



Agrisoft Systems NEWSLETTER

Ninth Edition, Jan. - Mar. 2014

Message from the Management

New database application for banana plantations under development

Dear Customers,

The first quarter of 2014 marks a significant chapter for Agrisoft Systems with the beginning of development work on the Banana Monitoring Program (BMP). Apart from a few small, specialized applications covering aspects of micro hydro power plants and rice nutrient management, Agrisoft Systems has focused almost exclusively on the oil palm plantation sector in the past. The BMP development project marks our first attempt to implement a comprehensive agronomy database program for a different crop besides oil palms.

Of course, a lot of the experience gained during our work on the OMP software for oil palm plantations over the past one and a half decades will flow into the new banana software. Nevertheless, starting work on a new program for a different crop presents our

development team with the clear opportunity to experiment with new techniques and application designs. I am sure that this innovation in the context of the banana application will be fruitful also for the ongoing development on the existing OMP software, by leading to new ideas and insights that would not necessarily have arisen without starting with a new development project from scratch. If they prove successful and useful in the BMP software, some of the new design concepts may be used in future version updates of OMP.



The first version of the Banana Monitoring Program is scheduled to be released in June of this year. It will include modules covering





Agrisoft Systems NEWSLETTER

Jan. - Mar. 2014

Message from the Management

detailed reporting of fruit bunch production as well as packing of boxes of bananas in the plantation packing houses and box shipping. Furthermore, BMP version 1 will include modules for short- and long-term bunch production forecasts based on tagging unripe bunches and estimating the number of trees that are expected to produce a bunch in the next semester. In future versions, we plan to add modules for fertilization, irrigation, pests and diseases and pesticide application, climate, and field maintenance.

The BMP development is not the only thing that has been keeping the Agrisoft Systems development team busy over the past months. For one, we have completed work on a new version of the OMP Nursery application, which

was released at the end of March. We take a closer look at the new version of OMP Nursery in the later parts of this newsletter. Work is also on-going towards OMP version 8.7.3, which will include a number of improvements including the re-designed pest and disease module that was already mentioned in a previous edition of this newsletter.

We are pleased to announce that Agrisoft Systems will be present at the International Oil Palm Conference (IOPC, <http://iopc2014.iopri.org/>), to be held in Bali from 17th to 19th June 2014. We very look forward to hopefully being able to meet some of our existing customers at the conference, and invite anyone interested in OMP to visit our information stand at the conference.





Agrisoft Systems NEWSLETTER

Jan. - Mar. 2014

Who's behind OMP

Programmer Staff: Mirahmatun

In this edition of the series "Who's behind OMP" we will profile Mirahmatun, a member of the programming staff at Agrisoft Systems. Mirahmatun, or Mira as she is known to most, was born in Yogyakarta on 1 October 1982. Mira developed a deep interest in computer beginning during her high school time when she was studying at SMA Kolombo Yogyakarta. She wanted to study and increase her knowledge about computers as she anticipated that computers and information technology would play an ever increasingly important role in the future working world. After graduating from SMA Kolombo Yogyakarta in 2003, Mira wanted to continue her studies in this direction. Consequently, she enrolled for a course of Informatics Engineering at STMIK Amikom, one of the best-renowned IT colleges in Yogyakarta.

At the college, Mira found time besides the classes, seminars and lectures to actively engage herself as a mentor at the Amikom Computer Club (AMCC). At the AMCC, Mira could share her knowledge with interested new students who wanted to get to know about the computer and IT world more quickly. To improve and broaden her own IT knowledge, Mira has attended several additional seminars at STMIK Amikom focusing on topics such as programming with Microsoft Access and Visual Basic.

After graduating from Amikom Yogyakarta in 2006, Mira first worked at an internet café in Yogyakarta until 2009. After that, she assumed a position as a member of the administrative staff at CV. Global Karya, an IT company in



Yogyakarta, before joining up with Agrisoft Systems in April 2011. At Agrisoft, Mira's main responsibility lies in creating and maintaining the setup files used to install OMP and the various Add-In programs. This is a task which requires a lot of patience and meticulous attention to detail, which is a particular strength of Mira's. Furthermore, Mira is in charge of uploading and downloading any data or other files that we share with our customers, as well as helping out with application testing as and when required.

Mira really enjoys her job and the different types of challenges it involves. She says "I am happy with every opportunity that Agrisoft gives to me. I hope Agrisoft will continue to grow into as a company with many customers all over the world, and I am ready to move forward with Agrisoft."



Agrisoft Systems NEWSLETTER

Jan. - Mar. 2014

What's New

New Version of OMP Nursery

By: Max Kerstan

The nursery is a very important part of a successful oil palm plantation, in particular when new plantation areas are being developed or replanting is taking place. Managing an efficient nursery operation is a challenging task which demands dedication and attention to detail. This is because young oil palm seedlings in their initial growth phase are of course much more sensitive towards environmental influences than well-established, mature palms. Even relatively slight delays or insufficiencies with regards to irrigation, fertilization or pest management can severely hamper the development of the palm seedlings. Due to the long economic life cycle of the oil palm, production losses due to planting of seedlings which are not 100% healthy will accumulate and can often reach significant amounts over the life time of the palm. This makes it extremely important that only the healthiest seedlings are planted in the field, while unhealthy or damaged specimens are culled at the nursery. At the same time, each culled seedling obviously represents a wasted investment of time and money, so that excessive culling can also become expensive and inefficient. Furthermore, a nursery manager must of course strive to always be able to provide sufficient seedlings for any plantation areas that need to be planted, to avoid causing further expensive delays in the field operations. Ensuring optimal culling rates in light of these conflicting requirements, while maintaining an adequate supply of seedlings for the requirements in the field is the challenge for a successful nursery manager.

OMP Nursery is a custom-built database program designed by Agrisoft Systems to help

nursery managers to meet the challenges outlined above. OMP Nursery makes it easy to track the development of seedlings in the nursery from the initial seed order placed to a seed provider up to dispatch or sale of seedlings ready for planting.

OMP - Nursery Report 2.02.3 printed 27-Mar-14

Seeds audit summary by progeny. Nursery Default

Order	Batch	Group	Progeny	Seeds available	0-3 mt	4-12 mt	>12 mt	Doubleton	Culled	Dead	Stolen	Dispatched	Sold	Last audit Date
01														
	0001		PN											
			PPKS	-	-	21,505	4,097	4,097	-	-	-	-	-	01-Apr-05
			Total PN	-	-	21,505	4,097	4,097	-	-	-	-	-	20-Mar-05
			Total 0001	-	-	21,505	4,097	4,097	-	-	-	-	-	
	0004		PN											
			PPKS	-	-	10,796	-	-	-	-	-	-	-	07-May-05
			Total PN	-	-	10,796	-	-	-	-	-	-	-	31-Oct-05
			MN											
			PPKS	-	-	24,097	-	-	-	-	-	-	-	31-Oct-05
			Total MN	-	-	24,097	-	-	-	-	-	-	-	01-Nov-05
			Total 0004	-	-	35,194	-	-	-	-	-	-	-	

Figure 1: Sample of OMP Nursery seed audit report.

Orders can be split into a number of batches, which in turn can contain multiple different seedling progenies. Helpful data entry wizards make it simple to record when and in which nursery plot a given progeny is planted and when progenies are moved or transplanted to different nursery plots. Furthermore OMP Nursery stores seedling audit results with numbers of culled seedlings and reasons for culling, as well as data on the vegetative growth progress of the seedlings.

Seeds audit of order 01		Batch 0016	Progeny PPKS	Plot ID	Plot_07		
Date	Remaining seeds	Culled	causes culling	Dead/doubleton	causes dead	Stolen	Dispatched
06-Aug-07	4,707	-	-	-	-	-	10,000
24-Aug-06	14,707	59	Chimera	-	-	-	-
24-Aug-06	14,766	68	Twisted shoot	-	-	-	-
24-Aug-06	14,834	112	Flat top	14	Grasshopper	-	-
31-Jul-06	14,960	-	-	35	Monkeys	-	-
31-Jul-06	14,995	-	-	5	-	-	-
01-May-06	15,000	-	-	-	-	-	-

Figure 2: Sample nursery audit results in OMP Nursery.



Agrisoft Systems NEWSLETTER

Jan. - Mar. 2014

What's New

Customizable lists of tasks to be carried out before and after planting of the seedlings (for example polybag filling, drainage preparation, fertilization etc.) enable the nursery manager to immediately see when tasks are delayed and to view costs by task.

Tasks of scenario				AS Batch DS					
Task	Days since planting	Notes							
Site preparation	-35	Must be ready for bag placement 4 weeks before t							
Site preparation	-30								
Lining	-29								
Bag filling	-28								
Irrigation	-28								
Polybag filling (pre nursery)	-28								
Task details of scenario				AS Batch DS		Task	Site preparation	Days	-30
Class	Title	No. of	Unit	Conversion	Account	bud. cost			
Equipment	Spray equipment	2.0	unit	/ 10,000	palm			0	
Labour	Supervisor	1.0	MD	/ 0	palm			0	
Labour	Worker	0.1	MD	/ 1,000	palm			25,000	

Figure 3: Editing OMP Nursery task lists.

OMP Nursery can either be used as a standalone application or in conjunction with an OMP plantation database. When linked to an OMP database, OMP Nursery shows lists of target blocks including their seedling requirements based on the block area and the planned planting density. OMP Nursery can handle both double- or single-stage nursery setups.

Agrisoft Systems has released a new version of OMP Nursery on 19th March, 2014. The new version carries the version number 3.01.01, and includes a number of improvements over previous versions of the software. A significant change is that fertilizer application can now be recorded by progeny rather than by batch. This change makes data entry more flexible and improves the level of detail that can be recorded.

Fertilizer: By progeny												
Inorganic: by nursery by order by batch by progeny Organic: by nursery by order by batch by progeny												
Fertilizer	Total	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov
Nursery 02												
Order 02												
Batch 0011												
Progeny: SOC												
Year 2014												
AN	Rec.	2.0	-	-	1.0	-	-	-	1.0	-	-	-
	App.	4.0	-	2.0	-	-	2.0	-	-	-	-	-
	Diff.	2.0	-	2.0	-1.0	-	2.0	-	-1.0	-	-	-
Nursery 02												
Order 02												
Batch 0011												
Progeny: SOC												
Year 2014												
BA	Rec.	7.0	-	3.0	-	-	4.0	-	-	0	-	-
	App.	59.0	4.0	55.0	-	-	-	-	-	-	-	-
	Diff.	52.0	4.0	52.0	-	-	-4.0	-	-	-	-	-

Figure 4: Fertilizer data analysis form.

Vegetative growth charts were also improved in the new version. They now graphically show the development over time of various vegetative growth parameters like palm height, number of fronds and petiole cross section on a batch-by-batch basis.

Besides these changes in the program content, OMP Nursery version 3.01.01 also includes a number of alterations aimed at improving user friendliness of the program. One example is that the way in which filters for different criteria affect one another has been improved. In particular it is now no longer possible to inadvertently choose filter criteria that are in conflict with one another and lead to no compatible records being returned. The process to recalculate nursery stocks after data has been imported has also been improved significantly, with the required time for the recalculation process having been reduced by a factor of more than ten.

Figure 5: OMP Nursery filter screen.

OMP Nursery is available as a standalone application or as an extension to an existing OMP installation. For further information or a quotation for the software license cost please contact <mailto:marketing@agrisoft-systems.com>.



Agrisoft Systems NEWSLETTER

Jan. - Mar. 2014

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.

This and That: General OMP Improvements

- Improve program speed by reducing frequency of re-querying, implement progress bars for processes that take more than a couple of seconds
- Include yield potential and budget on more reports, particularly in OMP-HRR
- Create new process for generating FFB pick-up schedules in OMP-SIS and OMP-HRR
- Change calculation of budget production to use production rounded to the nearest ton
- Unify visual appearance of OMP forms and reports
- New pest and disease module for OMP

Banana Monitoring Program (BMP)

- Production reporting for fresh fruit bunches and packed boxes ready for shipping
- New user interface design with quick navigation bar and filter form at top of the screen
- Improved calculations for areas and yields if cableways go in or out of production in the middle of the year
- Reporting of container shipping and bunch quality control
- Production forecasting based on bunch tagging and historical harvest spreads

Long Term Plans

- Improve OMP user interface based on experience from BMP
- Fertilizer chooser Add-In for OMP
- Include recording of additional meteorological information such as photosynthetically active radiation, humidity, tensiometer readings etc.
- Simplify data structure and split of data between OMP and Add-In programs, remove redundancies
- Standalone version of OMP independent of Microsoft Access
- Include basic financial information in OMP on most important income and expenditure points