



Agrisoft Systems NEWSLETTER

Fifty-eighth edition, Jul.— Sep. 2026

Message from the Management

News from Agrisoft Systems

Dear Customers and Friends,

The past three months have largely been a continuation of the work we have been doing throughout this year, with ongoing development of our new OMP Mill application remaining one of our main priorities. We have made good progress in implementing the first data analysis forms, charts and reports, initially focusing on bunch grading. Much of the work has involved developing the general functionality needed for data analysis, such as global and local filtering, exporting data to Excel and generating printed reports. While progress has been somewhat slower than we had originally hoped, this is largely due to the new programming language and technology we are using for OMP Mill. Many of the general functions that we already have in OMP Plantation need to be developed again from scratch. On the other hand, the new technology also offers many possibilities that were difficult or impossible to implement with our existing software. With much of this groundwork now completed, we are moving forward with implementing data analysis functionality for bunch analysis and mill losses monitoring.

Another project that we have been working on is the development of a web service for transferring OMP Field Survey data. The programming work on this new functionality has now been completed, and it will provide a much more flexible way of transferring survey results from exter-

nal applications and systems into OMP. The main feature article of this newsletter provides a more detailed preview of this new functionality and its potential applications.



Besides these projects, we have also started work on a major redesign of the way daily production and harvesting data is recorded in OMP Plantation. Production data is obviously amongst the most important information captured in OMP, and it is used in the vast majority of data analysis forms and reports. The planned changes will represent the biggest overhaul of production data recording since we first introduced the OMP Harvest Round Recording (HRR) add-in around 15 years ago.

One of the most important changes will be to separate the recording of harvesting activities from the recording of crop deliveries to the mill. At present, these are largely handled together in OMP HRR, although in practice harvesting and crop collection are two separate activities, often carried out by different teams and sometimes even on different days. In the new system, harvesting records will capture the number of bunches and amount of loose fruit harvested by each harvesting team, block and date, while crop deliveries to the mill will be recorded separately. Besides reflecting the actual field operations



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more accurately, this will allow us to reconcile the quantities harvested and delivered, providing valuable information on crop remaining in the field and the average time between harvesting and collection.

As part of this redesign, we also plan to integrate the data analysis and reporting functionality currently provided by the OMP HRR add-in into the main OMP DBMS application. Since these changes affect the underlying data structure as well as the data entry and recalculation processes of one of the most fundamental parts of OMP, they re-

quire careful planning to ensure that everything continues to work together correctly. We have therefore spent considerable time over the past months working through the requirements and mapping out the necessary changes in detail, and are now beginning the actual development work. We expect this project to occupy a significant part of our development efforts over the coming months.

Warm regards,

Max Kerstan





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Feature

Simplifying FS Data Transfer with A Web Service

Collecting accurate field data is an essential part of plantation management. With OMP-FS, surveyors can use the FS Mobile App to collect standardized field information directly in the plantation. However, collecting the data is only one part of the process. The survey definitions need to reach the FS Mobile App before the survey, and the completed survey results need to be transferred back to the main OMP database afterwards for further analysis in the main OMP application.

Until now, this data exchange has been handled

with a file-based system. Before a survey, the latest survey definitions are exported from the OMP desktop application and transferred to the surveyor's mobile device, typically by email or manual file transfer. The surveyor then imports the definitions into the FS Mobile App. After the survey is completed, the results are exported from the FS Mobile App as a file and sent back to the computer running the main OMP application. The file is then imported before the results can be processed further.

While this method provides a way to exchange the required data, it involves several manual steps and file handling. The new web-service data-transfer system provides a more direct way for the FS Mobile App and the backend to exchange relevant data. A custom REST API which we refer to as the web service has been developed for the FS Mobile App, allowing data to be transferred directly to and from the backend. The data is transmitted using TLS (Transport Layer Security), providing secure communication between the app and the backend.

A Simpler, More Reliable Way to Transfer Data

The difference between the two approaches can be seen in the overall workflow.

Existing file-based process

For definitions: OMP FS desktop application → Export data definitions to file → Transfer file →

Figure 1. REST API settings menu



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Import data into FS Mobile App

For survey results: OMP FS Mobile App → Export results to file → Transfer file → Import data in OMP FS desktop application → Data committed to main OMP database

New web-service process

OMP FS Mobile App ↔ REST API ↔ OMP database

With the new system, the Survey App can retrieve survey definitions from the backend and send completed survey results through the REST API. This removes the need to repeatedly export files to transfer information between the field and the OMP environment. There is also no need for the OMP operator to do any manual exporting, importing or sending of definitions or results files as the web service handles any pull or push requests sent from the mobile devices.

The new system also takes network conditions into account. If a connection is interrupted during a transfer, the application will attempt to reconnect several times before reporting an error. The transfer can also resume from the last position reached before the connection was lost. This is particularly useful for field surveys, where a stable connection cannot always be guaranteed, or when transferring large data sets such as definitions of predefined palm points. By replacing repeated file exchange with a dedicated web service connection, the new approach provides a more direct, secure and resilient way of moving field survey data.

How the new system works and core requirements

The new system consists of two main parts: the REST API web service and the updated FS Mobile App.

The web service is basically a service application that listens and responds to HTTP requests via a particular network address and port. Of course the web service must also connect to the OMP SQL Server database to be able to retrieve or insert the requested data. The web service could run on the same physical machine that is also hosting the OMP SQL Server database but it could also be on a different machine as long as it is able to connect to the SQL Server over the network. The key requirement is that the mobile devices must be able to send HTTP requests to the web service. This means either the web service must run on a machine with a public IP, or the mobile devices must connect to its network via some kind of VPN tunnel.

Once installed and configured with a back-end connection as described above, the web service provides the functions required for the FS Mobile App to communicate with the main OMP backend database. This including retrieving survey definitions, receiving survey results, and handling user authentication and authorization. This will be described in more detail in the following, however of course please note that the current file-based system for transferring data remains available for users who don't want to or can't use the web service approach.



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For a fresh installation of the FS Mobile App, when opening the app for the first time the user needs to load the OMP FS definitions stored in the backend, including the list of authorized surveyors. In the past this would mean having to obtain and load an OMP FS definition file. From now on the main welcome page of the app has a new “Load definitions from web service” button that you can use to access the REST API settings page (see Figure 1). Here, you can enter the connection details for the REST API hosted on the local server, including the URL, port and login credentials. Once the connection has been configured, you can select “Load definitions” to retrieve the latest field survey definitions and relevant surveyor information directly from the backend.

Apart from the initial setup on a new device, surveyors may also make a habit of synchronizing their mobile devices before going into the field to make sure they are working with the latest definitions available in the database. For this purpose the “Load definitions” screen can also be opened from the app main menu after logging in. By default, the system will intelligently attempt to transfer only the new changes that were made in the OMP backend since the last time you loaded definitions. This is to avoid unnecessarily transferring large amounts of unchanged data such as the definitions of all predefined palm points. If desired, you have the option to explicitly force a full reload. Note that the request for definitions synchronization is initiated by the surveyor and completely handled by the web service, so there is no need for the OMP op-

erator to repeatedly export definitions files and distribute them manually to individual surveyors. The process for transferring data from a completed survey is similarly streamlined. When you are ready to send the survey results to the backend you can click the new “Send/Export” button. This will take you to a page where you can transfer the survey results by clicking the button “Post data to web server” (Figure 2). Of course you can also export or send the results in file form if you prefer to stay with the previous system.

← Send/export results

Select survey results:

☒ All new results

☐ Results with survey dates

between 10/2/2026

and 10/2/2026

Include results already exported ☐

Results selected: 1

File name: OMP_FS_results_20261002_dummy01.fsr

Post data to web server

Figure 2. Page for transferring survey results

The survey results are then transferred by the web service to the OMP backend, where they are initially stored in a staging table. This provides an opportunity to validate the data before it is imported into the main backend table.



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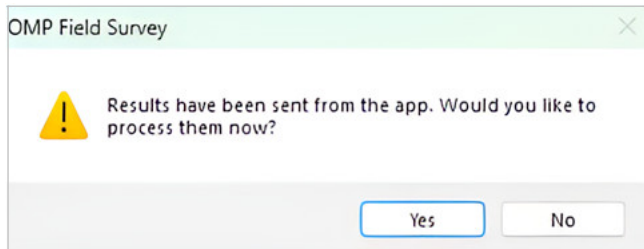


Figure 3. Notification indicating that new survey results are available

When new web service results are available, you receive a notification in the OMP FS frontend. You can then open the updated import table, review the validation results and handle any invalid data as necessary. Once all results have passed the validation checks, they can be imported into the main survey results data tables before the database is recalculated. A new “Import web service results” option is also available from the FS frontend main menu to start this validation and import process.

This means that the new system changes the way data is transferred without removing the existing validation step. Survey data can move through the web service, while you still retain control over checking and importing the results before they become part of the main table of survey results.

In summary, the new web service data transfer option greatly simplifies the daily data sharing with the OMP Field Survey both for the surveyors and the main OMP operator. It almost entirely eliminates manual tasks relating to importing and exporting definitions or results files, while at the same time retaining the existing data validation logic for new results. Furthermore, data is transmitted securely using TLS rather than being exchanged as an unsecured plaintext file, while built-in retry and resume capabilities help prevent an interrupted connection from forcing the transfer to start again.





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From the developers desk

A selection of the on-going developments and plans which are part of our constant efforts to continue to improve Agrisoft products.

OMP Mill

- New module focusing on oil yields, oil extraction rates and milling losses
- Standalone WPF application independent of Microsoft Access
- Overall OER monitoring by comparing oil output to FFB harvest
- Recording of mill loss rates at different stages of the milling process via direct measurement of losses
- Control charts and monitoring tools for mill losses
- Bunch analysis results for individual sample bunches for OER benchmark
- Bunch grading (e.g. ripe, underripe, overripe bunches) at mill ramp
- Correlation of different results with each other and where possible with other field/block parameters e.g. palm age, planting material, seasonality
- Development over time of bunch ripeness, potential and actual OER and mill losses

General Improvements

- Additional fields for BMP status and irrigation status
- Manual evapotranspiration entry setting by weather station
- Daily recording of fertilizer and pesticide application
- Data analysis on projected yield to end of year at more grouping levels
- Execute passthrough queries in OMP QW
- Additional OMP GIS maps
- Improved data analysis for resource use rates
- New reports for leaf nutrients versus critical and optimal leaf nutrient levels
- Data analysis form for upcoming scheduled re-planting areas
- Web service data transfer between OMP Field Survey app and add-in
- Cost estimate from field work resource budget

Production data recording

- Separate tables for harvesting data recorded in the field and for crop delivered to the mill
- Integration of all daily production and harvesting data into main OMP DBMS application
- Replacement for OMP HRR add-in
- Legacy support for monthly data entry and importing for existing customers
- More detailed information on crop deliveries including truck information
- Reconciliation of bunches harvested vs delivered
- Estimation of crop remaining uncollected in the field
- Recording of labour use related to harvesting and crop transport within general resource use module
- Increased support for server-side recalculation and query computation