



Agrisoft Systems NEWSLETTER

Forty-fourth edition, Jan. — Mar. 2023

Message from the Management

News from Agrisoft Systems

Dear Customers and Friends,

Over the past three months, the main focus of the Agrisoft development team has been on the next OMP version, OMP Plantation 10.3. This version is now in the final testing stage and almost ready for release, and we are excited to share some of the key features and improvements with you in this newsletter.

The OMP Plantation 10.3 release has three main areas of focus. One of these is the OMP-BBC module for black bunch count crop forecasting. We have made significant improvements to this module, which will allow our customers to make more accurate crop forecasts and better plan their operations. The new version will allow for far more flexibility in setting the assumptions that go into the crop forecast calculation, in particular relating to the expected distribution of the crop over the coming four months and the average bunch weight used in the production forecast. To complement this, we have also made improvements to the data analysis side and in particular improved the features to compare forecast and actual production.

In addition to the improvements to the OMP-BBC module, we have also introduced a new setup system that allows for the handling of multiple OMP site licenses within a single installation. This feature is particularly helpful for larger groups with central servers hosting OMP for multiple sites and users. With such a single instance installation, the regular tasks required to maintain the OMP system such as handling of version upgrades or management of shortcuts for users be-

comes much easier for the IT team.

The third major change is that we have integrated the recording and reporting on pesticides, which used to be in the OMP-PM add-in, into the main OMP-DBMS application. In this context we have recoded and improved all the pesticide data analysis forms and reports and integrated the pesticide data into the standard OMP import from Excel functionality. This integration is part of a larger project for future versions, related to standardizing and improving the recording of all field work tasks such as fertilization, weeding, pruning etc.



Besides the new development, as always we have been working closely with our customers to help them get the best out of OMP. For new customers, we closely accompany them throughout the implementation process, help plan the IT setup and support preparation of historical data for input into OMP. For existing MUA customers, typical support includes help fixing data errors, handling of bug reports and providing patches if required, advice regarding data analysis and support writing custom queries for data extraction, and taking requests for future feature additions.

Yours sincerely,

Max Kerstan



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Preview: OMP Plantation 10.3

In this article, we provide a preview of some of the changes and additions that you can look forward to in the next upcoming release OMP Plantation 10.3. As usual, our customers with active maintenance and upgrade agreements (MUAs) will receive this version upgrade at no additional cost.

The new release contains improvements relating to various different parts of the OMP Plantation software. A big change which will be relevant for pretty much all OMP users is that the recording and reporting on pesticide application and usage, which was previously handled in the OMP-PM add-in, has now been integrated into the main OMP-DBMS application. This reflects the fact that chemical weeding and pest control is a standard field upkeep practice at the vast majority

of oil palm plantations, while it is obvious that monitoring of and tight control over the application of toxic pesticides is very important from a sustainability perspective.

Although much of the data that the pesticide data analysis forms and reports show could already be seen in the past in the OMP-PM add-in, there are still many improvements in the new version. Most immediately obvious is the fact that the forms and reports have been visually redesigned to fit in with the rest of OMP-DBMS, and that there are more options for grouping levels and display parameters. More importantly, all the underlying code to query the data has been completely rewritten in order to provide far better speed and responsiveness. Pesticide data is now also included in the normal importing from Excel

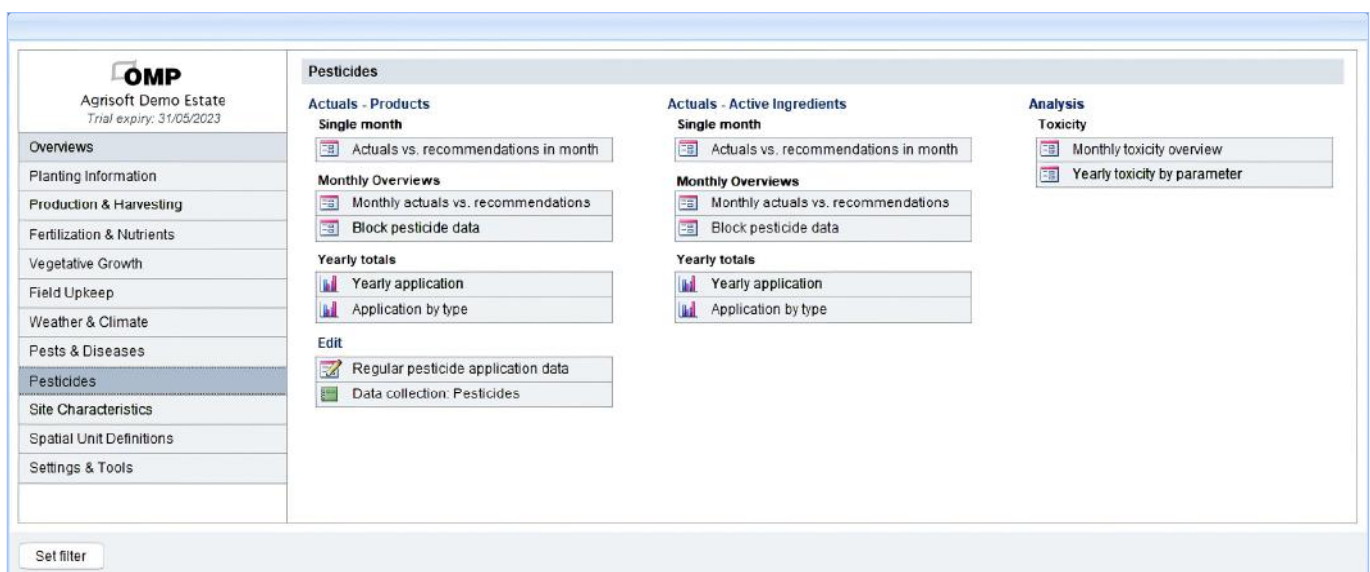


Figure 1: New pesticides menu in OMP-DBMS.



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Group by: Estate	Include: All pesticide application							
Subgroup by: Pesticide	All pesticide application Regular programme only Pest/disease control only							
	Total	Jan	Feb	Mar	Apr	May	Jun	Jul
Act.	1.14	0.06	0.08	0.08	0.10	0.11	0.17	0.04
Rec.	1.30	0.13	0.01	0.03	0.22	0.03	0.23	0.09
Diff.	-0.16	-0.07	0.07	0.05	-0.13	0.08	-0.06	-0.05

Figure 2: Restriction and grouping options on a pesticide data analysis form.

system, which in particular means better data verification and clearer messages to the user when data is rejected for any reason.

In OMP Plantation 10.3, we differentiate between “regular” pesticide application and corrective pesticide application for the control of pest outbreaks. Regular application refers to anything which is applied according to a pre-planned schedule. Of course, most regular pesticide application is done in the context of chemical weeding using herbicides, but it could also include a preventive application of pesticides to prevent pest or disease outbreaks. All the pesticide data analysis forms and reports in OMP Plantation 10.3 have the option to restrict to either the regular or the pest and disease control application (see figure 2).

Besides the direct benefits mentioned above, an important technical reason why we decided to carry out the integration of the pesticide data at this time is in preparation for the more comprehensive field work and resource use module that

we are working on. This module will contain a unified system for planning and capturing the tasks and resource usage associated with all field work tasks in an oil palm estate. This in particular includes regular fertilizer application and weeding, and it is far easier to ensure data consistency if everything is handled within the DBMS application rather than being distributed in separate add-in programs.

The other part of the OMP Plantation suite with major changes in version 10.3 is the OMP-BBC add-in for black bunch count crop forecasting. Roughly speaking, the crop forecasting algorithm is based on three independent pieces of input data: the actual number of black bunches counted in the field, an estimate of the expected distribution specifying which proportion of the crop will be ripe in each of the next 4 months, and finally the forecast bunch weight to forecast the output in tons. While previous versions of OMP-BBC already provided complete flexibility in entering the black bunch count data, the other two factors could be controlled only with general



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DE Form 1.01.1: Select year

General settings Monthly distribution Bunch losses Block assignment overview Assign BBC survey blocks Assign child blocks

Select active year Year 2023

Priority		Crop distribution by BBC survey month [%]												Description
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
1	Month+1	24.4	26.4	26.9	26.9	24.7	23.2	23.5	24.5	25.7	25.2	24.8	24.0	Planting material ASD
	Month+2	25.8	25.7	26.1	24.6	23.9	24.2	24.9	25.7	25.0	25.1	24.2	24.6	
	Month+3	25.2	25.0	23.9	23.8	24.9	25.7	26.1	24.9	25.0	24.5	24.8	26.0	
	Month+4	24.5	22.9	23.1	24.8	26.5	26.9	25.4	24.9	24.3	25.2	26.3	25.4	
Default	Month+1	26.0	22.1	24.0	25.5	28.3	27.4	27.6	24.5	24.9	24.9	26.5	22.3	Default distribution
	Month+2	26.0	24.6	25.3	26.9	25.5	26.4	24.1	24.5	24.9	26.9	22.9	23.9	
	Month+3	25.0	26.0	26.7	24.2	24.6	23.1	24.1	24.5	26.9	23.3	24.5	25.5	
	Month+4	23.0	27.3	24.0	23.4	21.6	23.1	24.2	26.5	23.3	24.9	26.1	28.3	

Add new

Figure 3: Rule-based system for monthly crop distribution in OMP-BBC.

settings which applied equally to all blocks in the OMP database. With OMP Plantation 10.3, this is set to change and the system will give users the flexibility to control the forecast settings in a more finely-grained manner.

The data entry for the monthly crop distribution now uses a rule-based system similar from other parts of OMP such as the OMP Fertilizer Planner and the maturity age setting (see figure 3). This means that you can define as many different sets of monthly distributions as you desire, with your own rules as to when a certain distribution should be applied. This system has proven extremely flexible and useful, providing a good compromise of allowing as much accuracy as desired without forcing users to enter lots of data if they prefer to keep their forecast assumptions simpler.

The entry form for the crop distribution includes a calculation wizard, shown in figure 4. With this wizard, users can calculate the distribution based on the historical data in their own OMP database. An important improvement in the current version is the possibility of restricting the data set over which the historical averages should be calculated, including the option of specifying a custom filter string. This can be used to ensure that the averages are really calculated only using suitable and relevant records, for example by excluding very old data or by restricting to a certain division or planting material.

In order to reduce the workload and to reduce the arbitrariness of the forecast, it is generally not desirable for the OMP user to manually enter or edit every block's forecast bunch weight for every month. Rather, the forecast bunch weight



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should in general be calculated in some way from the historical OMP production data. Nevertheless, it may be useful to be able to edit the values of individual blocks, for example if you know there are mistakes in the historical data for that block or if there were unexpected occurrences like atypical weather or a pest outbreak. This is now possible in OMP Plantation 10.3. The data can either be edited directly in the program

or imported from Excel spreadsheets, providing additional flexibility if users prefer to use a systematic calculation method that is not built into OMP. The new system of handling the forecast ABW has been discussed in much more detail in the 42nd edition of this newsletter.

Further improvements in OMP Plantation 10.3 include the possibility of covering multiple OMP

Calculate crop forecast distribution
✕

Historical yield distribution

12 month bunch yield distribution

Harvest month:	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Yield split [%]:	8.2	8.5	9.0	8.7	8.5	7.8	7.5	7.8	8.3	8.7	8.5	8.5

Resulting crop forecast distribution

	Crop distribution by BBC survey month [%]											
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Month+1	24.4	26.4	26.9	26.9	24.7	23.2	23.5	24.5	25.7	25.2	24.8	24.0
Month+2	25.8	25.7	26.1	24.6	23.9	24.2	24.9	25.7	25.0	25.1	24.2	24.6
Month+3	25.2	25.0	23.9	23.8	24.9	25.7	26.1	24.9	25.0	24.5	24.8	26.0
Month+4	24.5	22.9	23.1	24.8	26.5	26.9	25.4	24.9	24.3	25.2	26.3	25.4

Historical average bunch yield distribution

Settings

- Only complete records ?
- Palm age >= yr
- Custom criterion:

Results

Harvest month:	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Yield split [%]:	8.2	8.5	9.0	8.7	8.5	7.8	7.5	7.8	8.3	8.7	8.5	8.5

OK Cancel

Figure 4: Calculation wizard for crop distribution.



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Figure 5: Chart on long term yield trends.

site licenses within a single installation, the addition of 3 new marker fields as well as enhancements of the long term yield trends chart. The marker fields are a set of “free” user-definable fields that can be used to record block-level information on any topic that is relevant in your plantation and which is not already covered by a dedicated field built into OMP. For example, typical uses include marking blocks assigned to a BMP project or a fertilization trial, or recording information about the ownership structure or a particular nutrient management programme. The chart on long term yield trends (figure 5) now includes a number of new settings and op-

tions. Most importantly, you can now choose to view the 12MRT yield in addition to the straight monthly yield. This chart smoothes out any seasonal variations and therefore makes it easy to see whether the plantation performance is moving in the right direction.

In addition to the points discussed so far, the OMP 10.3 release includes a number of other smaller improvements and bug fixes. As usual, users will receive a “What’s new” document that provides a more complete list of changes as part of the upgrade process.





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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.

Data analysis additions

- Chart of 12MRT yield as function of palm age in months after planting
- Monthly round lengths report by division and field
- Mill residue extraction and utilization in monthly dashboard report
- Additional grouping options on fertilizer analysis forms
- Option of excluding block details on block agronomic summary report
- DA form and report for nutrient application vs recommendation
- Add second grouping combo box for monthly/YTD production form

General improvements

- Block splitting functionality in OMP Maintenance Tools add-in
- Importing of .bak files from previous versions
- Installation without requiring entry of serial numbers
- Thematic mapping of FS survey data aggregated to block level in OMP-GIS
- Thematic mapping of FS expressions at block level in OMP-GIS
- Improved handling of block label display in GIS maps

Field work and resource use module

- Budgeting for regular field work tasks like weeding, pruning, fertilizer application etc.
- Flexible definition of jobs with expected rates of usage of resources like fuel, equipment, material and labor
- Scheduling wizard to generate field work budget based on desired number of rounds and total area to cover in one cycle
- Recording of actual areas covered by job, block and date and comparison vs budget
- Recording of actual resource use and comparison vs budget
- Integration of fertilizer and pesticide application data
- Assignment of blocks with similar characteristics to “field work groups” which have similar field work plans