2017 PROCESSING TOMATO SEASON REVIEW

UC CE

January 11, 2018

This report has been prepared exclusively for UCCE by Ag-Seeds Unlimited

AgSeeds UNLIMITED

2017

Variety Review

UC CE

AgSeeds UNLIMITED

2017 Ag Seeds Trials by Type

Plot: 62 Locations

Chemistry & early indications of horticultural performance

GT Trials: 48 Locations

First true test of yield and commercial viability

Adaptive: 65 Locations

Confirmation of commercial potential

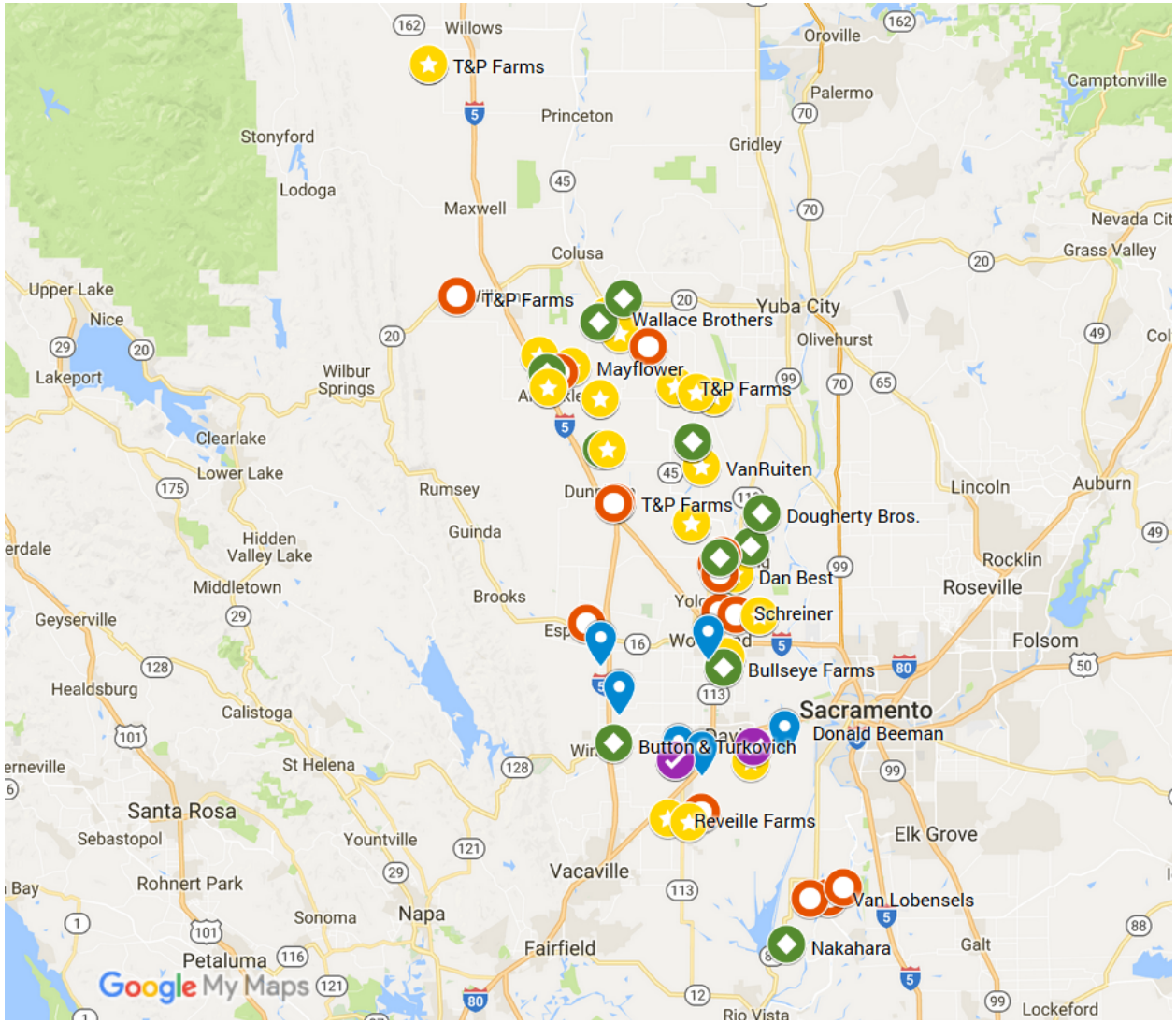
Specialty: 24 Locations

All other trials testing chemistry, yield, and dice recovery

Total: 199 Trials

California Processing Tomato Harvest

Ag Seeds Trialing efforts – North State



GT Trials
-20 Locations

Adaptive Trials
-23 Locations

Plot Trials
-23 Locations

Specialty Trials
-4 Locations

Specialty Trials
-6 Locations

UC CE

AgSeeds UNLIMITED

Seed Supply

Why does there always seem to be seed shortages on new varieties

Timing – Production decisions are being made 18 to 30 months before it used here.
Example: In order to have seed available in 2020, decisions have already been made or need to be made early this summer.

Cost – The cost of seed production has skyrocketed increasing risk in seed production of new material.

Quality – Even after seed arrives quality can be a problem. Germination and hybrid purity are examples of issues that can affect seed availability.

California Processing Tomato Harvest

Top 10 North Varieties – Early Market

Based on Final PTAB Reports

Variety	Supplier	TSW	F3	EFH EFS™	Total Loads	% of Loads	Solids
H1015	Heinz			X	3,007	22.6%	5.19
BQ273	Woodbridge	X			2,465	18.5%	5.31
BP13	BHN Seed	X	X		2,032	15.3%	5.07
N6416	Nunhems	X			1,487	11.2%	5.11
Shasta	Harris Moran				1,410	10.6%	5.27
BQ400	Woodbridge	X			851	6.4%	5.23
N6397	Nunhems				691	5.2%	5.48
APT410	Seminis				548	4.1%	4.86
SV0599TM	Seminis				355	2.7%	5.39
H5003	Heinz				237	1.8%	5.00
	All Others				211	1.6%	5.48
	Early Total				**13,294**	**100%**	**5.20**
% of Pack	**12.7%**						

UC CE

AgSeeds UNLIMITED

Commercial Variety

BQ403 – VFFNPtsw 110 Days

Early

Woodbridge Seed

Balanced Quality Strategy

- High Brix
- First Early

AgSeeds 2017 Lab — 33 Locations

Variety	BQ273	BQ403	N6416
Fruit Wt	76	76	67
Brix	5.30	5.48	5.04
JB	14.52	16.78	16.10
PPB	4.42	5.84	4.78
pH	4.28	4.32	4.32
A/B	2.27	2.31	2.31
Ostwald	447	350	423

Variety	2017 5 GT Trials		Average Yield/Ac
N6416	A		57.65
BQ403		B	55.85

LSD @.05 1.7698 — 15 Data Points

2017 PTAB Grades

Variety	# of Loads	Solids	Color	LU	Mold	pH	Green
BQ273	28,996	5.25	25.1	1.4	0.5	4.39	1.4
BQ403	852	5.40	24.9	1.4	0.4	4.32	2.1
N6416	9,320	4.94	25.3	1.5	0.5	4.37	1.1

UC CE

AgSeeds UNLIMITED

Commercial Variety
BQ400 – VFFNPtsw 116 Days

Early

Woodbridge Seed
Balanced Quality Strategy

- Excellent Peeler
- Excellent Dice Recovery
- Thick Intermediate

AgSeeds 2017 Lab — 33 Locations

Variety	BQ273	BQ400	N6416
Fruit Wt	76	72	67
Brix	5.30	5.17	5.04
JB	14.52	14.00	16.10
PPB	4.42	3.95	4.78
pH	4.28	4.37	4.32
A/B	2.27	2.33	2.31
Ostwald	447	419	423

Variety	2017 5 GT Trials		Average Yield/Ac
BQ273	A		61.42
BQ400		B	58.55

LSD @.05 1.2323 — 15 Data Points

2017 PTAB Grades

Variety	# of Loads	Solids	Color	LU	Mold	pH	Green
BQ273	28,996	5.25	25.1	1.4	0.5	4.39	1.4
BQ400	3,818	5.19	23.5	0.9	0.4	4.43	0.9
N6416	9,320	4.94	25.3	1.5	0.5	4.37	1.1

UC CE

AgSeeds UNLIMITED

California Processing Tomato Harvest

Top 10 North Varieties – Main Season Non EFH / EFS™

Based on Final PTAB Reports

Variety	Supplier	TSW	F3	EFH EFS™	Total Loads	% of Loads	Solids
HM3887	Harris Moran	X			7,601	17.1%	5.32
DRI319	Seminis	X			7,402	16.7%	5.71
AB0311	Seminis	X			7,051	15.9%	5.71
N6366	Nunhems				2,799	6.3%	5.33
H5608	Heinz	X			2,510	5.7%	4.89
HM4909	Harris Moran	X			2,203	5.0%	5.60
HM5900	Harris Moran	X			2,020	4.6%	5.46
SV8011TM	Seminis	X			1,511	3.4%	5.24
BQ141	Woodbridge	X	X		1,489	3.4%	4.94
BP16	BHN Seed	X	X		1,426	3.2%	5.47
	All Others				8,314	18.8%	5.33
Main Season - Non EFH / EFS™ Total					**44,326**	**100%**	**5.43**

% of Pack **42.2%**

UC CE

AgSeeds UNLIMITED

Commercial Variety

SV8011TM – VFFNtsw 123 Days

Intermediate

Seminis grow forward

- Excellent Peeler
- Good Yielder
- Thick JB

AgSeeds 2017 Lab — 33 Locations

Variety	DRI319	SV8011TM	HM3887
Fruit Wt	78	87	88
Brix	5.51	5.28	5.38
JB	16.21	12.78	14.60
PPB	5.62	3.52	4.59
pH	4.28	4.27	4.29
A/B	2.22	2.26	2.30
Ostwald	355	580	277

Variety	2016 5 GT Trials		Average Yield/Ac
SV8011TM	A		60.35
DRI319	A	B	56.33
H8504		B	53.08

LSD @.05 4.4139 — 15 Data Points

2017 PTAB Grades

Variety	# of Loads	Solids	Color	LU	Mold	pH	Green
DRI319	30,557	5.71	24.6	2.5	2.3	4.44	1.3
SV8011TM	4,844	5.26	24.6	0.9	2.6	4.47	2.2
HM3887	30,564	5.47	25.8	1.4	2.4	4.49	2.2

UC CE

AgSeeds UNLIMITED

Commercial Variety
SVTM5655 – VFFNtsw 125 Days

Thick

Seminis grow forward

- Good Brix
- Good Yields

AgSeeds 2017 Lab — 33 Locations

Variety	N6415	SVTM5655	H8504
Fruit Wt	76	77	70
Brix	5.04	5.32	5.01
JB	11.43	11.85	11.95
PPB	2.45	3.13	2.66
pH	4.28	4.67	4.20
A/B	2.26	2.21	2.24
Ostwald	560	509	685

Variety	2016 9 GT Trials		Average Yield/Ac
SVTM5655	A		52.90
H8504		B	49.30

LSD @.05 2.5366 — 27 Data Points

2017 PTAB Grades

Variety	# of Loads	Solids	Color	LU	Mold	pH	Green
N6415	22,915	5.07	25.0	1.2	3.1	4.47	1.8
SVTM5655	258	5.37	26.0	1.1	1.7	4.45	0.5

UC CE

AgSeeds UNLIMITED

Commercial Variety

HM5235 – VFFFNtsw 123 Days

Intermediate

HARRIS MORAN SEED COMPANY

- High Brix
- Excellent Peel Ability

AgSeeds 2017 Lab — 33 Locations

Variety	N6428	HM5235	HM3887
Fruit Wt	74	78	88
Brix	4.94	5.53	5.38
JB	13.58	12.73	14.60
PPB	3.36	3.90	4.59
pH	4.35	4.36	4.29
A/B	2.20	2.34	2.30
Ostwald	458	321	277

Variety	2017 6 GT Trials		Average Yield/Ac
N6428	A		55.27
HM5235		B	45.54

LSD @.05 3.8629 — 18 Data Points

2017 PTAB Grades

Variety	# of Loads	Solids	Color	LU	Mold	pH	Green
N6428	4,508	4.95	25.6	1.1	2.5	4.48	1.7
HM5235	294	5.50	24.1	1.4	2.5	4.44	1.1

UC CE

AgSeeds UNLIMITED

Commercial Variety

HM58801 – VFFFNtsw* 125 Days

Intermediate

HARRIS MORAN SEED COMPANY

- **High Brix**

AgSeeds 2017 Lab — 33 Locations

Variety	HM3887	HM58801	N6428
Fruit Wt	88	83	74
Brix	5.38	5.59	4.94
JB	14.60	12.62	13.58
PPB	4.59	3.94	3.36
pH	4.29	4.36	4.35
A/B	2.30	2.24	2.20
Ostwald	277	311	458

Variety	2017 4 GT Trials		Average Yield/Ac
HM3887	A		62.30
HM58801		B	51.62

LSD @.05 2.2649 — 12 Data Points

2017 PTAB Grades

Variety	# of Loads	Solids	Color	LU	Mold	pH	Green
N6428	4,508	4.95	25.6	1.1	2.5	4.48	1.7
HM58801	725	5.51	25.4	1.4	2.3	4.49	1.4

UC CE

AgSeeds UNLIMITED

Semi-Commercial Variety

H1662 – VFFFNPtswLv 125 Days

Thick

AgSeeds 2017 Lab — 33 Locations

Variety	N6428	H1662	N6415
Fruit Wt	74	76	76
Brix	4.94	5.10	5.04
JB	13.58	11.12	11.43
PPB	3.36	2.39	2.45
pH	4.35	4.33	4.28
A/B	2.20	2.17	2.26
Ostwald	458	776	560

- **Very High Ostwald**

Variety	2017 11 GT Trials		Average Yield/Ac
N6428	A		61.23
H1662		B	56.27

LSD @.05 1.5753 — 33 Data Points

2017 Adaptive Trial Data — **9 Locations**

Variety	Tons/Ac	Solids	Mold	Lim	Comm	Green	pH
N6428	51.6	4.93	2.32	1.08	24.7	1.97	4.47
H1662	47.8	5.01	1.88	0.68	25.1	2.30	4.44

2017 Adaptive Trial Data — **26 Locations**

Variety	Tons/Ac	Solids	Mold	Lim	Comm	Green	pH
N6415	48.0	4.95	5.15	0.87	24.9	2.11	4.50
H1662	47.6	5.15	3.67	1.09	25.9	2.69	4.48

UC CE

AgSeeds UNLIMITED

Semi-Commercial Variety

SVTM1082 – VFFFNPtsw 124 Days

Thin

Seminis grow forward

AgSeeds 2017 Lab — 33 Locations

Variety	N6428	SVTM1082	DRI319
Fruit Wt	74	69	78
Brix	4.94	5.62	5.51
JB	13.58	15.72	16.21
PPB	3.36	5.54	5.62
pH	4.35	4.24	4.28
A/B	2.20	2.24	2.22
Ostwald	458	498	355

➢High Brix

➢Adaptable

Variety	2017 6 GT Trials		Average Yield/Ac
N6428	A		55.27
SVTM1082		B	48.52

LSD @.05 2.2637 — 18 Data Points

2017 Adaptive Trial Data — **12 Locations**

Variety	Tons/Ac	Solids	Mold	Lim	Comm	Green	pH
SVTM1082	48.8	5.56	1.72	1.16	23.4	1.58	4.44
DRI319	45.5	5.67	4.64	1.93	23.6	1.96	4.50

2017 Adaptive Trial Data — **8 Locations**

Variety	Tons/Ac	Solids	Mold	Lim	Comm	Green	pH
N6428	49.9	4.94	2.21	1.05	24.4	2.11	4.48
SVTM1082	45.3	5.44	1.84	1.11	23.4	1.50	4.42

UC CE

AgSeeds UNLIMITED

Semi-Commercial Variety

HM4326 – VFFNtsw 124 Days

Thin

HARRIS MORAN SEED COMPANY

AgSeeds 2017 Lab — 33 Locations

Variety	DRI319	HM4326	N6415
Fruit Wt	78	74	76
Brix	5.51	5.66	5.04
JB	16.21	15.53	11.43
PPB	5.62	5.53	2.45
pH	4.28	4.28	4.28
A/B	2.22	2.24	2.26
Ostwald	355	366	560

- Brix Equal to DRI319
- Yields with DRI319

Variety	2017 5 GT Trials		Average Yield/Ac
HM4326	A		60.06
DRI319		B	53.78

LSD @.05 2.0771 — 15 Data Points

Seed Very Limited

2017 North State Adaptive Trial Data — 4 Locations

Variety	Tons/Ac	Solids	Mold	Lim	Comm	Green	pH
HM4326	56.34	5.34	0.83	1.60	24.3	5.78	4.39
DRI319	47.62	5.43	1.63	1.25	22.3	4.40	4.40

2017 Adaptive Trial Data — 11 Locations

Variety	Tons/Ac	Solids	Mold	Lim	Comm	Green	pH
HM4326	51.1	5.67	2.05	2.25	24.8	2.48	4.45
DRI319	48.4	5.67	2.19	1.96	23.9	2.30	4.47

UC CE

AgSeeds UNLIMITED

California Processing Tomato Harvest

Top 10 North Varieties – Main Season EFH / EFS™

Based on Final PTAB Reports

Variety	Supplier	TSW	F3	EFH EFS™	Total Loads	% of Loads	Solids
H5702	Heinz			X	6,023	12.8%	4.94
H4707	Heinz			X	5,590	11.9%	4.96
HM4885	Harris Moran	X		X	5,128	10.9%	5.01
H2401	Heinz			X	3,777	8.0%	4.92
H1428	Heinz	X		X	3,434	7.3%	4.94
UG19406	United Genetics			X	3,012	6.4%	5.37
N6428	Nunhems	X	X	X	2,858	6.1%	5.00
HM3888	Harris Moran	X		X	2,619	5.6%	5.10
HM9905	Harris Moran			X	2,233	4.7%	4.99
H1310	Heinz	X	X	X	2,213	4.7%	5.11
	All Others			X	10,219	21.7%	5.02
EFH / EFS™ Total					**47,106**	**100%**	**5.02**

% of Pack **44.8%**

UC CE

AgSeeds UNLIMITED

Commercial Variety

H1428 – VFFNtsw* 128 Days

Thick

Heinz

- Very Thick
- Very High Ostwald
- Good Color

AgSeeds 2017 Lab — 33 Locations

Variety	N6415	H1428	H8504
Fruit Wt	76	57	70
Brix	5.04	5.11	5.01
JB	11.43	10.68	11.95
PPB	2.45	2.19	2.66
pH	4.28	4.26	4.20
A/B	2.26	2.32	2.24
Ostwald	560	948	685

Variety	2017 5 GT Trials		Average Yield/Ac
H1428	A		62.37
H8504		B	56.36

LSD @.05 3.0143 — 15 Data Points

2017 PTAB Grades

Variety	# of Loads	Solids	Color	LU	Mold	pH	Green
N6415	22,915	5.07	25.0	1.2	3.1	4.47	1.8
H1428	10,677	4.92	23.9	0.8	2.5	4.50	3.1

UC CE

AgSeeds UNLIMITED

Commercial Variety

N6428 – VFFFNtsw* 125 Days

Intermediate

nunhems

- Excellent Yields
- Very Adaptable

AgSeeds 2017 Lab — 33 Locations

Variety	N6415	N6428	HM3887
Fruit Wt	76	74	88
Brix	5.04	4.94	5.38
JB	11.43	13.58	14.60
PPB	2.45	3.36	4.59
pH	4.28	4.35	4.29
A/B	2.26	2.20	2.30
Ostwald	560	458	277

Variety	2017 10 F3 GT Trials		Average Yield/Ac
N6428	A		56.80
HM3887		B	54.35

LSD @.05 2.1976 — 30 Data Points

Variety	2017 19 GT Trials	Average Yield/Ac
N6428	A	60.86
HM3887	A	59.53

LSD @.05 1.7893 — 57 Data Points

2017 PTAB Grades

Variety	# of Loads	Solids	Color	LU	Mold	pH	Green
N6415	22,915	5.07	25.0	1.2	3.1	4.47	1.8
N6428	4,508	4.95	25.6	1.1	2.5	4.48	1.7
HM3887	30,564	5.47	25.8	1.4	2.4	4.49	2.2

UC CE

AgSeeds UNLIMITED

Semi-Commercial Variety

N6434 – VFFFNtsw* 126 Days

Inter

nunhems

AgSeeds 2017 Lab — 20 Locations

Variety	N6428	N6434	HM3887
Fruit Wt	70	74	87
Brix	4.97	5.28	5.35
JB	13.69	14.07	14.60
PPB	3.46	4.17	4.54
pH	4.37	4.38	4.29
A/B	2.19	2.18	2.30
Ostwald	469	497	269

➢ Good Yields

➢ Higher Brix

Variety	2017 10 GT Trials		Average Yield/Ac
N6428	A		58.21
N6434		B	55.15

LSD @.05 1.192 — 30 Data Points

2017 Adaptive Trial Data — 6 Locations

Variety	Tons/Ac	Solids	Mold	Lim	Comm	Green	pH
N6428	52.6	4.95	2.80	1.25	24.4	1.73	4.51
N6434	50.4	5.24	2.90	1.07	24.1	1.15	4.49

2017 Adaptive Trial Data — 13 Locations

Variety	Tons/Ac	Solids	Mold	Lim	Comm	Green	pH
N6434	49.4	5.16	2.98	1.05	25.1	1.78	4.54
N6415	47.4	4.96	3.75	0.95	24.2	1.60	4.46

UC CE

AgSeeds UNLIMITED

Commercial Variety

HM58841 – VFFNtsw* 125 Days

Intermediate

HARRIS MORAN SEED COMPANY

Seed Very Limited

- Excellent Yields
- High Brix
- Thick JB

AgSeeds 2017 Lab — 33 Locations

Variety	DRI319	HM58841	HM3887
Fruit Wt	78	74	88
Brix	5.51	5.45	5.38
JB	16.21	12.01	14.60
PPB	5.62	3.41	4.59
pH	4.28	4.32	4.29
A/B	2.22	2.20	2.30
Ostwald	355	440	277

Variety	2017 4 GT Trials	Average Yield/Ac
HM58841	A	64.18
HM3887	A	62.30

LSD @.05 2.1928 — 12 Data Points

2017 PTAB Grades

Variety	# of Loads	Solids	Color	LU	Mold	pH	Green
DRI319	30,557	5.71	24.6	2.5	2.3	4.44	1.3
HM58841	1,109	5.45	24.8	0.8	2.4	4.46	1.2
HM3887	30,564	5.47	25.8	1.4	2.4	4.49	2.2

UC CE

AgSeeds UNLIMITED

Commercial Variety

HM58811 – VFFNtsw* 126 Days

Thick

HARRIS MORAN SEED COMPANY

Seed Very Limited

- Excellent Yields
- Higher Brix

AgSeeds 2017 Lab — 33 Locations

Variety	N6415	HM58811	H8504
Fruit Wt	76	77	70
Brix	5.04	5.18	5.01
JB	11.43	11.68	11.95
PPB	2.45	2.81	2.66
pH	4.28	4.32	4.20
A/B	2.26	2.22	2.24
Ostwald	560	443	685

Variety	2017 4 GT Trials	Average Yield/Ac
HM58811	A	62.74
HM3887	A	62.30

LSD @.05 3.1293 — 12 Data Points

2017 PTAB Grades

Variety	# of Loads	Solids	Color	LU	Mold	pH	Green
N6415	22,915	5.07	25.0	1.2	3.1	4.47	1.8
HM58811	575	5.17	25.7	0.6	1.5	4.48	1.1

UC CE

AgSeeds UNLIMITED

Commercial Variety

N6426 – VFFNtswLv* 125 Days

Thick

nunhems

Seed Very Limited

- Excellent Color
- Powdery Mild (Lv)

AgSeeds 2017 Lab — 33 Locations

Variety	N6415	N6426	H8504
Fruit Wt	76	76	70
Brix	5.04	5.03	5.01
JB	11.43	11.82	11.95
PPB	2.45	2.62	2.66
pH	4.28	4.31	4.20
A/B	2.26	2.33	2.24
Ostwald	560	458	685

Variety	2017 4 GT Trials		Average Yield/Ac
N6415	A		57.42
N6426		B	53.20

LSD @.05 1.7693 — 12 Data Points

2017 PTAB Grades

Variety	# of Loads	Solids	Color	LU	Mold	pH	Green
N6415	22,915	5.07	25.0	1.2	3.1	4.47	1.8
N6426	769	5.07	23.1	1.1	2.9	4.46	1.4

UC CE

AgSeeds UNLIMITED

Semi-Commercial Variety

HM4521 – VFFNtsw* 125 Days

Inter

HARRIS MORAN SEED COMPANY

AgSeeds 2017 Lab — **33 Locations**

Variety	HM3887	HM4521	N6415
Fruit Wt	88	77	76
Brix	5.38	5.25	5.04
JB	14.60	12.79	11.43
PPB	4.59	3.48	2.45
pH	4.29	4.28	4.28
A/B	2.30	2.21	2.26
Ostwald	277	414	560

Variety	2017 5 GT Trials		Average Yield/Ac
HM4521	A		67.64
N6415		B	51.70

LSD @.05 1.601 — 15 Data Points

Seed Very Limited

- **Excellent Yield**
- **Thick JB**

2017 Adaptive Trial Data — **7 Locations**

Variety	Tons/Ac	Solids	Mold	Lim	Comm	Green	pH
HM4521	59.2	5.21	1.53	0.14	24.9	1.33	4.37
N6415	49.5	4.96	3.17	0.23	23.3	1.21	4.43

UC CE

AgSeeds UNLIMITED

California Processing Tomato Harvest

Top 5 North Varieties – Pear Market

Based on Final PTAB Reports

Variety	Supplier	TSW	F3	EFH EFS™	Total Loads	% of Loads	Solids
N6420	Nunhems	X			429	59.1%	5.26
H1292	Heinz	X			173	23.8%	5.41
H1293	Heinz	X			113	15.6%	6.21
HM7885	Harris Moran			X	6	0.8%	4.91
HM8163	Harris Moran	X			5	0.7%	5.72
	Pear Total				**726**	**100%**	**5.44**

% of Pack **0.7%**

UC CE

AgSeeds UNLIMITED

Semi-Commercial Variety

HM8163 – VFFNtsw 125 Days

Pear

HARRIS MORAN SEED COMPANY

AgSeeds 2017 Lab		33 Locations
Variety	H1293	HM8163
Fruit Wt	60	72
Brix	5.57	5.78
JB	14.92	13.24
PPB	5.06	4.57
pH	4.45	4.38
A/B	2.31	2.32
Ostwald	469	353

- **High Brix**

Seed Very Limited

Variety	2016 11 GT Trials		Average Yield/Ac
HMX8163	A		52.98
H1293		B	49.09

LSD @.05 2.1341 — 33 Data Points

UC CE

AgSeeds UNLIMITED

California Processing Tomato Harvest

Top 10 North Varieties – F3 Market

Based on Final PTAB Reports

Variety	Supplier	TSW	F3	EFH EFS™	Total Loads	% of Loads	Solids
N6428	Nunhems	X	X	X	2,858	18.8%	5.00
H1310	Heinz	X	X	X	2,213	14.5%	5.11
BP13	BHN Seed	X	X		2,032	13.4%	5.07
BQ141	Woodbridge	X	X		1,489	9.8%	4.94
BP16	BHN Seed	X	X		1,426	9.4%	5.47
HM58801	Harris Moran	X	X	X	859	5.6%	5.49
N6429	Nunhems	X	X	X	813	5.3%	5.05
SV2493TM	Seminis	X	X		731	4.8%	5.11
H1422	Heinz		X		668	4.4%	5.36
BP32	BHN	X	X	X	655	4.3%	5.26
	All Others		X		1,469	9.7%	5.09
	F3 Total				**15,213**	**100%**	**5.14**

% of Pack **14.5%**

UC CE

AgSeeds UNLIMITED

2017

2018 Adaptive Varieties

UC CE

AgSeeds UNLIMITED

Adaptive Varieties
2018

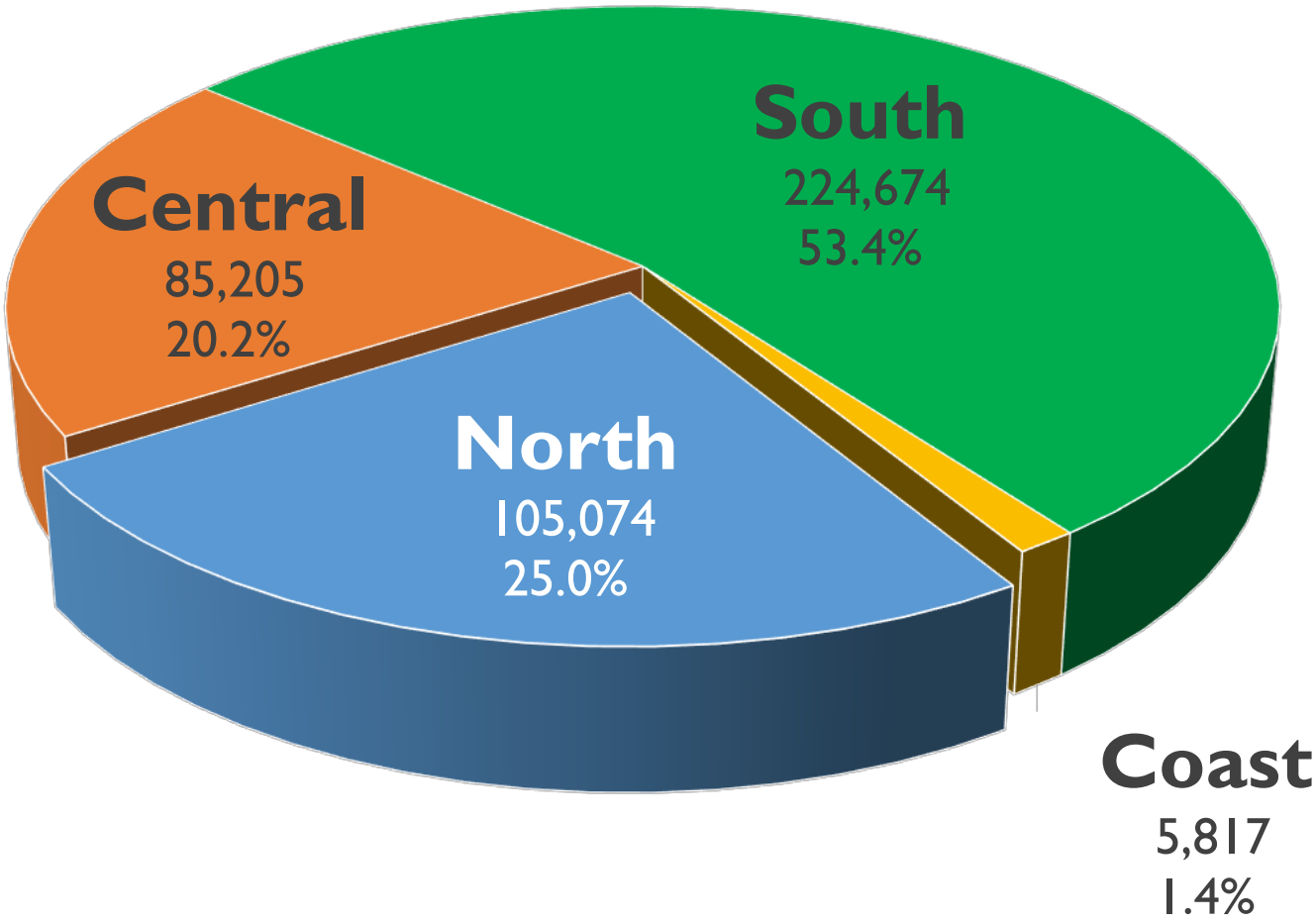
Supplier	Variety	Category	TSW	F3	EFS™/ EFH	2018 Seed Availablity
Heinz	H1765	Early	X	-	X	Trial
Harrris Moran	HMX58881	Early	X	-	-	Trial
Seminis	SVTM9000	Early	X	-	-	Trial
Woodbridge	BQ413	Early	X	X	-	Trial
Harrris Moran	HMX61P5293	Thin	X	-	-	Trial
Harrris Moran	HMX61P5522	Intermediate	X	-	-	Trial
Seminis	SVTM9003	Intermediate	X	-	X	Trial
Nunhems	N6440	Intermediate	X	X	X	Trial
BHN	BP42	Intermediate	X	X		Trial
BHN	BP43	Intermediate	X	X		Trial
Woodbridge	BQ411	Intermediate	X	X		Trial
Woodbridge	BQ422	Intermediate	X	X		Trial
Nunhems	N6441	Thick	X	X	X	Trial
Heinz	H1776	Thick	X	-	X	Trial
Seminis	SVTM9007	Thick	X	-	-	Trial
Seminis	SVTM9008	Thick	X	-	X	Trial

2017

California Market

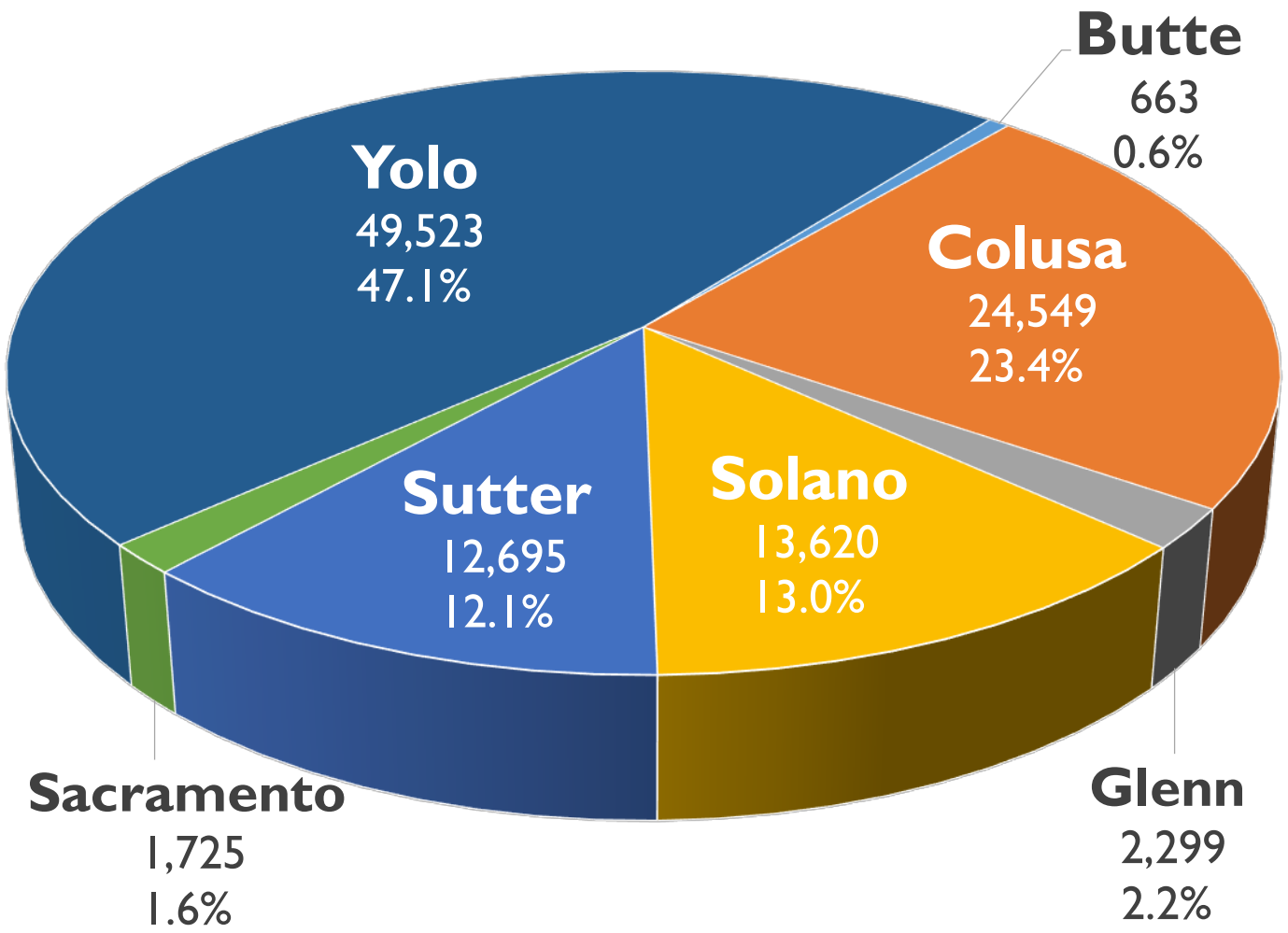
California Processing Tomato Harvest

Total Loads – Breakdown by Reigon



California Processing Tomato Harvest

Total Loads – Breakdown by North Region



Industry Intention:

11,800,000 Tons

What was achieved:

10,463,554 Tons

Industry Intention:

3,083,958

What was achieved:

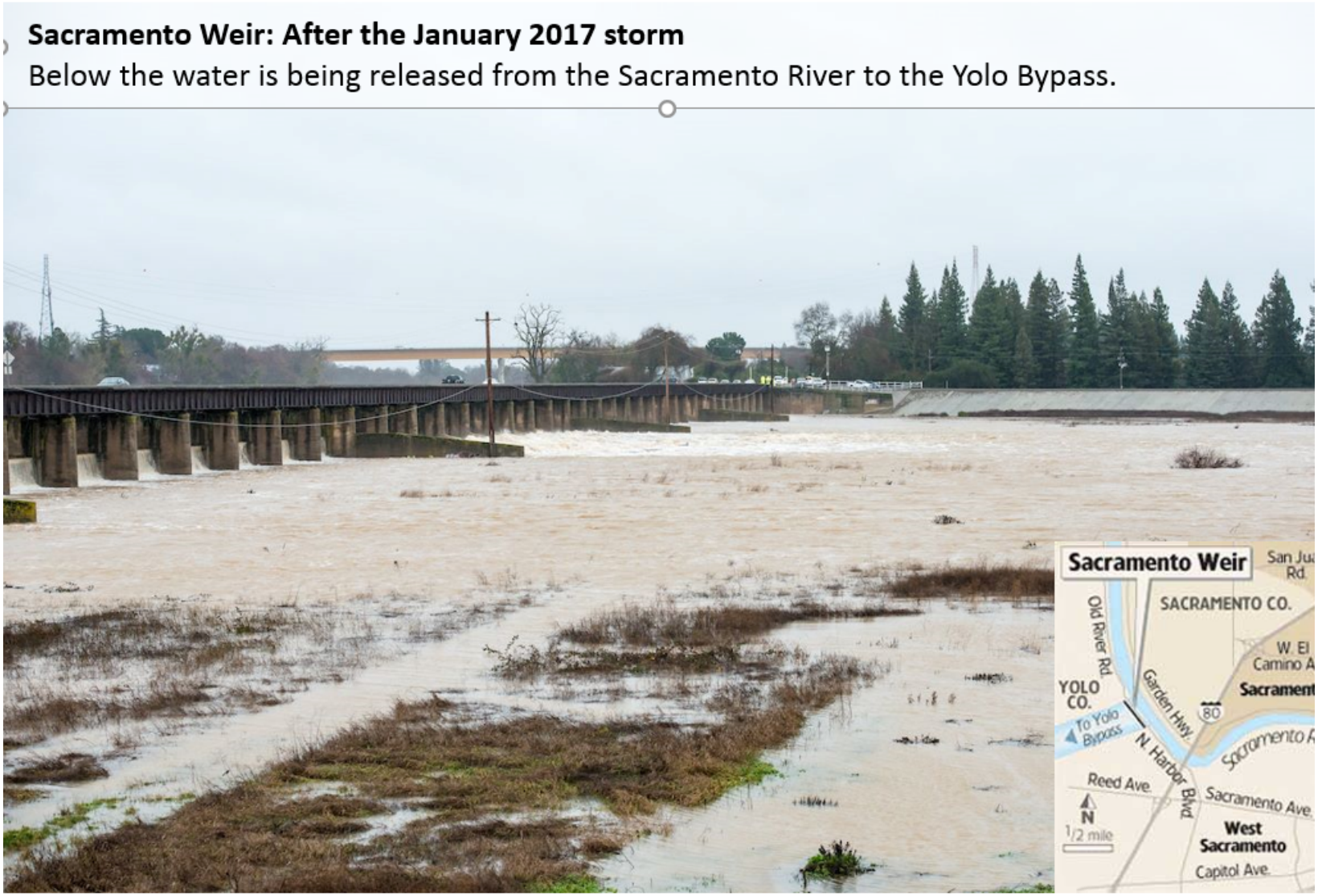
2,590,524

Sacramento Weir: Before the January 2017 storm

Below, no water is flowing through the weir in March 2016. The weir had not been opened in over a decade.

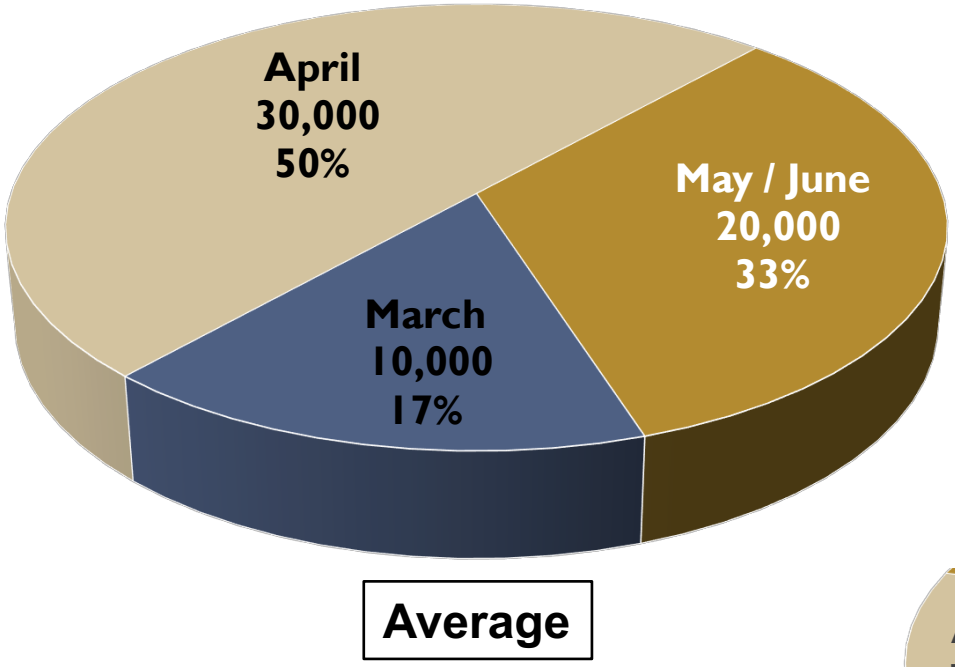
Sacramento Weir: After the January 2017 storm

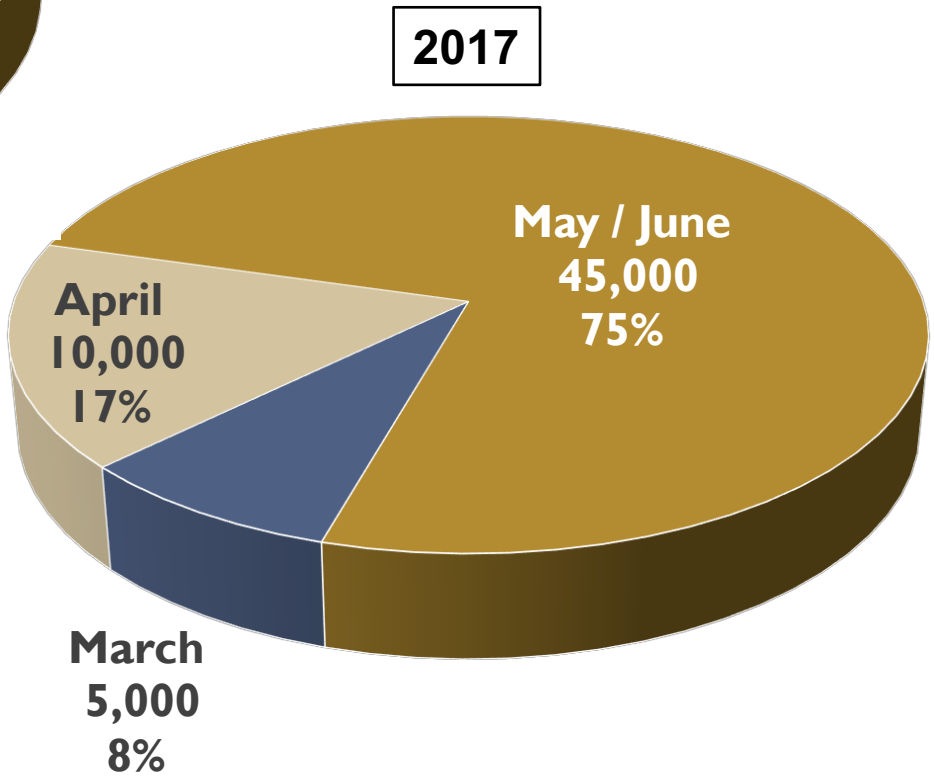
Below the water is being released from the Sacramento River to the Yolo Bypass.



California Processing Tomato Transplanting

Average Acres Transplanted compared to 2017 by Month





UC CE

AgSeeds UNLIMITED

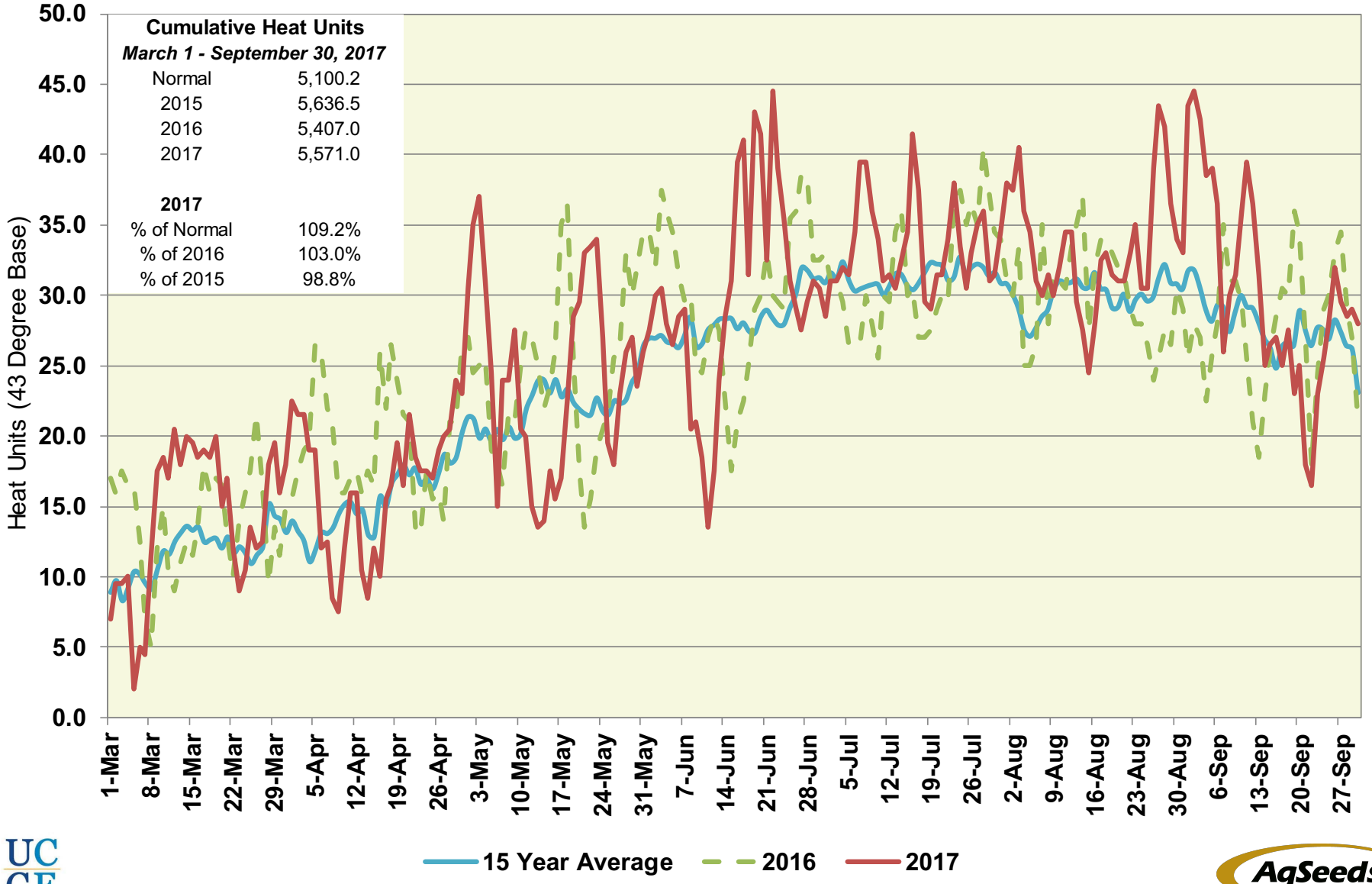
North Weather Station

Temperature Comparison

	Woodland Station		
	2017	**2016**	**15-Year Avg**
Days with High of 105° or More	6	0	1.3
Days with High of 100° or More	15	8	9.9
Days with High of 95° or More	41	34	32.3
Days with Low Over 70°	5	0	0.6

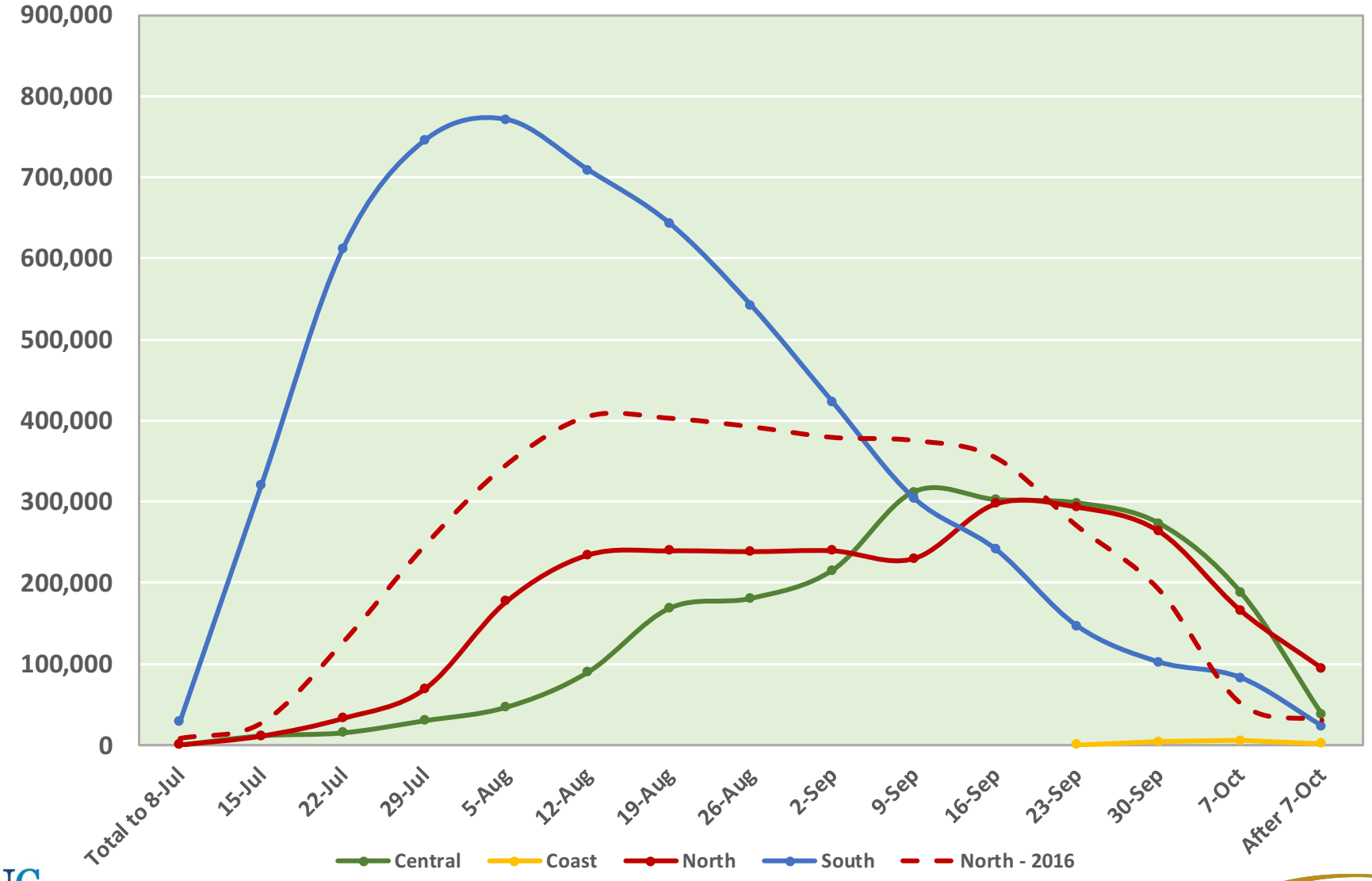
Woodland Station (North Region)

Heat Units – 2017 vs 2016 & 15 Year Average



California Processing Tomato Harvest

2017 Tons per Week by Region



UC CE

AgSeeds UNLIMITED

2017

Variety Advancements in California

UC CE

AgSeeds UNLIMITED

California Processing Tomato Harvest

Top 15 Varieties – 2017, 2013, & 2008, North State

2008

Variety	# Loads
AB2	24,666
N6366	10,331
H2401	9,273
H9780	6,599
HP849	6,525
APT410	5,652
H9995	5,267
N6368	5,171
H8504	4,633
H9557	4,608
H5003	4,311
H8004	3,879
CXD179	3,191
H9663	2,558
HM0830	2,380

2013

Variety	# Loads
H5608	13,981
N6366	8,864
N6404	8,225
H2401	6,206
CXD255	5,799
H5508	4,802
H8504	4,684
HP849	4,176
N6402	3,544
DRI319	3,485
H5702	3,191
BQ206	3,170
CXD282	3,112
H4707	2,410
H5003	2,373

2017

Variety	# Loads
HM3887	7,601
DRI319	7,402
AB0311	7,051
H5702	6,023
H4707	5,590
HM4885	5,128
H2401	3,777
H1428	3,434
UG19406	3,012
H1015	3,007
N6428	2,858
N6366	2,799
HM3888	2,619
H5608	2,510
BQ273	2,465

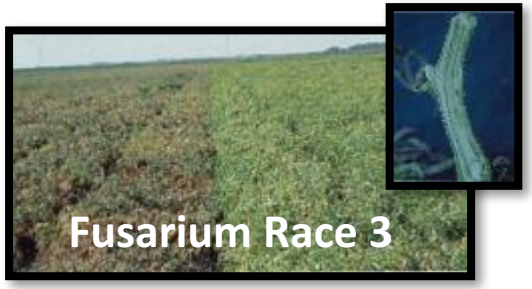
% of Pack	87.7%	68.1%	62.1%

UC CE

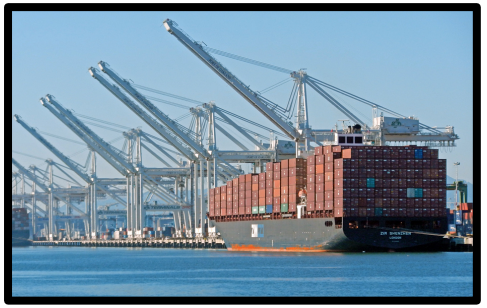
AgSeeds UNLIMITED

California Processing Tomato Market

Issues & Concerns



Disease Pressure



Trade Regulations

Water Storage & Regulation

Permanent Crops

Farm Labor Shortage & Increased Regulation

UC CE

AgSeeds UNLIMITED

Tomato Spotted Wilt Virus

California History

2006

The first outbreak of the Spotted Wilt Virus in the California market. No commercial varieties were available

2008

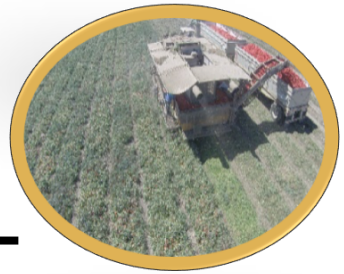
The first commercial varieties with TSW resistance came to the market: HM4801 and DRI8058.

2010

The number of commercial varieties that carried TSW resistance grew to 8.

2018

There are 81 TSW resistant varieties available commercially in California. 100% of all new varieties have TSW resistance.



UC CE

AgSeeds UNLIMITED

EFS / EFH
California History

1996

The first year an EFS / EFH variety is introduced to the California market (H9492). The best holding variety was BOS3155.

2000

The first year EFS / EFH varieties were publicized in our variety guide. There was a total of 4 varieties all from a single supplier.

2010

The industry offers 14 EFS / EFH varieties to the California market, which helped alleviate some fear of harvesting into October.

2018

There are 41 EFS / EFH varieties available commercially in all classes of maturity.

UC CE

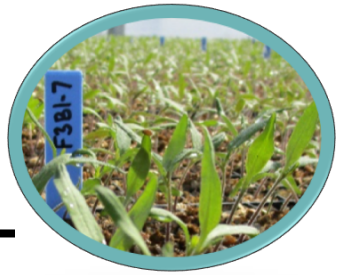
AgSeeds UNLIMITED

Fusarium Race 3

California History

1990-1995

The first time Fusarium Race 3 appears in California.



2009

The first year a semi-acceptable F3 resistant variety (CXD282) becomes commercial.

2014

The number of commercial varieties that carried F3 resistance grew to 3.

2018

There are 31 F3 resistant varieties commercially available. Over half of new varieties evaluated have F3 resistance.


California
Yield
History

Field Yields
California History

2001

Top three varieties were 3155, H8892 and APT410. Statewide yields were 34.02 tons per acre.

2006

Top three varieties were AB2, H9780 and H9557. N6366 is commercial and Ag Seeds started its GT trial program. Statewide yields were 35.83 tons per acre.

2010

Top three varieties were N6366, H8504 and AB2. New commercial and trial varieties like H5608, N6397, H1015, HM9905 and N6404. Statewide yields were 45.54 tons per acre.

2017

Top three varieties were DRI319, HM3887 and BQ273. Commercial varieties like N6428 and HM58841 are available. Statewide yields were 46.0 tons per acre.


Thank You