

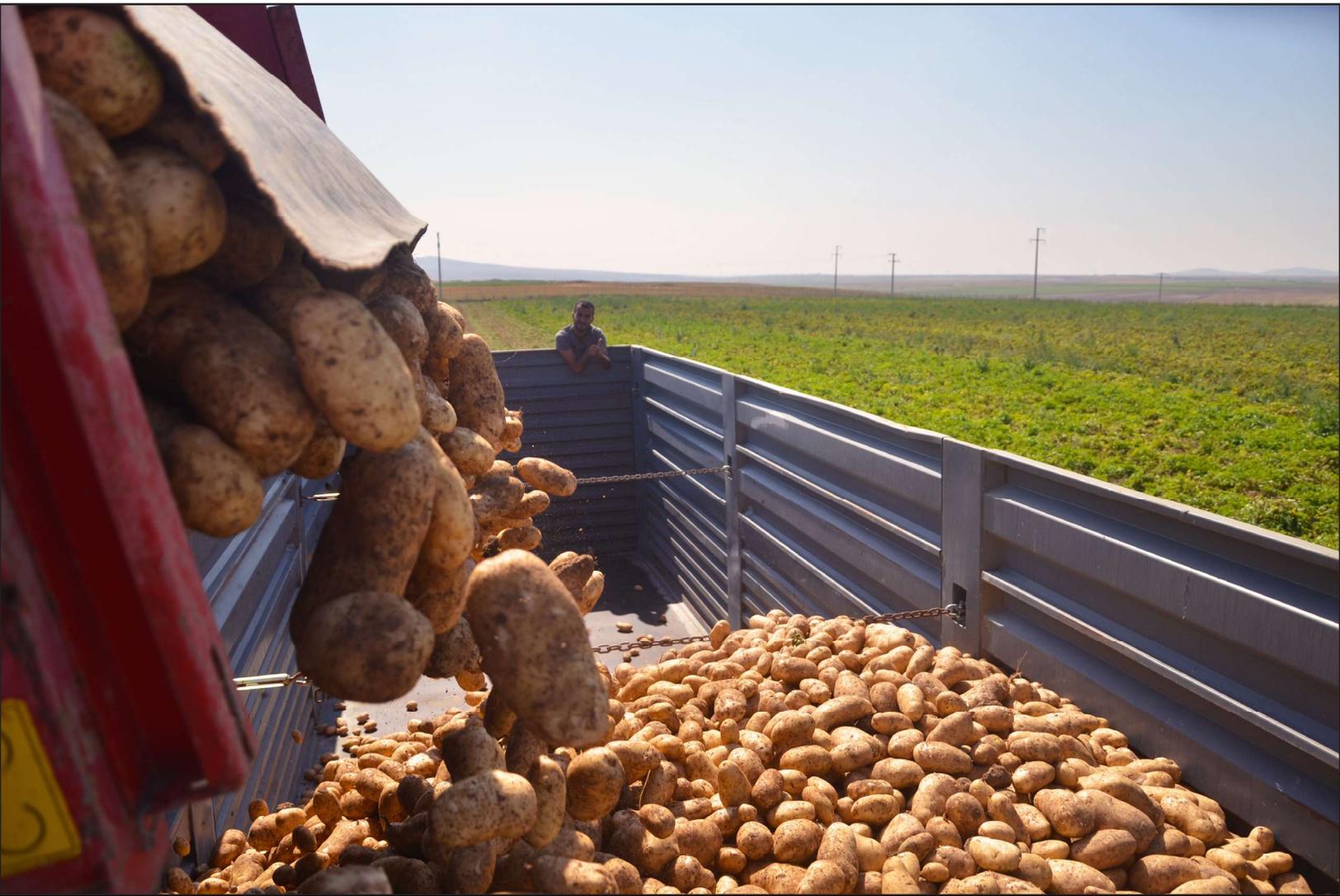


TECHMARK, INC

Technology from the ground up

Techmark Laboratory Services

Potato Chemical Maturity,
Process Quality Evaluation and Consulting



Products and Services



“Storage management is an essential function for every chip operation. Techmark provides a systematic approach to making storage decisions. For over 15 years we have had weekly calls with Todd to evaluate our storage quality, set shipping orders and develop management plans for challenged areas. Our multi-state network is able to collaborate and create a plan. Techmark consulting has become a valuable tool for us.”

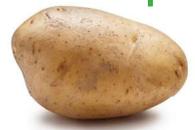
Steve Gangwish, CEO of CSS Farms

What is **Techmark's Laboratory Program?**

Techmark's Laboratory program for potato sugar monitoring and process quality evaluation is the leader in global storage monitoring. We work with growers, university programs, variety development trials, processors and other value chain stakeholders. With **Techmark Approved Lab Partners** across North America and the globe we offer a wide range of services for your organization.

Services-

- Pre-harvest tuber testing for chemical maturity, solids, and more.
- Storage sample testing for sugars and process quality
- Storage Management Consulting
- Techmark Approved Lab Partners



Introduced in 1992, Techmark's Laboratory Program has evaluated storage samples representing billions of CWT.



Techmark's sampling recommendations begin with Pre-Harvest

Field samples provide a snapshot into the chemical maturity of the crop. We start samples at 3-weeks and 1 week before scheduled vine kill or harvest. The 3-week sample is an early measurement of the chemical maturity. The 1-week sample provides an understanding of how rapidly the crop is maturing and a prediction of where the crop will finish relative to vine kill or harvest. Chemical maturity understanding is highly dependent upon variety. Each variety has different agronomic traits based on genetics. The grower will use this pre-harvest data to evaluate their intended storage plans, manage vine kill dates, predict storage challenges and manage the storage crop.

It's important to plan and schedule your pre-harvest samples with a local **Techmark Approved Laboratory**.

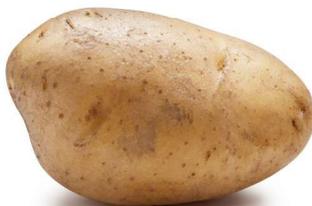
Your Pre-Harvest sample report will include:

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

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.

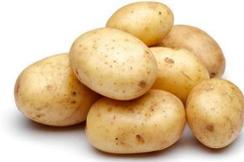
Techmark Pre-Harvest Panels -- HOME FIELD TM							
Field Name: MRC AF6671-10 -- Variety: AF6671-10							
Sample Date: 8/26/2030			Client Field Code: TMDEMO				
FIELD DATA-- CGDD 2080							
Canopy Rating	Canopy Uniformity	Number of Hills	Number of Stems	Sample_ID			
0	100	6	18	53			
TUBER COUNTS and WEIGHTS							
Chip Potato	< 2 inch	< 3 inch	< 4 inch	≥ 4 inch	Unsize	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	2080			
Notes:							
<small>Techmark Potato Pre-Harvest Report Copyright © 2030 - Techmark, Inc.</small>							



Pre-Harvest Chemical Maturity Testing and Evaluation

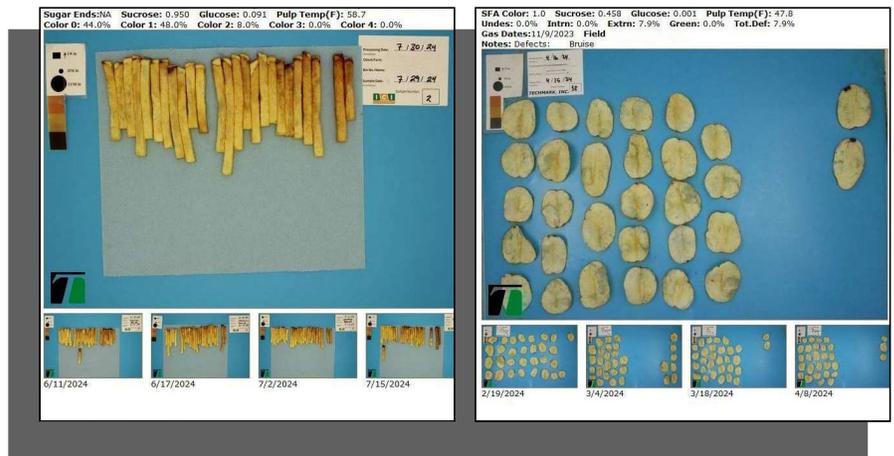


Storage Sugar Testing and Monitoring



Storage sugar testing should be done with a Techmark Approved Laboratory. We recommend bi-weekly sampling throughout the storage season. Sugar monitoring provides not only a current snapshot of your crops storage quality but creates a season long record with visualized trends. Sugar monitoring is a proven tool for your storage team. Storage managers will use sugar data to create higher quality storage outcomes and protect the investment you've already made in the field.

We use the same tubers for the sugar analysis as we do for the processed sample image. Using the same tubers ensures that the processed product accurately reflects the sugar data. Single tubers with high concentrations of reducing sugars can affect the data and how its interpreted for storage management. This is why we always use the same tissue for all testing.



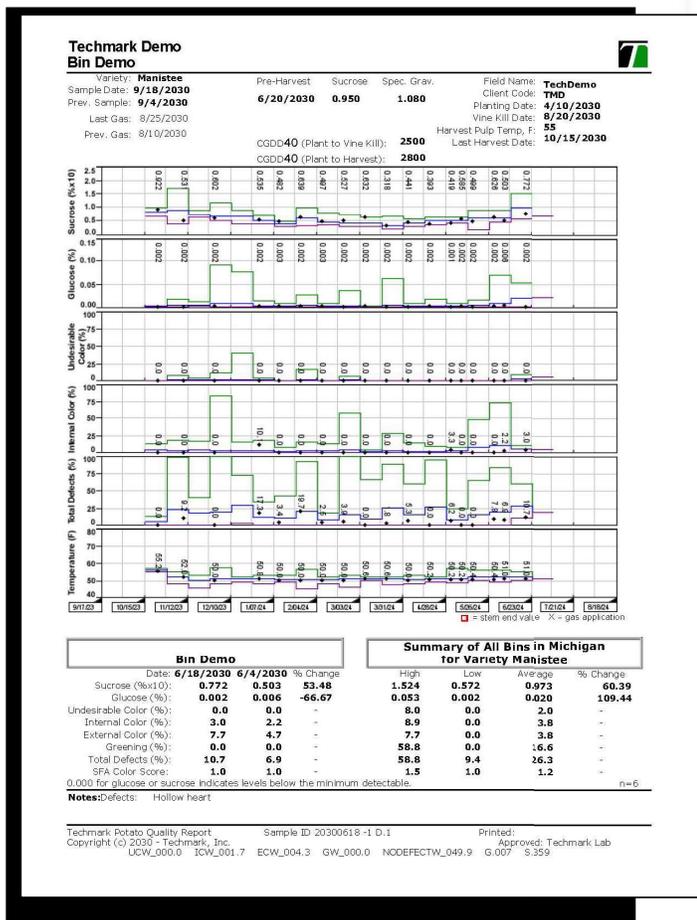
Users with access to Techmark's Stor-Trac platform for their storage ventilation system can manage all of their data in a single platform including lab data. This ties the entire storage environment together for your team!



Sucrose

Your **Storage Bin Report** will show not only the most recent sample data but also the entire storage seasons data for visualized trends and performance.

- **Sucrose and Glucose Data**
- **Bin Temperature**
- **Defect Scoring**
- **Regional data by Variety**
- **Preharvest Data for Reference**
- **Image of Processed Sample**



“Techmark has helped our farm become better Storage Managers. We are learning to anticipate the needs of the storage using Techmark’s lab data and consulting services. Collaboration has been a game changer.”

Chase Young,
Sandyland Farms - MI



Maintaining quality throughout the storage season is **Job #1**

You've made the investment. Now you need to protect the quality you worked so hard to achieve in the field. We can protect the quality you've created by intentional storage management. Whether you have 1 bin or 100 in your Storage Management Program we offer a consulting service that is tailored to meet your need and deliver the highest return on your storage crop.

What will we review during a consulting call?

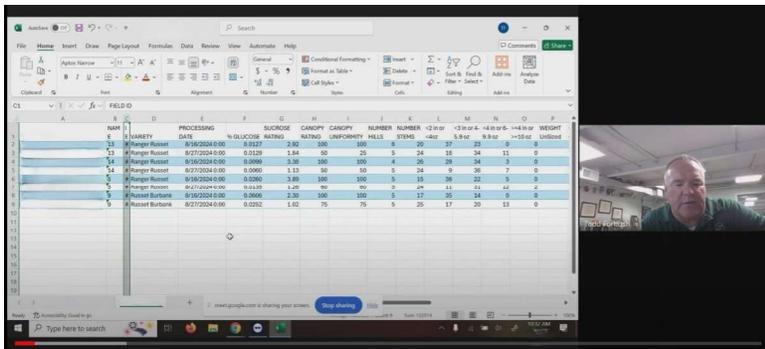
- Review of storage sugar samples and storage performance
- Discussion on what your seeing in the bin
- Current temperatures in the bin, and outside environment
- Continous evaluation of your storage goals and how your bins match best to reach those goals.
- Strategies for warming and conditioning schedules to meet shipping demands
- Varietal storage traits and what to expect
- Hot spots and how best to manage them
- Fan run times and energy management

Who would benefit from Techmark Consulting?

Anyone with a crop in storage will benefit. Our consulting is tailored to fit your goals. We work with growers, breeders, agronomists, processors and other industry members. We work with large, multi-state operations and smaller single location producers looking for better storage outcomes.

- Regularly scheduled calls during the storage season
- Consulting fees based on CWT and number of bins
- Video and phone consultation available
- Evaluate storage ventilation performance

Consultations done by video with sample data evaluations



Techmark Consulting Storage and Processing Quality

I highly recommend Techmark consulting. Through a learning process over regularly scheduled calls we were given the confidence to significantly reduce our fan run times, whilst still providing sufficient air when it was needed. This led to immediate energy savings and an improvement in our potato quality. Techmark's knowledge and experience make them a valuable asset"

Michael Davie, North Paddock Farms, Alberta Canada



Techmark Approved Laboratory Program



Techmark Approved Laboratories

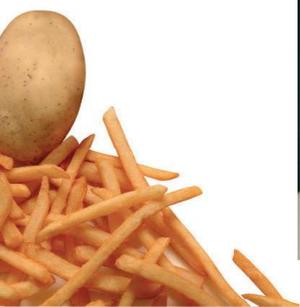


Techmark's Approved Laboratory Program, or TALP, is a global Laboratory partnership to offer potato sugar and process quality testing in production regions. Our network of laboratory partners extends throughout North America as well as limited international locations.

A Techmark Approved Lab can be setup in a variety of models.

- Private lab for on-farm use only
- Local lab for multiple growers and potentially other industry partners such as trial managers, processors and breeders. We've opened this type of lab with agronomists, growers and processors.

Wondering if a TALP is a good fit for your operation?
Give us a call at 517.322.0250



How do I start a TALP?

1. Contact Techmark to discuss if a TALP is right for you. We can help you evaluate start up and operational costs to determine if the opportunity is right for you.
2. With our support - identify space, equipment, staffing needs, and other logistics
3. Onsite training from Techmark includes review of SOP's, sample processing training, data entry and management
4. Become a TALP certified lab! Techmark remains a partner throughout our relationship.

“Our goal is to have potato sugar testing accessible to every grower storing potatoes. The value of testing and monitoring potato sugars in storage has a direct impact on quality and sustainability for the entire value chain.”

David Carpenter, Techmark Laboratory Sales Manager



How does Techmark support my operation?

Techmark will be a partner throughout the life of your lab. Your success is our success.

- Monthly check samples for your laboratory to ensure consistency
- Cooperative advertising of your TALP if appropriate
- Monthly reviews of your data reports
- A phone call away for operational support
- On site training and support is available





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