TECHMARK, INC

technology from the ground up

Pre-Harvest Chemical Maturity Testing and Evaluation

Techmark Laboratory Program

Storage preparation begins in the field with Pre-Harvest sampling.

Understanding your crops pre-harvest chemical maturity is a **powerful** metric to understanding storage potential.

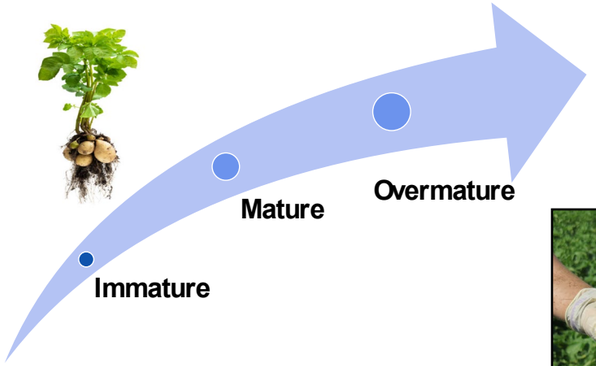
Better conditioning strategy
Better early storage ventilation management
Better storage outcomes

Techmark's sampling recommendations begin with **Pre-Harvest**

Field samples are our first look at the chemical maturity and storability of your crop. We start with a sample 3-weeks prior to scheduled vinekill or harvest. We finish with a sample at 1-week prior to vinekill or harvest.

The 3-week sample gives us an early measurement of the chemical maturity

The 1-week sample helps us understand how rapidly the crop has matured and a prediction of where it will finish.



How does chemical maturity impact my storage quality?

What does a sample consist of?

A representative sample is taken from each field. When the field has significant canopy or other agronomic variability we recommend taking multiple samples from selected locations within the field.

Your Pre-Harvest Sample Report will include -

- Sucrose and Glucose Ratings
- Canopy Vigor and Uniformity
- Specific Gravity
- Yield Related Data
- Custom Services

Chemical maturity is dependent on variety. Each variety has unique agronomic traits based on genetics. The grower and the storage management team use pre-harvest sugar values to undertand where the crop is prior to storage.

Techmark Pre-Harvest Panels --MI Potato Industry Commission
Field Name: MRC AF6671-10 -- Variety: AF6671-10
Sample Date: 8/26/2024 Client Field Code:

FIELD DATA-- CGDD

Canopy Rating	Canopy Uniformity	Number of Hills	Number of Stems	Sample_ID
0	100	6	18	53

TUBER COUNTS and WEIGHTS

Chip Potato	< 2 inch	< 3 inch	< 4 inch	≥ 4 inch	Unsized	TOTAL
Count					62	62
Weight (lbs)					13.505	13.505
Weight (kg)					6.126	6.126

LAB DATA

Pulp Temp.1 (F)	Pulp Temp.2 (F)	Pulp Temp.3 (F)	Count	Air Weight (g)	Water Weight (g)	Water Temp. (F)	Presence of Hollow Heart
74.1	73.9	74.5	30			71.4	no

Average Pulp Temp.	Specific Gravity Adjustment	Specific Gravity	Frito Lay Solids
74.2		1.102	20.70

Raw Glucose (g/L)	Raw Sucrose (g/L)	Glucose %	Sucrose (%x10)	GDD Plant to Panel
15	293	0.003	0.630	

Notes:

Techmark Potato Pre-Harvest Report
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By: Patrick Morris

YSI 2900 Bioanalyzer

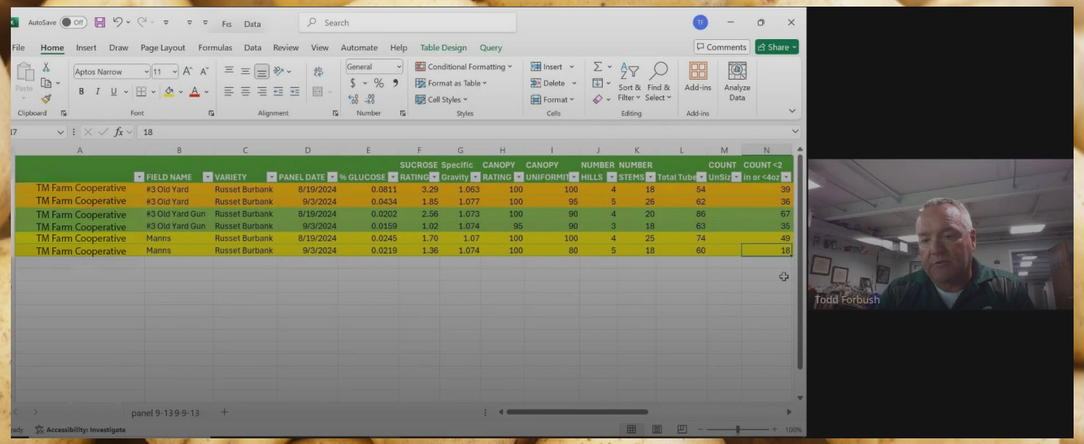
How will I use this data?

- Creating storage management plans
- Storage conditioning strategies by field
- Manage vine kill
- Anticipate storage challenges
- Combine similar maturity fields into the same bins to create better storage outcomes

Our Offer To You

We know Pre-Harvest Chemical Maturity Testing can bring value to your operation. **We offer a complimentary trial.** You get 2 pre-harvest samples processed and 1 consulting call to discuss the data. We understand that creating data is only part of the process and that interpreting the data is equally important - which is why we include a consulting call.

Our Techmark Consulting calls are managed by Todd Forbush. Todd will discuss the data from your pre-harvest samples, talk about how to apply the data to your storage crop and educate you and your team on applying the science to your storage management.



	FIELD NAME	VARIETY	PANEL DATE	% GLUCOSE	SUCROSE RATING	Specific Gravity	CANOPY RATING	CANOPY UNIFORMIT	NUMBER HILLS	NUMBER STEMS	Total Tube	COUNT UnSiz	COUNT <2 in or <4oz
TM Farm Cooperative	#3 Old Yard	Russet Burbank	8/19/2024	0.0811	3.29	1.063	100	100	4	18	54		39
TM Farm Cooperative	#3 Old Yard	Russet Burbank	9/3/2024	0.0434	1.85	1.077	100	95	5	26	62		36
TM Farm Cooperative	#3 Old Yard Gun	Russet Burbank	8/19/2024	0.0202	2.56	1.073	100	90	4	20	86		67
TM Farm Cooperative	#3 Old Yard Gun	Russet Burbank	9/3/2024	0.0159	1.02	1.074	95	90	3	18	63		35
TM Farm Cooperative	Manns	Russet Burbank	8/19/2024	0.0245	1.70	1.07	100	100	4	25	74		49
TM Farm Cooperative	Manns	Russet Burbank	9/3/2024	0.0219	1.36	1.074	100	80	5	18	60		18

How Do I Get Started?

Call our Lab Sales Manager at 517.322.0250
Email techmark@techmark-inc.com

Techmark's Laboratory Program

- Pre-Harvest Chemical Maturity Monitoring
- Storage Sugar Sample Management
- Techmark Consulting Services
- Techmark Approved Laboratory Network

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