

Sugarcane Farm Manager: A Free Digital Records and Intelligence Platform for the Philippine Sugar Industry

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ABSTRACT

Philippine sugar producers — from smallholder families to commercial block farms — manage their operations the same way they did thirty years ago: by memory and handwritten notes. No farm management tool was built for this market. Every serious platform available targets large commercial operations in Australia or North America, requires stable internet, and carries a cost structure that makes adoption unlikely across most of the Philippine sugar belt.

Sugarcane Farm Manager (SFM) is a free progressive web app built specifically for Philippine conditions. It runs offline on any Android or iPhone browser, stores all data on the device first, and syncs to the cloud when a connection is available. No download and no account are required to start. The platform is in active use across farms in Negros Oriental and is designed to scale from a single two-hectare plot to a multi-block commercial operation without changing the interface or the cost.

SFM covers the full production cycle. On the field side: GPS-traced boundary mapping, 12-stage growth tracking with days-in-stage counters and harvest window estimates, per-variety agronomic guidance across the VMC, Phil, and PSR families matched to the farmer's logged soil type, and a soil moisture status that automatically corrects against live rainfall data. On the financial side: daily labour and expense tracking in Philippine pesos with per-hectare breakdowns and category charts. On the pest side: a nine-pest reference database with symptom-based identification, GPS-pinned community outbreak mapping, and a declaration system that attaches a photo, reads its embedded GPS data, and flags whether the photo was taken within 3 km of the declared field — producing a timestamped, location-verified record for SRA or DA validation teams. This feature was built directly in response to the 2026 RSSI outbreak in Negros, where 17,125 hectares were reported affected but only 1,571 validated as of late July due to field-staff capacity constraints. A georeferenced digital declaration changes that equation.

The harvest and quedan cycle is now fully integrated. Farmers log haul tickets per truck or train bucket as cane leaves the farm, enter the mill's quedan figures — CCS, LKG farmer share, and sugar class — when they come back, and see revenue and sugar content charted by field across the season. Read-only Farm View Links let cooperative managers and mill-side agronomists access a farm's live records without login credentials, and without any ability to alter the data.

SFM is free, requires no specialist hardware, and works where mobile data does not. It gives any producer — and the industry bodies that serve them — a verifiable digital record of what happened on a specific farm, on a specific date, that exists before anyone comes to look.

PROPOSED SESSION

Technical Presentation, 20 minutes

PRESENTER

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