



# 2024 Northern Ohio Processing Cabbage Variety Trial

Ohio Agricultural Research Development Center  
North Central Agricultural Research Station, Fremont Ohio

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Cabbage is an important specialty crop in Sandusky County. While some fresh market Cabbage is grown in the county, a majority grown is processing cabbage. Sandusky County is fortunate to have one of the largest sauerkraut processing plants in the industry, The Fremont Company. This evaluation is possible due to the

Fremont Company's desire to find the best varieties suited to this area that can be used for sauerkraut production, and to evaluate those varieties for maturity and quality to both extend the harvest season and improve the quality of their product.

The OARDC's North Central Agricultural Research Station is ideally located for the Fremont Company's production area. All varieties included in the trial were recommended by The Fremont Company. The trial was to examine general characteristics of the cabbage, including observed maturity, tonnage harvested, internal color of heads, Brix levels, thrips severity, and disease activity at 3 different harvest dates. This trial was intended as an evaluation to establish a baseline for the varieties grown.

This report contains several different evaluations that may need some explanation. The first part of the report is the log of operation detailing all field operations. Operations conducted in the greenhouse prior to planting are available upon request.

The Harvest Data section looks at harvest dates and data. Harvest was judged by cutting heads and examining how many green leaves were on the head. Less than six green leaves indicated timing for the variety to be harvested. Second and third harvests were then approximately seven days and fourteen days later. This section also shows yield data. Charts show total yield, useable yield and may indicate the reason for the cull loss.

The Head Evaluation section gives all the data about each variety. The data is an average of two heads that were evaluated at each harvest. All three harvests are shown, and an average of all harvest is highlighted at the bottom of each variety. Included in this evaluation is the Onion Thrips Severity Rating. This rating examines both the severity of thrip damage and the leaf depth at which it was found. This rating study was developed by Christine Anne Hoepting of Cornell University Extension and there is copy of the chart at the end of the report.

The final chart is a rating index that ranks all the varieties based on an average of their scores on the traits that could be scored with a ranking system. Total harvested tons were not included in the average ranking, as this would have skewed data based on the variance in marketable and cull tonnage within varieties. Total harvested tons are however reported for observation. This ranking is informational only and does not necessarily indicate which varieties are most suitable for processing cabbage productions. Seed availability, soil types, contract dates, and other factors would influence the variety selection of individual growers.

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North Central Agricultural Research Station

#### Observations and Notes

Plots were planted in 30" rows and were not on raised beds. Disease pressure was moderate this season. In general, the plot was below average in appearance and yield, due to wet weather at planting and dry weather after July 1. Thrip pressure was light this season.

**Table 1. Harvest Data and Tonnage per acre**

Variety	Harvest Date	Days After Transplant	Harvested Tons	Marketable Heads/10	Marketable Tons	Cull Tons
<b>Padoc</b>	8/23/2024	93	47.92	10	47.92	0
	8/30/2024	100	41.12	10	41.12	0
	9/6/2024	107	81.02	10	81.02	0
	<b>Averages</b>	<b>100</b>	<b>56.69</b>	<b>10</b>	<b>56.69</b>	<b>0</b>
<b>Nixon</b>	9/6/2024	107	52.59	10	52.59	0
	9/13/2024	114	32.93	10	32.93	0
	9/20/2024	121	68.09	10	68.09	0
	<b>Averages</b>	<b>114</b>	<b>51.21</b>	<b>10</b>	<b>51.21</b>	<b>0</b>
<b>3503</b>	9/6/2024	107	44.71	10	44.71	0
	9/13/2024	114	40.32	10	40.32	0
	9/20/2024	121	52.69	10	52.69	0
	<b>Averages</b>	<b>114</b>	<b>45.91</b>	<b>10</b>	<b>45.91</b>	<b>0</b>
<b>3610</b>	9/6/2024	107	36.28	10	36.28	0
	9/13/2024	114	38.40	10	38.40	0
	9/20/2024	121	30.39	10	30.39	0
	<b>Averages</b>	<b>114</b>	<b>35.02</b>	<b>10</b>	<b>35.02</b>	<b>0</b>
<b>Bellicose</b>	9/6/2024	107	27.81	10	27.81	0
	9/13/2024	114	52.31	10	52.31	0
	9/20/2024	121	51.23	10	51.23	0
	<b>Averages</b>	<b>114</b>	<b>43.78</b>	<b>10</b>	<b>43.78</b>	<b>0</b>
<b>3738</b>	9/13/2024	114	46.70	10	46.70	0
	9/20/2024	121	43.04	10	43.04	0
	9/27/2024	128	47.40	10	47.40	0
	<b>Averages</b>	<b>121</b>	<b>45.71</b>	<b>10</b>	<b>45.71</b>	<b>0</b>
<b>Cecile</b>	9/13/2024	114	44.99	10	44.99	0
	9/20/2024	121	51.82	10	51.82	0
	9/27/2024	128	58.90	10	58.90	0
	<b>Averages</b>	<b>121</b>	<b>51.90</b>	<b>10</b>	<b>51.90</b>	<b>0</b>
<b>2361</b>	9/20/2024	121	36.56	10	36.56	0
	9/27/2024	128	48.16	10	46.16	0
	10/4/2024	135	83.74	10	83.74	0
	<b>Averages</b>	<b>128</b>	<b>56.15</b>	<b>10</b>	<b>56.15</b>	<b>0</b>

	Harvest Date	Days After Transplant	Harvested Tons	Marketable Heads/10	Marketable Tons	Cull Tons
<b>Tobia</b>	9/20/2024	121	53.63	10	53.63	0
	9/27/2024	128	49.56	10	49.56	0
	10/4/2024	135	77.65	10	77.65	0
	<b>Averages</b>	<b>128</b>	<b>60.28</b>	<b>10</b>	<b>60.28</b>	<b>0</b>
<b>Quartz</b>	9/20/2024	121	38.75	10	38.75	0
	9/27/2024	128	41.82	10	41.82	0
	10/4/2024	135	33.46	9	29.46	4.0
	<b>Averages</b>	<b>128</b>	<b>38.01</b>	<b>9.67</b>	<b>36.68</b>	<b>1.33</b>
<b>3708</b>	9/27/2024	128	38.86	10	38.86	0
	10/4/2024	135	41.05	10	41.05	0
	10/11/2024	142	36.31	10	36.31	0
	<b>Averages</b>	<b>135</b>	<b>38.74</b>	<b>10</b>	<b>38.74</b>	<b>0</b>
<b>Report</b>	9/27/2024	128	46.70	10	46.70	0
	10/4/2024	135	68.55	10	68.55	0
	10/11/2024	142	54.78	10	54.78	0
	<b>Averages</b>	<b>135</b>	<b>56.68</b>	<b>10</b>	<b>56.68</b>	<b>0</b>
<b>Successor</b>	10/4/2024	135	47.50	10	47.50	0
	10/11/2024	142	49.17	10	49.17	0
	10/18/2024	149	50.69	10	50.69	0
	<b>Averages</b>	<b>142</b>	<b>49.19</b>	<b>10</b>	<b>49.19</b>	<b>0</b>
<b>Killaprince</b>	10/4/2024	135	62.83	10	62.83	0
	10/11/2024	142	65.97	10	65.97	0
	10/18/2024	149	74.61	10	74.61	0
	<b>Averages</b>	<b>142</b>	<b>67.80</b>	<b>10</b>	<b>67.80</b>	<b>0</b>
<b>Promise</b>	10/11/2024	142	48.12	10	48.12	0
	10/18/2024	149	53.98	10	53.98	0
	10/25/2024	156	75.42	10	75.42	0
	<b>Averages</b>	<b>149</b>	<b>59.17</b>	<b>10</b>	<b>59.17</b>	<b>0</b>
<b>Passat</b>	10/11/2024	142	72.87	10	72.87	0
	10/18/2024	149	68.76	10	68.76	0
	10/25/2024	156	53.70	10	53.70	0
	<b>Averages</b>	<b>149</b>	<b>65.11</b>	<b>10</b>	<b>65.11</b>	<b>0</b>

	Harvest Date	Days After Transplant	Harvested Tons	Marketable Heads/10	Marketable Tons	Cull Tons
<b>Atria</b>	10/18/2024	149	33.34	9	30.39	2.95
	10/25/2024	56	46.35	10	46.35	0
	11/1/2024	163	47.67	10	47.67	0
	<b>Averages</b>	<b>156</b>	<b>42.45</b>	<b>9.33</b>	<b>41.47</b>	<b>.99</b>
<b>Typhoon</b>	10/18/2024	149	31.61	10	31.61	0
	10/25/2024	156	27.57	10	27.57	0
	11/1/2024	163	41.33	10	41.33	0
	<b>Averages</b>	<b>156</b>	<b>33.50</b>	<b>10</b>	<b>33.50</b>	<b>0</b>
<b>9355</b>	10/25/2024	156	48.79	10	48.79	0
	11/1/2024	163	47.40	10	47.40	0
	11/8/2024	170	75.66	10	75.66	0
	<b>Averages</b>	<b>163</b>	<b>57.28</b>	<b>10</b>	<b>57.28</b>	<b>0</b>
<b>3513</b>	10/25/2024	156	49.56	10	49.56	0
	11/1/2024	163	56.00	10	56.00	0
	11/8/2024	170	79.74	10	79.74	0
	<b>Averages</b>	<b>163</b>	<b>61.77</b>	<b>10</b>	<b>61.77</b>	<b>0</b>
<b>TCA581</b>	11/1/2024	163	48.72	10	48.72	0
	11/8/2024	170	26.38	10	26.38	0
	11/15/2024	177	26.10	10	26.10	0
	<b>Averages</b>	<b>170</b>	<b>33.73</b>	<b>10</b>	<b>33.73</b>	<b>0</b>
<b>Adelco</b>	11/1/2024	163	66.42	10	66.42	0
	11/8/2024	170	74.93	10	74.93	0
	11/15/2024	177	77.37	10	77.37	0
	<b>Averages</b>	<b>170</b>	<b>72.91</b>	<b>10</b>	<b>72.91</b>	<b>0</b>
<b>Storador</b>	11/1/2024	163	31.26	10	31.26	0
	11/8/2024	170	32.83	10	32.83	0
	11/15/2024	177	40.32	10	40.32	0
	<b>Averages</b>	<b>170</b>	<b>34.80</b>	<b>10</b>	<b>34.80</b>	<b>0</b>

**Table 2. Summary and Averages of Harvest Data**

<b>Variety</b>	<b>Supplier Listed Days after transplant</b>	<b>Actual Days after Transplant</b>	<b>Harvested Tons</b>	<b>Marketable Tons</b>	<b>Cull tons</b>
<b>Padoc</b>	70	100	56.69	56.69	0
<b>Nixon</b>	83	114	51.21	51.21	0
<b>3503</b>	~	114	45.91	45.91	0
<b>3610</b>	81	114	35.02	35.02	0
<b>Bellicose</b>	81	114	43.78	43.78	0
<b>3738</b>	~	121	45.71	45.71	0
<b>Cecile</b>	~	121	51.90	51.90	0
<b>2361</b>	100	128	56.15	56.15	0
<b>Tobia</b>	~	128	60.28	60.28	0
<b>Quartz</b>	~	128	38.01	38.01	1.33
<b>3708</b>	~	135	38.74	38.74	0
<b>Report</b>	~	135	56.68	56.68	0
<b>Successor</b>	~	142	49.19	49.19	0
<b>Killaprince</b>	~	142	67.80	67.80	0
<b>Promise</b>	96	149	59.17	59.17	0
<b>Passat</b>	~	149	65.11	65.11	0
<b>Atria</b>	~	156	42.45	42.45	.99
<b>Typhoon</b>	~	156	33.50	33.50	0
<b>9355</b>	100	163	57.28	57.28	0
<b>3513</b>	100	163	61.77	61.77	0
<b>TCA 581</b>	~	170	33.73	33.73	0
<b>Adelco</b>	~	170	72.91	72.91	0
<b>Storador</b>	~	170	34.80	34.80	0

**Table 3: Head Evaluation**

# Green Leaves	actual average green leaf count on 2 randomly selected heads from each rep
Brix level	actual average refractometer reading from 2 randomly selected heads from each rep
Thrips Severity	measured by Onion Thrips Severity Rating Scale, seen on next page
Thrips leaf depth	actual average leaf depth of thrips on 2 randomly selected heads from each rep

Variety	Harvest Date	Days After Transplant	# Green Leaves	Brix Level	Thrips Severity	Thrips Leaf Depth	
<b>Padoc</b>	8/23/2024	93	5	5	~	~	
	8/30/2024	100	5	5.5	~	~	
	9/6/2024	107	3	5.5	~	~	
<b>Nixon</b>	9/6/2024	107	5	6.5	~	~	
	9/13/2024	114	5	7.0	~	~	
	9/20/2024	121	5	7.0	~	~	
<b>3503</b>	9/6/2024	107	5	7.5	~	~	Many Basal Buds
	9/13/2024	114	5	7.5	~	~	
	9/20/2024	121	4	6.5	~	~	Tip Burn
<b>3610</b>	9/6/2024	107	5	6.5	~	~	
	9/13/2024	114	6	4	~	~	Soft Rot
	9/20/2024	121	4	8.5	~	~	
<b>Bellicose</b>	9/6/2024	107	5	7.5	~	~	
	9/13/2024	114	5	7.0	~	~	
	9/20/2024	121	4	7.5	Lt. 1	2	
<b>3738</b>	9/13/2024	114	5	7.5	~	~	
	9/20/2024	121	5	7.0	~	~	Soft Rot
	9/27/2024	128	5	7.0	Lt. 1	2	
<b>Cecile</b>	9/13/2024	114	5	7.0	Lt. 1	1	
	9/20/2024	121	5	7.5	Lt. 1	2	
	9/27/2024	128	5	7.0	~	~	
<b>2361</b>	9/20/2024	121	4	6.0	~	~	
	9/27/2024	128	5	6.5	Lt. 1	1	
	10/4/2024	135	4	6.5	~	~	

<b>Tobia</b>	9/20/2024	121	4	6.0	~	~	
	9/27/2024	128	5	6.5	~	~	
	10/4/2024	135	4	6.5	~	~	
<b>Quartz</b>	9/20/2024	121	5	6.5	~	~	
	9/27/2024	128	5	7.0	Lt. 1	5	
	10/4/2024	135	5	6.5	~	~	
<b>3708</b>	9/27/2024	128	5	6.0	~	~	
	10/4/2024	135	4	7.0	~	~	
	10/11/2024	142	4	6.5	Lt. 1	1	
<b>Report</b>	9/27/2024	128	5	7.0	~	~	
	10/4/2024	135	5	8.0	~	~	
	10/11/2024	142	4	7.0	~	~	
<b>Successor</b>	10/4/2024	135	5	7.0	~	~	
	10/11/2024	142	5	8.5	~	~	
	10/18/2024	149	5	8.0	~	~	
<b>Killaprince</b>	10/4/2024	135	5	6.5	~	~	
	10/11/2024	142	5	6.5	~	~	
	10/18/2024	149	5	7.0	~	~	
<b>Promise</b>	10/11/2024	142	5	7.5	~	~	
	10/18/2024	149	5	9.0	~	~	
	10/25/2024	156	4	8.5	~	~	
<b>Passat</b>	10/11/2024	142	5	6.0	~	~	
	10/18/2024	149	5	7.0	~	~	
	10/25/2024	156	5	7.0	~	~	
<b>Atria</b>	10/18/2024	149	5	8.5	~	~	
	10/25/2024	156	5	9.0	~	~	
	11/1/2024	163	4	8.0	~	~	
<b>Typhoon</b>	10/18/2024	148	5	8.5	~	~	
	10/25/2024	156	4	9.0	~	~	
	11/1/2024	163	5	9.5	~	~	

<b>9355</b>	10/25/2024	156	5	8.0	~	~	
	11/1/2024	163	4	8.5	~	~	
	11/8/2024	170	5	9.5	~	~	
<b>3513</b>	10/25/2024	156	5	8.5	~	~	
	11/1/2024	163	6	9.0	~	~	
	11/8/2024	170	5	8.5	~	~	
<b>TCA 581</b>	1/1/2024	163	6	8.5	~	~	
	11/8/2024	170	6	10.0	~	~	
	11/15/2024	177	6	9.0	Heavy 4	8	
<b>Adelco</b>	1/1/2024	163	5	8.0	~	~	
	11/8/2024	170	6	9.0	~	~	
	11/15/2024	177	4	8.0	~	~	
<b>Storador</b>	1/1/2024	163	4	10.0	~	~	
	11/8/2024	170	5	10.0	~	~	
	11/15/2024	177	6	10.0	~	~	

## Onion Thrips Severity Ratings in Cabbage



Scale of 0-5: 0 = no damage; 1 = minor; 2 = below average; 3 = average;  
4 = above average; 5 = very bad

## 2024 Cabbage Dry Matter (Taken in week 2 of Harvest)

Date	Variety	Dry Matter %
8/30/2024	Padoc	9.80%
9/13/2024	3610	10.30%
9/13/2024	Nixon	9.90%
9/13/2024	3503	9.90%
9/13/2024	Bellicose	9.50%
9/20/2024	3738	11.40%
9/20/2024	Cecile	11.10%
9/27/2024	Quartz	10.70%
9/27/2024	CXCB2361	9.90%
9/27/2024	Tobias	9.30%
10/4/2024	3708	10.50%
10/4/2024	Report	10.20%
10/11/2024	Killaprince	10.20%
10/11/2024	Successor	11.00%
10/18/2024	Promise	10.50%
10/25/2024	Atria	11.40%
10/25/2024	Typhoon	11.70%
10/25/2024	Passat	11.80%
11/1/2024	9355	11.50%
11/1/2024	9513	11.60%
11/8/2024	Adelco	10.00%
11/8/2024	Storidor	12.50%
11/8/2024	TCA581	12.20%

# Addendum

## Environmental Influence on Cabbage Dry Matter

Variety	Wet Year 2023	Dry Year 2024
Padoc	7.63%	9.80%
Nixon	9.26%	9.90%
B3610	8.80%	10.30%
Bellicose	10.00%	9.50%
Report	9.54%	10.20%
Promise	9.70%	10.50%
Promise	10.26%	10.50%
Passat	9.26%	11.80%
Typhoon	11.28%	11.70%
B3513	9.83%	11.50%

2024 Processing Cabbage Trial log of operations  
Field ID - BS

Date	Project Leader	Description of Operation	Staff # & hours	Total Staff hours	Seasonal Staff # and hours	Total Seasonal Staff hours
9/13/2023	Gasiter	Herbicide Application - 32 oz/A Envy, 32 oz/A Liberty and 3 lbs/A AMS	1-.25	0.25		
9/18/2023	Gasiter	South half of field - subsoiled wheat stubble with JD 6155M and Landoll 3 shank ripper	1-1.25	1.25		
9/19/2023	Gasiter	north half of Field - Subsoiled wheat stubble with JD6155M and Landoll 3 shank ripper	1-1.25	1.25		
3/26/2024	Gastier	Adjusted exhaust fan belts,restapled expanded metal on benches as needed	2-2.0	4		
3/26/2024	Gastier	Started Disinfecting Greenhouse and benches with Physan 20 1oz/2gallon water set up benches for heat mats	1-2.0	2		
3/27/2024	Gastier	Finished disinfecting Greenhouse, heat mats and set up heat mats	1-2.5	2.5		
3/28/2024	Gastier	installed Greenhouse Divider	2-.5	1		
3/29/2024	Gastier	Set up and disinfected flat filler, headhouse and Greenhouse divider. Moved soil into head house	1-.25,1-1.0	1.25	1-1.0	1
4/1/2024	Gasiter	trial received .75 inches of rainfall				
4/2/2024	Gastier	filled and seeded 48-200 cell trays for trial. Seeded 2 trays/Variety and 1 tray Broccoli and 1 tray Cauliflower and Brussel sprouts for guards. Varieties seeded - Padoc lot #1510063A; B3610 lot # 1805891A; Bellicose lot # 1728690C; Nixon lot # 1688761B; Passat lot # 1728678A; Report lot # 1619190B; B3513 lot # 1754372; Typhoon lot # 1400011A; EXP 3708; EXP 3738; XCB9355 lot # 21NH-075; XCB 2361 lot # 23NH053; Tobia lot # 104211039; Atria lot # 104114353; Quartz lot # 104497439; SVJT3503 lot # 104338371; Cecile lot # 1209060; Adelco lot # 18836841; Kilaprince lot # 17923408; Storiator lot # 18371474; Succesor lot # 18374004; TCA-581 lot # 32120002981; and Promise lot # 3130014721	1-1.0, 1-4.0	5	1-5.0	5
4/2/2024	Gasiter	trial received 1.1 inches of rainfall				
4/3/2024	Gasiter	trial received .1 inches of rainfall				
4/4/2024	Gasiter	trial received .2 inches of rainfall				
4/5/2024	Gasiter	trial received .1 inches of rainfall				
4/8/2024	Gasiter	trial received .1 inches of rainfall				
4/11/2024	Gasiter	trial received .8 inches of rainfall				
4/12/2024	Gasiter	trial received .5 inches of rainfall				
4/13/2024	Gasiter	trial received .1 inches of rainfall				
4/17/2024	Gastier	thinned and pricked			2-.75	1.5
4/18/2024	Gastier	fertilized 200 ppm 20-20-20	1-.25	0.25		
4/18/2024	Gasiter	trial received .6 inches of rainfall				
4/19/2024	Gasiter	trial received .1 inches of rainfall				
4/22/2024	Gasiter	Herbicide application - 38 oz/A Ag saver Glyphosate, 9.6 oz/A Preference NIS, 8 oz/A Choice weathermaster and 6.5 oz/A Justified	1-.5	0.5		
4/22/2024	Gastier	set up rest of the center benches in the greenhouse			2-.5	1
4/23/2024	Gastier	fertilized 200 ppm 20-20-20	1-.5	0.5		
4/23/2024	Gastier	took down Greenhouse divider	1-.25	0.25		
4/24/2024	Gasiter	trial received .5 inches of rainfall				
4/26/2024	Gastier	fertilized 200 ppm 20-20-20	1-.5	0.5		
4/29/2024	Gasiter	Disc Chiseld with 6155M and Brillion Chisel	1-1.0	1		
4/29/2024	Gastier	fertilized 200 ppm 20-20-20	1-.5	0.5		
4/29/2024	Gasiter	trial received .9 inches of rainfall				
5/1/2024	Gastier	fertilized 200 ppm 20-20-20	1-.5	0.5		
5/3/2024	Gastier	fertilized 200 ppm 20-20-20	1-.5	0.5		
5/4/2024	Gasiter	trial received .2 inches of rainfall				
5/6/2024	Gastier	Cleaned up Heat mats and screens			1-3.75	3.75
5/7/2024	Gastier	fertilized 200 ppm 20-20-20	1-.5	0.5		
5/7/2024	Gastier	turned trays to minimize edge effect	1-.25	0.25	1-.25	0.25
5/8/2024	Gasiter	trial received .4 inches of rainfall				
5/10/2024	Gastier	fertilized 200 ppm 20-20-20	1-.5	0.5		
5/10/2024	Gasiter	trial received .35 inches of rainfall				

Date	Project Leader	Description of Operation	Staff # & hours	Total Staff hours	Seasonal Staff # and hours	Total Seasonal Staff hours
5/11/2024	Gasiter	trial received .25 inches of rainfall				
5/13/2024	Gasiter	set drive flags to spread fertilizer	1-.5	0.5		
5/13/2024	Gasiter	Spread fertilizer- Applied 400lbs/A 0-0-60, 150lbs/A 11-52-0, 150lbs/A AMS(21-0-0-24) 175lbs/A 46-0-0, 10lbs/A Boron	1-.5	0.5		
5/13/2024	Gasiter	worked in fertilizer with 6155M and Landoll	1-.75	0.75		
5/13/2024	Gastier	fertilized 200 ppm 20-20-20	1-.75	0.75		
5/14/2024	Gastier	Put racks onto 1st wagon and disinfected	1-.25	0.25	2-.25	0.5
5/14/2024	Gastier	moved plants onto wagon to harden off	1-.25	0.25	1-.25	0.25
5/14/2024	Gastier	Made plot stakes for trial			2-.5	1
5/15/2024	Gasiter	trial received .35 inches of rainfall				
5/17/2024	Gastier	Put racks onto 2nd wagon and disinfected	1-.25	0.25	1-.5	0.5
5/17/2024	Gastier	fertilized 200 ppm 20-20-20	1-.5	0.5		
5/17/2024	Gasiter	trial received .3 inches of rainfall				
5/19/2024	Gasiter	worked ground with 7210, Kongskilde, and packer	1-.75	0.75		
5/19/2024	Gasiter	set drive flags	1-.25	0.25		
5/19/2024	Gasiter	set stakes for spraying cabbage trial	1-.25	0.25		
5/20/2024	Gasiter	drove alleys with 6310	1-.75	0.75		
5/20/2024	Gasiter	Herbicide application - 16 oz/A Dual Magnum and 8 oz/A Command 3ME	1-.5	0.5		
5/21/2024	Gasiter	trial received .3 inches of rainfall				
5/22/2024	Gasiter	transplanted trial with JD 7210 and 2 row transplanter - .7qt 10-34-0 /50 gal transplant water. 16 inch in row spacing	2-3.0	6	2-3.0	6
5/22/2024	Gastier	fertilized 200 ppm 20-20-20	1-.5	0.5		
5/27/2024	Gasiter	trial received .95 inches of rainfall				
5/29/2024	Gasiter	trial received .25 inches of rainfall				
5/30/2024	Gasiter	trial received .7 inches of rainfall				
5/31/2024	Gasiter	put out plot stakes	1-.5	0.5	1-.5	0.5
6/2/2024	Gasiter	trial received .3 inches of rainfall				
6/3/2024	Gasiter	walked cabbage trial and replaced a few plants	1-.5	0.5	1-.5	0.5
6/5/2024	Gasiter	Flagged corners of reps	1-.25	0.25	1-.25	0.25
6/5/2024	Gastier	Disposed of remaining cabbage			2-0.75	1.5
6/6/2024	Gastier	cleaned up flat filler			2-1.5	3
6/6/2024	Gastier	started to take down center benches			2-0.25	0.5
6/6/2024	Gasiter	trial received .35 inches of rainfall				
6/9/2024	Gasiter	trial received .1 inches of rainfall				
6/11/2024	Gasiter	cultivated with Kubota and 2 row Danish Tine cultivator	1-0.5	0.5		
6/12/2024	Gasiter	Insecticide Application- 1.92 oz/A Warrior	1-0.5	0.5		
6/12/2024	Gastier	finished taking down center benches			3-0.25	0.75
6/12/2024	Gastier	cleaned up and took racks off 1st wagon			2-0.25	0.5
6/14/2024	Gasiter	trial received .05 inches of rainfall				
6/21/2024	Gasiter	Irrigated with OMIS overhead gun put on approx. 3/4 inch		6		
6/23/2024	Gasiter	trial received .5 inches of rainfall				
6/24/2024	Gasiter	Insecticide Application- 5oz/A Movento 240 SC, 1 lb/A Javelin WG, 9 oz/A Induce NIS	1-0.5	0.5		
6/25/2024	Gastier	cleaned up and took racks off 2nd wagon			3-.25	0.75
6/26/2024	Gasiter	trial received .4 inches of rainfall				
6/27/2024	Gasiter	trial received .6 inches of rainfall				
6/29/2024	Gasiter	trial received .4 inches of rainfall				
7/2/2024	Gasiter	Fungicide and Insecticide Application - Orondis Ultra 8oz/A, Movento 5oz/A, Javelin 1lb/A, NIS 9oz/A	1-0.5	0.5		
7/5/2024	Gasiter	trial received .25 inches of rainfall				
7/10/2024	Gasiter	trial received 1.1 inches of rainfall				

Date	Project Leader	Description of Operation	Staff # & hours	Total Staff hours	Seasonal Staff # and hours	Total Seasonal Staff hours
7/11/2024	Gasiter	trial received .2 inches of rainfall				
7/14/2024	Gasiter	trial received .05 inches of rainfall				
7/15/2024	Gasiter	Insecticide Application- 8oz/A Radiant, 11.3 oz/A Freeway	1-0.5	0.5		
7/26/2024	Gasiter	Fungicide and Insecticide Application- 1 lb/A Menzate ProStick, 8oz/A Radiant, 5.9oz/A Freeway	1-0.25	0.25		
7/30/2024	Gasiter	trial received .35 inches of rainfall				
8/1/2024	Gasiter	walked and hoed			4-0.75	3
8/1/2024	Gasiter	Insecticide and Fungicide Application- Quadris 15oz/A, Baythroid XL 2.8 oz/A	1-0.25	0.25		
8/2/2024	Gasiter	trial received .45 inches of rainfall				
8/3/2024	Gasiter	trial received .25 inches of rainfall				
8/5/2024	Gasiter	reset and marked stakes			3-1.25	3.75
8/6/2024	Gasiter	trial received .05 inches of rainfall				
8/7/2024	Gasiter	trial received 1.3 inches of rainfall				
8/10/2024	Gasiter	Insecticide application - 4 oz/A Assail and 5.8 oz/A Freeway	1-.5	0.5		
8/15/2024	Gasiter	Insecticide application - 2 oz/A Beleaf and 10 oz/A Intrepid 2F	1-.5	0.5		
8/16/2024	Gasiter	trial received .05 inches of rainfall				
8/18/2024	Gasiter	trial received .1 inches of rainfall				
8/23/2024	Gasiter	Insecticide application - 4 oz/A Mustang Maxx	1-.25	0.25		
8/23/2024	Gasiter	Harvested cabbage - 1st harvest of Padoc	1-0.25	0.25		
8/27/2024	Gasiter	trial received .3 inches of rainfall				
8/30/2024	Gasiter	Insecticide application - 9.6 oz/A Asana	1-.5	0.5		
8/30/2024	Gasiter	Harvested cabbage - 2nd harvest of Padoc	1-0.5	0.5		
8/31/2024	Gasiter	trial received .4 inches of rainfall				
9/2/2024	Gasiter	trial received .3 inches of rainfall				
9/5/2024	Gasiter	Fungicide application - 15.5 oz/A Quadris	1-.5	0.5		
9/5/2024	Gasiter	Insecticide application - 2.8 oz/A Baythroid XL	1-.5	0.5		
9/6/2024	Gasiter	Harvested cabbage - 3rd harvest - padoc, 1st harvest - SVJT 3503, B3610, Nixon and Bellicose	2-.5	1		
9/7/2024	Gasiter	trial received .5 inches of rainfall				
9/13/2024	Gasiter	Insecticide application - 4 oz/A Mstang Maxx	1-.5	0.5		
9/13/2024	Gasiter	Harvested Cabbage - 2nd harvest - SVJT 3503, B3610, Nixon and Bellicose; 1st harvest - Cecile and EXP 3738	1-.5	0.5		
9/20/2024	Gasiter	Fungicide and Insecticide application - 2pt/A Oranil 6L, 1 qt/A Regalia and 3.5 oz/A Actara	1-.5	0.5		
9/20/2024	Gasiter	Harvested Cabbage - 3rd harvest - SVJT 3503, B3610, Nixon and Bellicose; 2nd harvest - Cecile and EXP 3738; 1st harvest - XCB 2361, Tobia and Quartz	1-1.0	1	1-.75	0.75
9/23/2024	Gasiter	trial received .4 inches of rainfall				
9/24/2024	Gasiter	trial received .1 inches of rainfall				
9/25/2024	Gasiter	trial received .05 inches of rainfall				
9/26/2024	Gasiter	Fungicide application - 6.2 oz/A Quadris	1-.5	0.5		
9/26/2024	Gasiter	Insecticide application - 2.8 oz/A Baythroid XL	1-.5	0.5		
9/27/2024	Gasiter	Harvested cabbage - 3rd harvest - Cecile and EXP 3738; 2nd Harvest - XCB2361, Tobia and Quartz; 1st harvest - 3708 and Report	1-.75	0.75	1-.75	0.75
9/28/2024	Gasiter	trial received .15 inches of rainfall				
10/2/2024	Gasiter	trial received .1 inches of rainfall				
10/4/2024	Gasiter	Harvested and evaluated cabbage - 3rd harvest - XCB2361, Tobia and Quartz; 2nd harvest - 3708 and Report; 1st harvest - Succesor and Kilaprince	1-1.0	1		
10/4/2024	Gasiter	Insecticide application - 20 oz/A Exirel and 5.8 oz/A Nu filmP	1-.5	0.5		
10/11/2024	Gasiter	Harvested and evaluated cabbage - 3rd harvest - 3708 and Report; 2nd harvest - Succesor and Kilaprince; and 1st harvest - Promise and Passat	1-1.0	1		
10/13/2024	Gasiter	trial received .9 inches of rainfall				
10/25/2024	Gasiter	trial received .1 inches of rainfall				

<b>Date</b>	<b>Project Leader</b>	<b>Description of Operation</b>	<b>Staff # &amp; hours</b>	<b>Total Staff hours</b>	<b>Seasonal Staff # and hours</b>	<b>Total Seasonal Staff hours</b>
11/6/2024	Gastier	trial received .4 inches of rainfall				
10/18/2024	Gastier	Harvested and evaluated cabbage - 3rd harvest - Kilaprince and Successor; 2nd harvest - Promise and Passat; 1st harvest - Atria and Typhoon	1-1.0	1		
10/25/2024	Gastier	Harvested and evaluated cabbage - 3rd harvest - Promise and Passat; 2nd harvest - Atria and Typhoon; 1st harvest - XCB 9355 and B3513	1-1.0	1		
11/1/2024	Gastier	Harvested and evaluated cabbage - 3rd harvest - Atria and Typhoon; 2nd harvest - XCB 9355 and B3513; 1st harvest - Adelco, Storidor and TCA-581	1-1.0	1		
11/8/2024	Gastier	Harvested and evaluated cabbage - 3rd harvest - XCB 9355 and B3513; 2nd harvest - Adelco, Storidor and TCA-581	1-1.0	1		
11/10/2024	Gastier	trial received .55 inches of rainfall				
11/14/2024	Gastier	trial received .8 inches of rainfall				
11/15/2024	Gastier	Harvested and evaluated cabbage - 3rd harvest Adelco, Storidoe and TCA-581	1-.75	0.75		
	Gastier	disked down trial	1-1.0	1		
<b>Total Staff Hours</b>				<b>64.25</b>		<b>37.25</b>

# 2024 Cabbage Dry Matter Weight

Sample Date	Variety	Wet weight (g)	Dry Weight (g)	% DM
8/23/2024	<b>Padoc</b>	39.12	3.62	0.0925
8/23/2024	<b>Padoc</b>	37.95	3.29	0.0867
8/30/2024	<b>Padoc</b>	53.48	5.55	0.1038
8/30/2024	<b>Padoc</b>	40.92	3.89	0.0951
9/6/2024	<b>Padoc</b>	55.6	3.98	0.0716
9/6/2024	<b>Padoc</b>	52.32	3.99	0.0763
9/13/2024	<b>3610</b>	32.38	3.3	0.1019
9/13/2024	<b>3610</b>	44.98	4.79	0.1065
9/13/2024	<b>Nixon</b>	36.23	3.55	0.098
9/13/2024	<b>Nixon</b>	36.04	3.62	0.1004
9/13/2024	<b>3503</b>	26.4	2.59	0.0981
9/13/2024	<b>3503</b>	34.55	3.47	0.1004
9/13/2024	<b>Bellicose</b>	28.93	2.48	0.0857
9/13/2024	<b>Bellicose</b>	43.75	4.34	0.0992
9/20/2024	<b>3738</b>	44.78	4.85	0.1083
9/20/2024	<b>3738</b>	46.64	5.73	0.1229
9/20/2024	<b>Cecile</b>	29.05	3.05	0.105
9/20/2024	<b>Cecile</b>	52.39	6.13	0.117
9/27/2024	<b>Quartz</b>	39.5	4.19	0.1061
9/27/2024	<b>Quartz</b>	32.86	3.55	0.108
9/27/2024	<b>XCB 2361</b>	35.35	3.69	0.1044
9/27/2024	<b>XCB 2361</b>	49.64	4.83	0.0973
9/27/2024	<b>Tobia</b>	37.3	3.64	0.0976
9/27/2024	<b>Tobia</b>	52.88	4.67	0.0883

## Cabbage Dry Matter Weight Con't

Sample Date	Variety	Wet weight (g)	Dry Weight (g)	% DM
10/4/2024	<b>3708</b>	42.38	4.48	0.1057
10/4/2024	<b>3708</b>	46.07	4.83	0.1048
10/4/2024	<b>Report</b>	49.35	5.11	0.1035
10/4/2024	<b>Report</b>	47.07	4.8	0.102
10/11/2024	<b>Kilaprince</b>	47.91	4.97	0.1037
10/11/2024	<b>Kilaprince</b>	28.77	2.83	0.0984
10/11/2024	<b>Successor</b>	40.45	4.39	0.1085
10/11/2024	<b>Successor</b>	36.1	4.01	0.1111
10/18/2024	<b>Successor</b>	43.17	4.56	0.1056
10/18/224	<b>Successor</b>	52.52	5.82	0.1108
10/18/2024	<b>Promise</b>	26.48	2.83	0.1069
10/18/2024	<b>Promise</b>	44.48	4.61	0.1036
11/8/2024	<b>Adelco</b>	62.48	6.28	0.10051
11/8/2024	<b>Storidor</b>	36.7	4.83	0.13161
11/8/2024	<b>Storidor</b>	42.65	5.21	0.12216
11/8/2024	<b>TCA-581</b>	35.12	4.33	0.12329
11/8/2024	<b>TCA-581</b>	41.73	5.11	0.12245