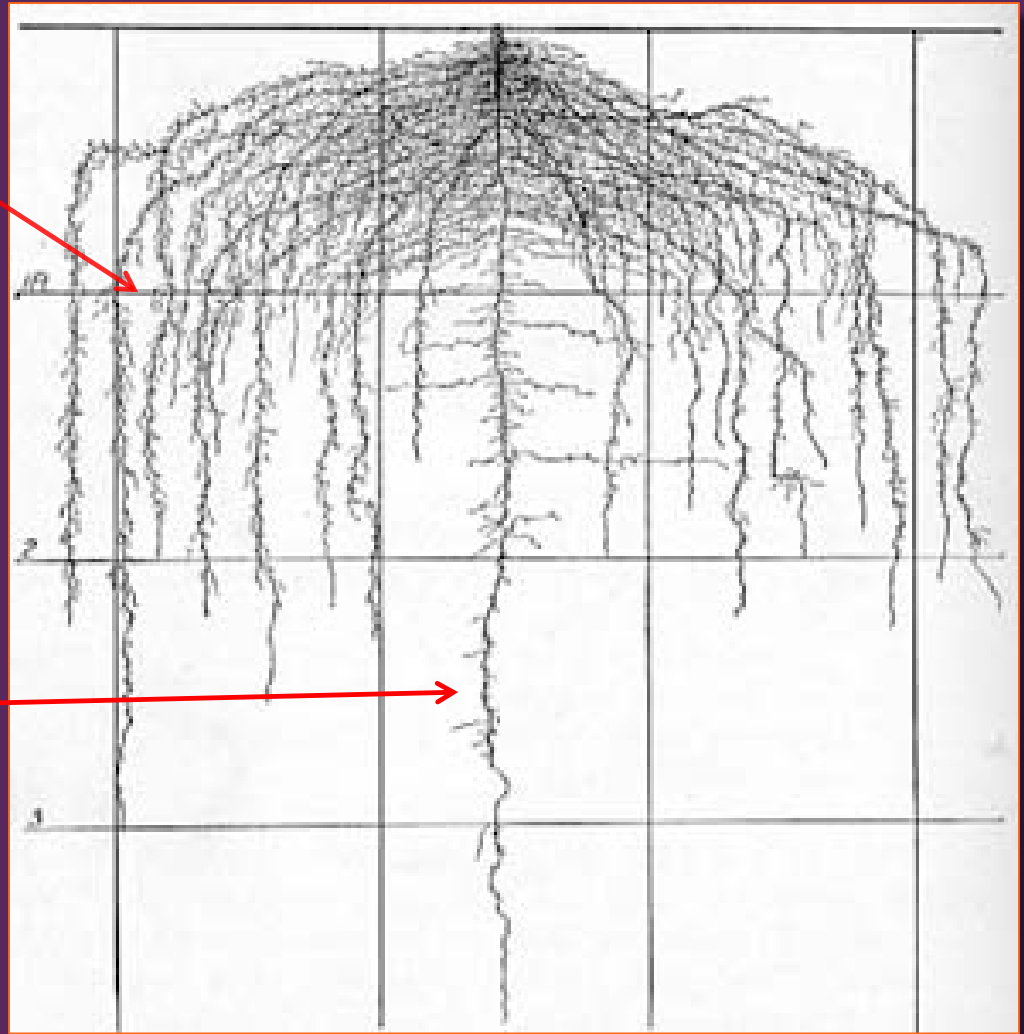
FERTILIZER PRICES

AVERAGE U.S. FARM PRICES OF SELECTED FERTILIZERS



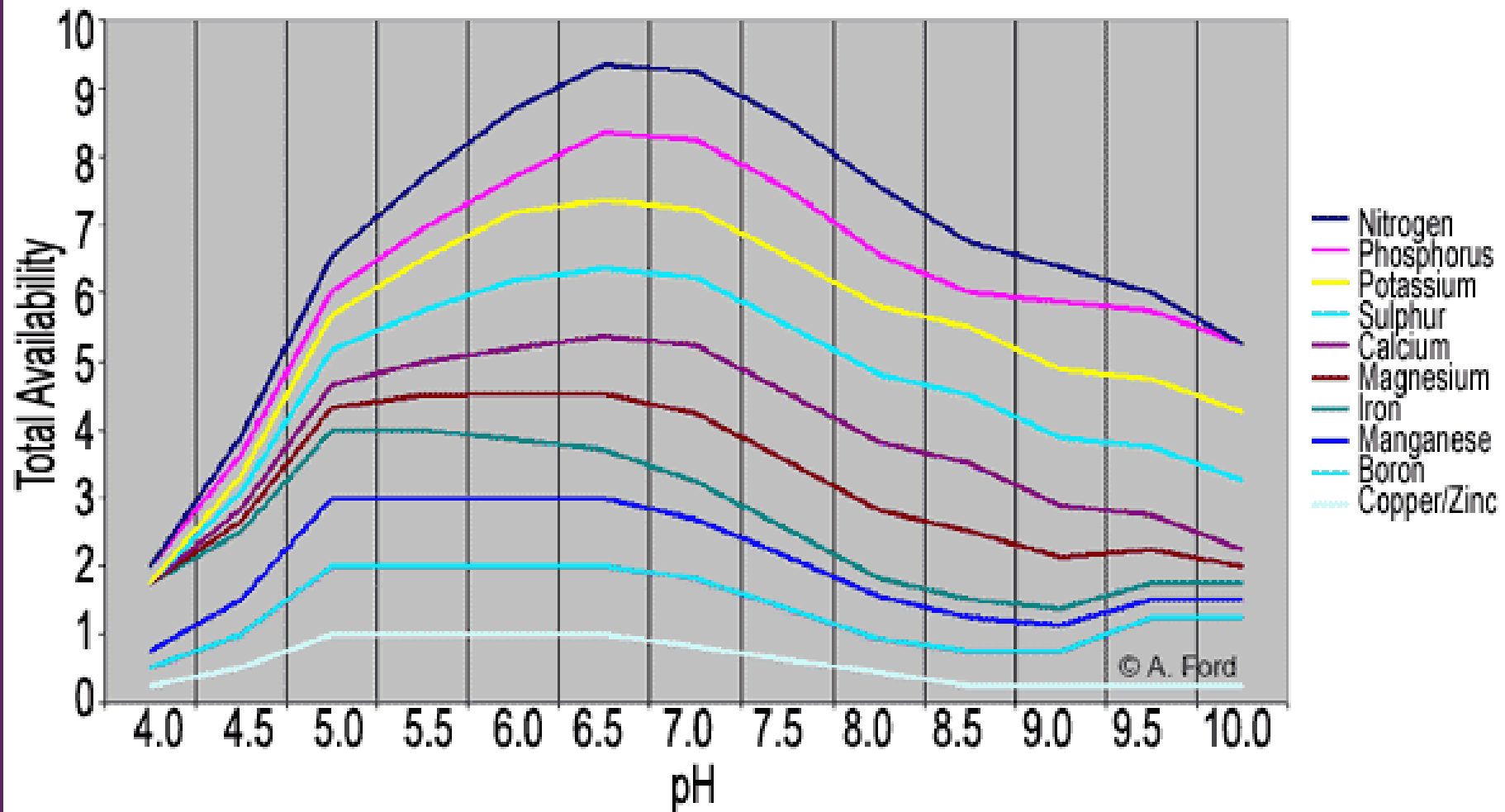
ROOT SYSTEM

- Not Fibrous



Many Taps

Total Nutrient Availability Against pH



NPK

- **Nitrogen** helps boost a plant's foliage growth above ground. If your plants are lacking Nitrogen they may appear stunted. Leaves will pale, yellowing due to a slow down of chlorophyll production.
- **Phosphorus** is required by a plant for the conversion of light energy to chemical energy during photosynthesis and also for cell communication and reproduction. It helps roots, fruit and flower development. If your plants are lacking Phosphorus they are likely to show signs of stunted or spindally growth, taking longer to mature. A chile deficient of Phosphorus will have difficulty taking all the other essential nutrients up through the roots.
- **Potassium** regulates the water transfer through the plant, reducing water loss from the leaves, making them more resistant to cold and dry weather. Unfortunately deficiencies only become visible when they are severe. Older leaves may show as blotches or discoloration along the edges of the leaves, as well as a lack of flowering or fruit set.

GROWTH CYCLE



TABLE 4.35. RATES OF FERTILIZERS RECOMMENDED FOR VEGETABLE CROPS IN FLORIDA ON SANDY SOILS BASED ON MEHLICH-I SOIL TEST RESULTS (Continued)

Vegetable	N (lb/acre)	P ₂ O ₅ (lb/acre) ¹ Soil-test P			K ₂ O (lb/acre) ¹ Soil-test K		
		Very Low	Low	Medium	Very Low	Low	Medium
Parsley	120	150	120	100	150	120	100
Pea, southern	60	80	80	60	80	80	60
Pepper	200	150	120	100	160	130	100
Potato	200	120	120	60	140	140	140
Radish	90	120	100	80	120	100	80
Spinach	90	120	100	80	120	100	80
Squash	150	120	100	80	120	100	80
Strawberry	150	150	120	100	150	120	100
Sweet corn	200	150	120	100	120	100	80
Sweet potato	60	120	100	80	120	100	80
Tomato	200	150	120	100	225	150	100
Watermelon	150	150	120	80	150	120	80

Adapted from G. Hochmuth and E. Hanlon, "IFAS Standardized Fertilization Recommendations for Vegetable Crops," Florida Cooperative Extension Service Circular 1152 (2000), <http://edis.ifas.ufl.edu/CV002>.

¹No P or K recommended for soils testing high except for potato, which receives no P but receives 140 lb K₂O/acre.



Smut

DISEASE



Virus disease



Leaf spot



Rust



Stalk rot

INSECTS



Wireworm



Fall Armyworm



Corn Borer



White Grub



Corn Earworm



Flea beetle



Mole Cricket



Cutworm

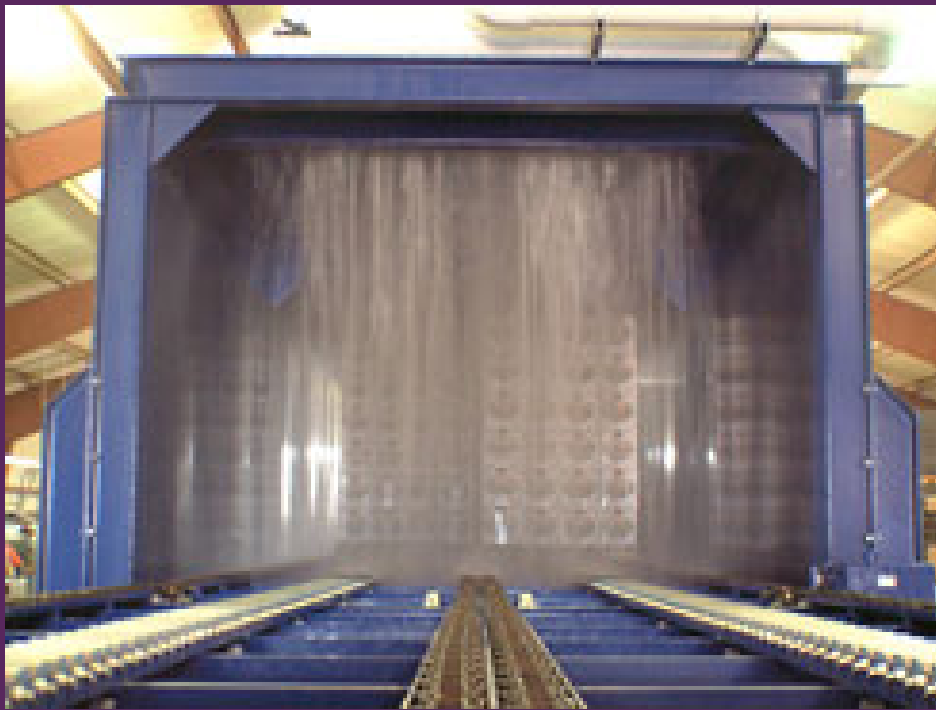


HARVESTING



PACKAGING

Sweet Corn are packed in paperboard (wax cartons), wooded crates, or plastic hampers



Hydro-cooled

Sweet Corn Cultivar Trial 2014

Planted: April 11

Plot Size: 25 ft. X 12 ft. (4 Rows)

White Cultivars:

Ice Queen (HM)
Bright White (CC)
7401 IMP (7906WZ) (AC)
XTH3174 (IFSI)
Munition (SYN)
Glacial (1743)
XTH3380 (IFSI)
SV1580SC (SEM)

Bi-Color Cultivars:

Rainier (HM)
Anthem XR (CC)
APA426 (CC)
Ap426 (10-426) (IFSI)
SS2742 (AC)
Obsession II (SEM)
Obsession (SEM)
Marquette (HM)
Aces (2060) (AC)
Battalion (SYN)

Yellow Cultivars:

Vision (IFSI)
ACR 3023 (AC)
SV1446SD (SEM)
CSAYF9-345 (CC)
CSAYF9-382 (CC)
Yosemite (HM)
SCH4184 (SEM)
3188MR (AC)

ICE QUEEN - HARRIS MORAN



Tassel Date: June 2

Silk Date: June 6

Harvest Date: June 20

Average Height at Tassel: 55"

Average Ear Height: 11"

Total Number of Ears Inside Rows: 52

Total Number of Ears outside Rows: 51

Length of 5 Ears: 41

Width of 5 Ears: 9

Tip Cover Rating: 2

Tip Fill Rating: 2

Note: Some dieback, medium long flag leaves, some suckers, not all kernels straight

BRIGHT WHITE – CROOKHAM COMPANY



Tassel Date: June 2

Silk Date: June 6

Harvest Date: June 20

Average Height at Tassel: 56"

Average Ear Height: 10"

Total Number of Ears Inside Rows: 51

Total Number of Ears outside Rows: 52

Length of 5 Ears: 41

Width of 5 Ears: 10

Tip Cover Rating: 1

Tip Fill Rating: 1

Note: Few flag leaves, mostly small, some long. Some dieback

RESULTS JUNE 20 HARVEST

- **Ice Queen** and **Bright White** both produced the same amount of yields. **Bright White** had a little bit better tip cover and tip fill and were long skinny ears, while **Ice Queen** was short and fat ears.

7401 IMP (7906WZ) – ABBOTT & COBB



Tassel Date: June 4

Silk Date: June 9

Harvest Date: June 23

Average Height at Tassel: 59"

Average Ear Height: 9"

Total Number of Ears Inside Rows: 56

Total Number of Ears Outside Rows: 51

Length of 5 Ears: 41

Width of 5 Ears: 10

Tip Cover Rating: 1

Tip Fill Rating: 1

Note: Many suckers, pretty ear, some husk burning, many long, fat, dark green flag leaves

XTH3174 - SEEDWAY



Tassel Date: June 4

Silk Date: June 9

Harvest Date: June 23

Average Height at Tassel: 59"

Average Ear Height: 12"

Total Number of Ears Inside Rows: 49

Total Number of Ears Outside Rows: 49

Length of 5 Ears: 41

Width of 5 Ears: 9

Tip Cover Rating: 1

Tip Fill Rating: 1

Note: Lots of husk burning, few fat flag leaves or medium length, dark green, tight husk

RESULTS JUNE 23 HARVEST

- 7401 IMP (7906WZ) produced better yields than XTH3174 did, both had really good tip fill and tip cover. Both were short and fat ears.

GLACIAL(1743) - ABBOTT & COBB



Tassel Date: June 6

Silk Date: June 9

Harvest Date: June 25

Average Height at Tassel: 50"

Average Ear Height: 8 "

Total Number of Ears Inside Rows: 53

Total Number of Ears outside Rows: 48

Length of 5 Ears: 39"

Width of 5 Ears: 9"

Tip Cover Rating: 2

Tip Fill Rating: 2

Note: Some dieback, many long flag leaves, loose husks

MUNITION - SYNGENTA



Tassel Date: June 9

Silk Date: June 11

Harvest Date: June 25

Average Height at Tassel: 63"

Average Ear Height: 16"

Total Number of Ears Inside Rows: 53

Total Number of Ears outside Rows: 48

Length of 5 Ears: 39"

Width of 5 Ears: 9"

Tip Cover Rating: 2

Tip Fill Rating: 2

Note: Some dieback, many long, thick flag leaves, lose husk

RESULTS FOR JUNE 25 HARVEST

- **Glacial (1743)** and **Munition** had no difference in yields or tip cover and tip fill and both were short fat ears.

XTH3380- IFSI



Tassel Date: June 9

Silk Date: June 11

Harvest Date: June 27

Average Height at Tassel: 61"

Average Ear Height: 13"

Total Number of Ears Inside Rows: 43

Total Number of Ears outside Rows: 45

Length of 5 Ears: 38"

Width of 5 Ears: 9"

Tip Cover Rating: 1

Tip Fill Rating: 1

Note: Lots of husk burning, few fat flag leaves or medium length, dark green, tight husk

SV1580SC - SEMINIS



Tassel Date: June 6

Silk Date: June 11

Harvest Date: June 27

Average Height at Tassel: 55"

Average Ear Height: 11"

Total Number of Ears Inside Rows: 53

Total Number of Ears outside Rows: 51

Length of 5 Ears: 38"

Width of 5 Ears: 9"

Tip Cover Rating: 1

Tip Fill Rating: 1

Note: Some dieback, medium-long flag leaves

RESULTS JUNE 27 HARVEST

- **XTH3380** produced a lot less yields on the inside rows that **SV1580SC** did, both had good tip fill and tip cover, and were short fat ears.

RAINER – HARRIS MORAN



Tassel Date: June 4

Silk Date: June 6

Harvest Date: June 20

Average Height at Tassel: 48 "

Average Ear Height: 7.2"

Total Number of Ears Inside Rows: 63

Total Number of Ears outside Rows: 68

Length of 5 Ears: 36.3"

Width of 5 Ears: 9"

Tip Cover Rating: 1

Tip Fill Rating: 2

Note: Some dieback, small ear, dark green, lots suckers,
R1&2:small flag leaves, R3:lots med-long dark green flags

ANTHEM XR - CROOKHAM COMPANY



Tassel Date: June 2

Silk Date: June 6

Harvest Date: June 23

Average Height at Tassel: 53.5"

Average Ear Height: 11.4"

Total Number of Ears Inside Rows: 54

Total Number of Ears outside Rows: 45

Length of 5 Ears: 40.5"

Width of 5 Ears: 9.8"

Tip Cover Rating: 1

Tip Fill Rating: 1

Note: Tight husk, smallish ears, long flag leaves of medium width, dark green, some husk burning

APA426 - CROOKHAM COMPANY



Tassel Date: June 4

Silk Date: June 9

Harvest Date: June 23

Average Height at Tassel: 49.2"

Average Ear Height: 8.3"

Total Number of Ears Inside Rows: 44

Total Number of Ears outside Rows: 36

Length of 5 Ears: 38"

Width of 5 Ears: 9"

Tip Cover Rating: 1

Tip Fill Rating: 1

Note: Tight husk, not pretty--kernels not straight, medium length, skinny, dark green flag leaves

AP426 (10-426) – CROOKHAM COMPANY



Tassel Date: June 2

Silk Date: June 9

Harvest Date: June 23

Average Height at Tassel: 55.3"

Average Ear Height: 8"

Total Number of Ears Inside Rows: 50

Total Number of Ears outside Rows: 43

Length of 5 Ears: 39.5"

Width of 5 Ears: 9.2"

Tip Cover Rating: 1

Tip Fill Rating: 1

Note: Tight husk, a few short, dark green flag leaves, some husk burning

SS2742- ABBOTT & COBB



Tassel Date: June 4

Silk Date: June 6

Harvest Date: June 23

Average Height at Tassel: 61"

Average Ear Height: 12.9"

Total Number of Ears Inside Rows: 58

Total Number of Ears outside Rows: 49

Length of 5 Ears: 35.8"

Width of 5 Ears: 8.8"

Tip Cover Rating: 1

Tip Fill Rating: 1

Note: Some dieback, long, medium width flag leaves,
loose husk

OBSESSION II(BT) - SEMINIS



Tassel Date: June 4

Silk Date: June 9

Harvest Date: June 23

Average Height at Tassel: 55.2"

Average Ear Height: 10.8"

Total Number of Ears Inside Rows: 52

Total Number of Ears outside Rows: 48

Length of 5 Ears: 37.2"

Width of 5 Ears: 8.8"

Tip Cover Rating: 1

Tip Fill Rating: 1

Note: Some dieback, skinny flag leaves of medium length, loose husk

OBSESSION - SEMINIS



Tassel Date: June 4

Silk Date: June 6

Harvest Date: June 23

Average Height at Tassel: 55.6"

Average Ear Height: 13.7"

Total Number of Ears Inside Rows: 47

Total Number of Ears outside Rows: 38

Length of 5 Ears: 39.3"

Width of 5 Ears: 9.6"

Tip Cover Rating: 1

Tip Fill Rating: 1

Note: Many suckers, light green, short flag leaves, big ears, well-filled, some dieback

MARQUETTE - HARRIS MORAN



Tassel Date: June 6

Silk Date: June 9

Harvest Date: June 23

Average Height at Tassel: 52.8"

Average Ear Height: 8.2 "

Total Number of Ears Inside Rows: 50

Total Number of Ears outside Rows: 40

Length of 5 Ears: 37.7"

Width of 5 Ears: 9"

Tip Cover Rating: 1

Tip Fill Rating: 1.67

Note: Little dieback, loose husk, long, dark green flag leaves

RESULTS FOR JUNE 23 HARVEST

- **SS2742** produced the most out of the varieties harvested this day and was the most marketable having nice fat ears and good tip fill and tip cover. **APA426** didn't produce very good yields and was the worst as far as yields harvested this day, but it did have nice fat ears and good tip fill and tip cover.

ACES(2060) - ABBOTT & COBB



Tassel Date: June 6

Silk Date: June 9

Harvest Date: June 25

Average Height at Tassel: 49"

Average Ear Height: 9.1"

Total Number of Ears Inside Rows: 28

Total Number of Ears outside Rows: 26

Length of 5 Ears: 37.5"

Width of 5 Ears: 8.8"

Tip Cover Rating: 1

Tip Fill Rating: 1

Note: Low yield, kernels not straight, some dieback, long, thick flag leaves

BATTALION – SYNGENTA



Tassel Date: June 4

Silk Date: June 6

Harvest Date: June 25

Average Height at Tassel: 57.17 "

Average Ear Height: 13.67"

Total Number of Ears Inside Rows: 41.33

Total Number of Ears outside Rows: 42.67

Length of 5 Ears: 38"

Width of 5 Ears: 9"

Tip Cover Rating: 1

Tip Fill Rating: 1

Note: Long, dark green, thick flag leaves

VISION - IFSI



Tassel Date: June 2

Silk Date: June 6

Harvest Date: June 20

Average Height at Tassel: 49.7"

Average Ear Height: 7.9"

Total Number of Ears Inside Rows: 52

Total Number of Ears outside Rows: 56

Length of 5 Ears: 38.2"

Width of 5 Ears: 9"

Tip Cover Rating: 1.8

Tip Fill Rating: 2

Note: Medium length flag leaves--R1: lots, R2&3: some;
some dieback, light green, some secondary ears

ACR 3023 - ABBOTT & COBB



Tassel Date: June 4

Silk Date: June 9

Harvest Date: June 23

Average Height at Tassel: 53.1"

Average Ear Height: 10.2"

Total Number of Ears Inside Rows: 54

Total Number of Ears outside Rows: 47

Length of 5 Ears: 36.4"

Width of 5 Ears: 9"

Tip Cover Rating: 1.3

Tip Fill Cover: 1.3

Note: Light green, slightly loose husk, medium width flag leaves, some light burning of husk

SV1446SD - SEMINIS



Tassel Date: June 4

Silk Date: June 9

Harvest Date: June 23

Average Height at Tassel: 51.7"

Average Ear Height: 16.2"

Total Number of Ears Inside Rows: 44

Total Number of Ears outside Rows: 38

Length of 5 Ears: 38.7"

Width of 5 Ears: 9"

Tip Cover Rating: 1.7

Tip Fill Cover: 2.3

Note: Light green, slightly loose husk, medium width flag leaves, some light burning of husk

RESULTS FOR JUNE 23 HARVEST

- **ACR3023** produced a lot better yield than **SV1446SD** and had better tip fill and tip cover also. **ACR3023** also had fatter yields while **SV1446SD** had longer skinnier ears.

CSAYF9-345 - CROOKHAM COMPANY



Tassel Date: June 6

Silk Date: June 11

Harvest Date: June 25

Average Height at Tassel: 60.5"

Average Ear Height: 16.6"

Total Number of Ears Inside Rows: 41

Total Number of Ears outside Rows: 41

Length of 5 Ears: 38.5"

Width of 5 Ears: 9.8"

Tip Cover Rating: 2.3

Tip Fill Rating: 1

Note: Light green, short flag leaves, tight husk

CSAYF9-382 - IFSI



Tassel Date: June 6

Silk Date: June 9

Harvest Date: June 25

Average Height at Tassel: 56.2 "

Average Ear Height: 13.8 "

Total Number of Ears Inside Rows: 51

Total Number of Ears outside Rows: 48

Length of 5 Ears: 39.3"

Width of 5 Ears: 8.8"

Tip Cover Rating: 1

Tip Fill Rating: 1

Note: Some dieback, long, thick, dark green flag leaves

RESULTS FOR JUNE 25 HARVEST

- **CSAYF9-382** produced a lot better yield and had really good tip cover and had longer fatter ears. **CSAYF9-345** had longer skinnier ears.

YOSEMITE - HARRIS MORAN



Tassel Date: June 9

Silk Date: June 13

Harvest Date: June 27

Average Height at Tassel: 62.5"

Average Ear Height: 19.6 "

Total Number of Ears Inside Rows: 43

Total Number of Ears outside Rows: 43

Length of 5 Ears: 42.6"

Width of 5 Ears: 10"

Tip Cover Rating: 1

Tip Fill Rating: 1

Note: Medium length flag leaves, dark green, some dieback, tight husks, big ear

SCH4184 - SEEDWAY



Tassel Date: June 9

Silk Date: June 13

Harvest Date: June 30

Average Height at Tassel: 71.3"

Average Ear Height: 21.1 "

Total Number of Ears Inside Rows: 57

Total Number of Ears outside Rows: 55

Length of 5 Ears: 34.2"

Width of 5 Ears: 8.8"

Tip Cover Rating: 2

Tip Fill Rating: 1

Note: Loose husk, light green, small ear, lots of light green flag leaves

3188MR - ABBOTT & COBB



Tassel Date: June 6

Silk Date: June 13

Harvest Date: June 30

Average Height at Tassel: 57.3"

Average Ear Height: 14.5"

Total Number of Ears Inside Rows: 45

Total Number of Ears outside Rows: 53

Length of 5 Ears: 39"

Width of 5 Ears: 9.2"

Tip Cover Rating: 2

Tip Fill Rating: 1.7

Note: Dark green, tight husk, many suckers

RESULTS FOR JUNE 30 HARVEST

- SCH4184 produced the best yield, both SCH4184 and 3188MR had short fat ears.