



# Manual Test Execution Report

AI Crop Disease Detection System | STQA Project

## Execution Summary

Metric	Details
Test Lead	Muhammad Taha
Project	AI Corp Disease Detection
Execution Date	January 17, 2026
Total Test Cases	25
Passed	25
Failed	0
Pass Rate	100%
Coverage	95%

## Detailed Test Execution Matrix

ID	Module	Scenario	Steps	Expected Result	Result
TC-01	UI/UX	Application Launch	Open app from icon	Splash screen → Dashboard	PASSED
TC-02	IoT	Sensor Data Display	Navigate to Sensors	Real-time Temp/Hum/Soil data	PASSED
TC-03	IoT	Manual Refresh	Click refresh icon	Force latest cloud data update	PASSED
TC-04	Data	Historical View	Open History tab	List of past 50 readings	PASSED
TC-05	Core	Camera Capture	Click camera button	Stable image preview window	PASSED
TC-06	AI	Disease Analysis	Upload leaf photo	Detected name + Confidence %	PASSED
TC-07	AI	Invalid Input	Upload non-leaf img	"Not a plant image" error	PASSED
TC-08	System	Performance	Upload 20MB file	Auto-handling / Error notice	PASSED
TC-09	Data	Predict History	View past analyses	List of identified diseases	PASSED
TC-10	Chatbot	English Support	Ask crop advice	AI response in English	PASSED
TC-11	Chatbot	Urdu Support	Ask in Urdu text	AI response in Urdu text	PASSED
TC-12	Utils	Text Translation	Use translate tool	EN text → Urdu conversion	PASSED
TC-13	IoT	ESP32-CAM Upload	Trigger capture	Image sync to Cloudinary	PASSED
TC-14	IoT	Remote Feed	View latest cam	Show most recent IoT photo	PASSED
TC-15	API	/health Check	Call backend API	Status 200 OK	PASSED

ID	Module	Scenario	Steps	Expected Result	Result
TC-16	API	/status Check	Call model status	Returns "Model Loaded"	PASSED
TC-17	API	Ping Latency	Request /ping	Fast response (<200ms)	PASSED
TC-18	Core	Offline Support	Toggle No Internet	Data served from local cache	PASSED
TC-19	Cloud	Firebase Sync	Update sensor node	Immediate Dashboard sync	PASSED
TC-20	Alerts	SMS Notification	Soil Moisture > 2800	Receive emergency SMS alert	PASSED
TC-21	Social	WhatsApp Bot	Send "reading"	Auto-reply with sensor data	PASSED
TC-22	i18n	Language Toggle	Click EN/UR btn	Instant UI language swap	PASSED
TC-23	Themes	Dark Mode Sync	Toggle Dark Mode	Full UI theme color inversion	PASSED
TC-24	IoT	Serial Stream	Plug ESP32 via USB	Data stream to local console	PASSED
TC-25	Backend	Load Handling	100 concurrent reqs	All requests handled safely	PASSED

## Final Verdict

### STATUS: APPROVED FOR PRODUCTION

Integrated testing across IoT, AI, and Manual workflows confirms the system is stable. All major navigation paths and core functionalities perform according to specifications with zero critical gaps identified during manual execution.