Message from the Management

OMP Fertilizer Planner nearing release

Dear Customers and Friends,

The main focus of our development work over the past three months has been on finishing and finalizing the new OMP Fertilizer Planner add-in, which is due to be released this month. Work on this add-in started almost a year ago in September 2014, and in the Agrisoft Newsletter of that month we gave a brief overview of the things we had planned. Looking back at this original preview, all the hard work over this time has paid off as we have not only managed to include all the features that were originally planned but have also added many additional features that will make the program more powerful. Some of these improvements have been suggested by our customers, several of which have already been able to preview beta versions of the OMP Fertilizer Planner in the past months. We are proud to say that the feedback from everyone who has seen this preview has been overwhelmingly positive and in some plantations the OMP Fertilizer Planner will immediately be put into use upon release to generate fertilizer recommendations for 2016.

Of course, the Fertilizer Planner was not the only project that we were working on and indeed we released a new version of OMP-AMIS in May, carrying version number 8.8.2. As already previewed in the previous newsletter, the new version includes numerous improvements to OMP-DBMS and the various add-in programs, including for example better leaf nutrient level charts, fertilization schedule reports, a detailed block history report, additional yield analysis forms and much more. Furthermore, we have continued working on our Banana Management Program (BMP). BMP offers comprehensive coverage of the entire Banana production, packing and shipping process as well as powerful production forecasting tools. In future versions, we will be looking to add many of the features that are familiar from OMP including coverage of fertilizers, climate and irrigation, pests and diseases and much more.

In other news, we are proud to announce that OMP has been installed at the Poliplant plantations in West Kalimantan which were recently acquired by the Cargill Tropical Palm Holdings. This decision is particularly satisfying for us, because it confirms that long-time OMP users Cargill continue to see OMP as a crucial agronomy and plantation management tool, even more so with the exciting new possibilities such as the OMP Fertilizer Planner.

This newsletter includes a profile of Oknika Untari, one of the newer members of our programming team, as well as a closer look at the OMP Ten Year Crop Budget application and an overview of our development plans and ideas.

Yours faithfully,

Max Kerstan
(Director)

What's New

OMP Ten Year Crop Budget

By: Max Kerstan

Access to accurate predictions or budgets of future production is extremely important for oil palm plantation companies. Short-term forecasts based on black bunch counts help companies to plan sales and arrange CPO transport and mill maintenance. Yearly crop budgets form an important component of the overall financial budget and help companies to plan labor allocation and timing of fertilizer application or other field work. However, beyond this also longer-term crop budgets are highly important, for example to plan replanting dates, strategic sales contracts or construction of new palm oil mills. While the first two aspects have been covered in the OMP-AMIS suite for a while with the OMP Crop Forecast and OMP Crop Budget add-ins, Agrisoft Systems now also offers a tool for the long-term budgets with the recent release of the OMP Ten Year Crop Budget (OMP-TYCB). OMP-TYCB was developed in close cooperation with our customers and has particular strengths in taking replanting plans into account.

The way in which OMP-TYCB generates crop budgets can be split into two distinct steps. In the first step, the program evaluates the predicted plantation age spread, i.e. the number of hectares per tree age and division, for each of the next ten years. In the second step, it uses user-defined yield profiles to estimate the yearly production and yield. The calculations in the first step are based on the "current" plantation age spread, i.e. the age spread in the year the budget is being generated. This data can either be entered manually by the user in the data entry form shown in figure 1, or it can be imported at the click of a button from the main OMP-DBMS database.

Figure 1: Data entry form for plantation age spread.

For each record uniquely identified by the division, field and planting year, users can specify detailed and individual replanting plans, see figure 2. Note that in particular it is possible to replant a given area in multiple steps, and users also have the option of specifying the area which is kept unchanged during replanting. Figure 2 shows sample replanting plans for the 60.1 ha in Division Center D01, field MT04 which belong to planting year 1995. In this example, 40 ha are to be replanted in 2016 while 15 ha are kept. In the following year, another 10 ha will be replanted. If the sum of replanted and kept area is less than the original area, the difference is "discarded" from

Figure 2: Entry and edit form for replanting plans.

the replanting year onwards. This makes it possible to take into account that the planted area may be reduced on replanting, for example to incorporate larger buffer zones or new roads.

Besides the number of hectares to replant and to keep, users can also specify a percentage multiplication factor for the yield to be used in the year of replanting. This may be used to take into account the fact that an area replanted at some point in the middle of the year will still contribute to the overall production in the first months of the year before replanting. The yield percentage should be adjusted according to when in the year replanting is to take place, with smaller percentages if replanting is done at the beginning of the year and larger percentages if the area is

replanted at the end of the year.

Of course, it is not necessary to enter such specific replanting plans for every part of the estate as many areas will follow a "default" replanting scheme. Default replanting parameters can be entered in OMP-TYCB separately for main estate and smallholder areas, as shown in figure 3. These default parameters will be used to plan the

Figure 3: Default replanting parameters.

replanting of all areas where no individual special replanting plans were entered.Of course, the OMP-TYCB also allows you to enter plans for new plantings that will be added to the plantation in the budget period. These new plantings can be entered in in a way that is similar to the definition of the initial plantation age profile.

Using the combined information of the initial age profile, planned new plantings and replanting parameters, OMP-TYCB generates the expected

What's New

age profile for the coming ten years. The crucial second component that is required to go from age profile to an actual crop budget comes in the shape
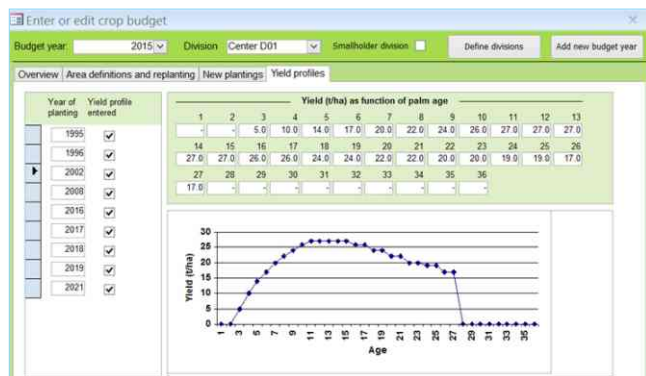

Figure 4: Yield profile definition.

of yield profiles. Different yield profiles can be entered in OMP-TYCB for each division and planting year, including the planting years in the future which will become relevant in cases of replanting or new plantings. By having different yield profiles for different planting years it is in particular possible to take into account that yields increase as new planting material progenies become available and are planted to the field.

A selection of copying features can be used to copy yield profiles between planting years and/or divisions, so that it is easy to quickly input similar

Figure 5: Long-term crop budget overview form.

yield profiles for multiple planting years if this is required. Furthermore, users also have the option of viewing actual historical yield profiles based on the OMP-DBMS to help them devise realistic yield profiles.

As already mentioned at the beginning of this article, in OMP Crop Budget the OMP-AMIS suite includes a specialized add-in for one-year crop budgets. Of course, the one-year budget will typically be more accurate as it is usually made on a block-by-block basis rather than using blanket yield profiles for blocks of the same age. The next version of OMP-TYCB due to be released this month will include an option to import information from the one-year crop budget into OMP-TYCB, to ensure that the relevant entries in the OMP-TYCB yield profiles are adjusted in such a way that the budgeted production agrees with the one-year budget.

Figure 6: Excerpt of one of the worksheets in the OMP-TYCB Excel export.

The results of the budget generation routine can be viewed and analyzed within OMP-TYCB using several view data and analysis forms, an example of which is shown in figure 5. As usual in OMP, data displayed in report form can be easily exported to MS Excel for further use. However, besides this the OMP-TYCB also includes a more advanced custom Excel export feature which creates a more complicated spreadsheet summarizing the entire budget information in multiple tabs (see figure 6).

Who's behind OMP

Programmer Staff
Oknika Dwi Untari

In this edition of "Who's behind OMP" we profile one of the newer members of the Agrisoft Systems team, Oknika Dwi Untari. Oknika was born in Cilacap, Central Java on October 15 1988 and developed an interest in computers and the art of programming at a young age. She first came into serious contact with computers and the art of programming came during a period of volunteer work at a local tractor manufacturer during her junior high school period. Oknika immediately felt drawn towards the subject and decided to pursue this line of work despite the fact that no one in her family had ever ventured in this direction. Accordingly, she chose to continue her studies in a vocational high school focusing on information technology.

After graduating from high school in 2006 Oknika decided to directly dive into the working world, beginning with a programmer's job at the tractor company where she had previously volunteered. After three years, she moved on to Yogyakarta and in the following years worked for several software companies in Yogyakarta. Through all these jobs Oknika has gained not only programming experience and a high level of knowledge regarding database application design, but also learned to appreciate the importance of balancing programming speed with attention to detail and quality control. This strong working experience background would make her a valuable member of any software company in Indonesia, and we are very happy to have her in the Agrisoft Systems team since March 9, 2015.

Over the past few months Oknika has proven to be

able to adapt quickly to different programming projects, in particular in moving to the Banana Management Program (BMP) development team and taking up an important role within the team. Amongst other things, Oknika has been personally responsible for the development of a new production dashboard report and various important improvements to the production forecasting module. Oknika sees her main goal as finding creative and innovative ways to implement customer visons and ideas into the program to ensure that it is fully functional for field use.

Despite the fact that Oknika has been with us only a short while, we can confidently say that she is already a valued member of our Agrisoft family. As Oknika herself says: "Agrisoft Systems offers a unique software and I am excited to make it even more useful for the entire plantation industry. I am happy to be a member of this team that brings excellent solutions from Indonesia to the rest of the world."

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 plans

- OMP Black Bunch Count forecast vs actual vs rainfall charts.
- Feature to export OMP reports in PDF format and attach the result to emails
- Crop loss audit extrapolate over plantation to get total loss estimate
- Data importing in OMP Field Upkeep
- Addition of new stages in OMP Tissue Culture process
- Fiscal year handling for OMP Nursery, Seed Production and Tissue Culture
- Survey app for data collection in the field using smartphones or tablets

Banana Management Program

- Long-term forecast based on prediction of number of bunches tagged
- Manual entry and edit forms for production and tagging data
- Import of data from Excel spreadsheets
- Improved analysis of forecast vs actual production
- Production dashboard reports
- Analysis of production by parameters (soil type, planting material etc.)
- Container shipping and freight details

OMP-HRR

- More detailed harvest monitoring including harvest schedules and highlighting of blocks late for harvesting.
- Entry of area harvested on each day for blocks harvested over multiple days.
- Weekly reports with percentage of blocks as function of number of days since last harvest.
- Possibility to record different harvest methods (e.g. mechanical or manual).
- Analysis of effectiveness of different harvest methods.