FARMER FREEMAN

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Pathogen Diagnostic Report

TMV

CUSTOMER NAME
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COMPANY / ORGANIZATION
Farmer Freeman

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REPORT DATE
October 15, 2026

RUN DATE
October 15, 2026

DATE OF LAB RECEIPT
October 14, 2026

Diagnostic Results

Sample ID	Strain	Nickname	Sample Type	TMV	IC
VT00001	Chemdawg	CD-A01	Root + Leaf	NOT DETECTED	PASS 25.10
VT00002	Banana Kush	BK-B02	Root + Leaf	NOT DETECTED	PASS 24.70
VT00003	Northern Lights	NL-C03	Root + Leaf	DETECTED 25.90	N/A 23.80
VT00004	Jack Herer	JH-D04	Root + Leaf	NOT DETECTED	PASS 25.30
VT00005	AK-47	AK-E05	Root + Leaf	NOT DETECTED	PASS 24.90

- DETECTED — Pathogen present; IC not required for detection
- NOT DETECTED — No pathogen signal; IC valid
- UNDER ANALYSIS — IC failed; being retested, ready in 1–2 business days
- Lower Cq values typically correlate with a greater pathogen load in the sample.

Interpretation Summary

! **Pathogen Detected**

One or more samples tested positive for: **TMV**. Immediate action is recommended. Isolate affected plants and equipment. Do not take cuttings from positive plants. Sanitize tools between plants. Contact a cultivation advisor to develop a remediation plan.

About the Pathogens Tested

Tobacco Mosaic Virus (TMV)

Channel: FAM **Type:** Virus **Threshold:** Cq < 35

Tobacco Mosaic Virus (TMV) is a highly stable tobamovirus that can infect cannabis, causing mosaic discoloration, leaf distortion, and chlorosis. TMV spreads readily through mechanical contact — contaminated hands, tools, and clothing — and can persist on surfaces for extended periods.

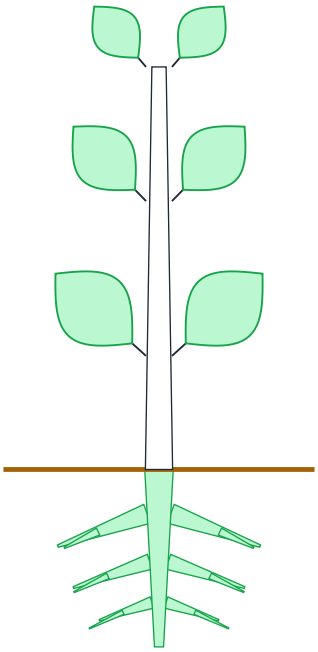
Methodology

This report utilizes quantitative reverse transcription PCR (RT-qPCR) performed on an Agilent AriaMX Real-Time PCR instrument. Nucleic acids are extracted from plant tissue using a validated extraction protocol. Each reaction includes an internal extraction and amplification control (IC/HEX channel) to confirm assay validity. A Cq threshold of 35 cycles is applied for most targets (40 cycles for Russet Mite): samples with Cq at or below threshold are reported as Detected. Samples with Cq between 35 and 40 cycles are also reported as Detected when the IC Cq is below 35, confirming assay validity. A positive target result is reported as Detected regardless of IC status. Wells with no target signal and a failed IC are reported as Under Analysis and will be retested by the laboratory.

Questions? Contact support@farmerfreeman.com or call 202-697-7640. Submit new samples at www.farmerfreeman.com.

VT00001

Chemdawg
CD-A01



No pathogen detected
Pathogen detected
Not tested

PANEL
TMV

SAMPLE TYPE
Root + Leaf

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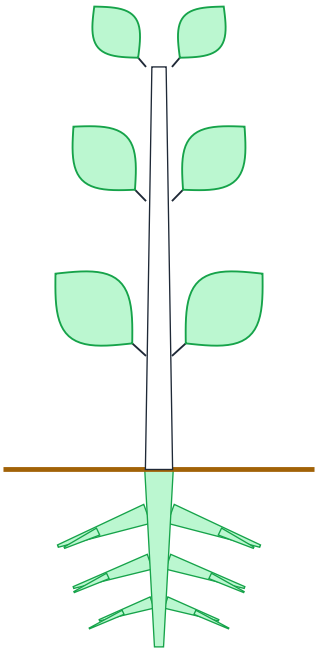
Results

TMV	**NOT DETECTED**	No Cq
Internal Control (IC)	**PASS**	Cq 25.10

VT00002

Banana Kush

BK-B02



No pathogen detected
Pathogen detected
Not tested

PANEL
TMV

SAMPLE TYPE
Root + Leaf

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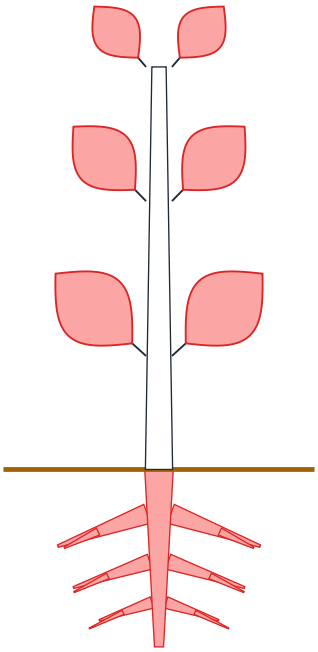
Results

TMV	**NOT DETECTED**	No Cq
Internal Control (IC)	**PASS**	Cq 24.70

VT00003

Northern Lights

NL-C03



No pathogen detected
Pathogen detected
Not tested

PANEL
TMV

SAMPLE TYPE
Root + Leaf

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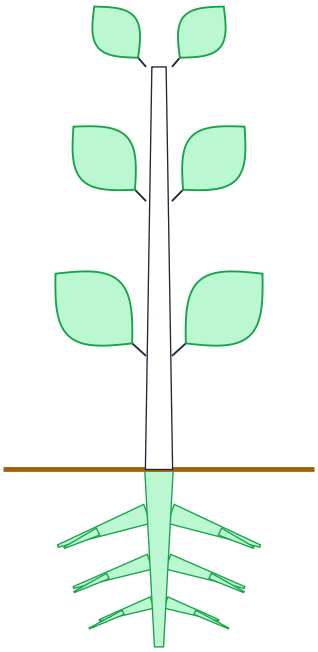
Results

TMV	**DETECTED**	Cq 25.90
Internal Control (IC)	**PASS**	Cq 23.80

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VT00004

Jack Herer
JH-D04



No pathogen detected
Pathogen detected
Not tested

PANEL
TMV

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Root + Leaf

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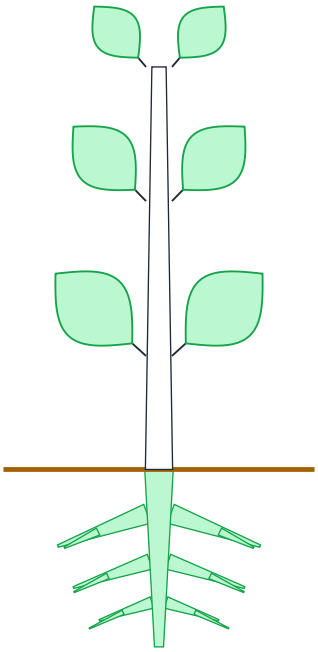
Results

TMV	**NOT DETECTED**	No Cq
Internal Control (IC)	**PASS**	Cq 25.30

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VT00005

AK-47
AK-E05



No pathogen detected
Pathogen detected
Not tested

PANEL
TMV

SAMPLE TYPE
Root + Leaf

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RUN DATE
October 15, 2026

Results

TMV	**NOT DETECTED**	No Cq
Internal Control (IC)	**PASS**	Cq 24.90