Message from the Management

Dear Customers,

On behalf of the whole staff of Agrisoft Systems I would like to thank all our customers for their continued trust in OMP after the enforced change of management at the beginning of the year. In particular, our customers at the forefront of the oil palm industry in Papua New Guinea, Indonesia and Malaysia such as Cargill, Hargy and NBPOL have reaffirmed their commitment towards OMP by renewing their maintenance and upgrade agreements with Agrisoft Systems. This trust has allowed us to demonstrate that Agrisoft Systems is as committed as ever to providing the best possible support to our existing customers. As always, we are also working closely with our customers to continue improving our software products and to keep OMP up to date with all the requirements of oil palm management.

Besides the traditional main center of oil palm cultivation in South East Asia, Agrisoft is also pleased to be a part the growth of palm oil in Latin America, in particular through our partnership with AgroAmerica S.A. Having introduced OMP as a basis for their agronomic decision-making several years ago, AgroAmerica are using the extensive available information to put into place best management practices and are achieving very good yield results. Accordingly, they have significantly increased the oil palm area managed with OMP in Guatemala and Panama in the past months. With several palm oil producers in Colombia also considering the introduction of OMP in their plantations, the importance of Latin American palm oil both for the general palm oil industry but also for Agrisoft in particular will continue to grow in the coming years.

Message from the Management

The Agrisoft Systems development team has been working intensively on two new software packages to extend and complement the features included in OMP. For one, we have carried out an extensive customization of our Tissue Culture Database Management System for PT SMART Tbk in Jakarta, in accordance with Agrisofts aim of providing customized software solutions to suit the individual needs of each customer. The second main project consists of the development of a new database program for the preparation of long-term yield forecasts, which is being developed from scratch in cooperation with NBPOL. This program generates annual yield forecasts for 10 years in the future, automatically taking block replanting effects and the progressively changing palm age profile into account. Besides greatly simplifying the long term budgeting for future yields, the program also allows for a comparison with previous budgets in order to analyse how well past targets have been met. This 10 year crop budget application is scheduled for release in the upcoming months and will be profiled in more detail in the latter sections of this newsletter.

As part of our series "Who's behind OMP", we will profile Djuwadi Al Musyarof, who is one of the most senior developers at Agrisoft Systems and an expert in particular on the OMP-GIS component. Finally, the "what's new" section of this newsletter give an overview of a selection of the various exciting improvements and updates for OMP that are currently in planning or in development.

Best regards,

Max Kerstan
Managing Director

Who's behind OMP

GIS Senior Programmer:
Djuwadi Al Musyarof

In this edition, we would like to profile Djuwadi Al Musyarof, one of the senior programmers at Agrisoft Systems. Djuwadi was born in Grobogan, Central Java, on the 4th of March 1983. From an early age, Djuwadi was fascinated by the electronic world. No wonder that after graduating from SMA 1 Purwodadi in 2001, he continued his studies at Jogjakarta State University, majoring in the subject of Electronic Engineering. In the course of his studies, Djuwadi represented his university in a number of robotics contests at national level. However, it soon became clear that his studies of electronic engineering would become a stepping stone on the way to becoming a programmer, after he learnt the basic knowledge of programming as part of his regular coursework. During these

courses, Djuwadi grew to love programming and began studying software and website design by himself in addition to his regular studies.

As a natural consequence of his interest in the programming world, Djuwadi joined Agrisoft Systems Indonesia after graduating in 2005. From the beginning, he specialized on making use of Geographical Information Systems (GIS), and deepened his knowledge by participating in a number of GIS seminars organized by the MapInfo User Forum, LIDAR and 3D Mapping. At Agrisoft, Djuwadi developed the concept of OMP-GIS together with Armin Gfroerer Kerstan, interweaving the agronomic data stored in the OMP database with an easy-to-use presentation in map form.

Through his hard work, Djuwadi became one of the most knowledgeable programmers at Agrisoft, especially regarding OMP-GIS. However, this does not mean that his competence lies only in GIS, and he also masters all the other facets of OMP. This made Djuwadi a natural choice as an OMP trainer, and over the years many OMP operators have profited from his deep knowledge as well as his excellent communication skills as part of Agrisoft OMP training workshops.

Despite his considerable experience in software design, Djuwadi is constantly looking to extend his IT skills and knowledge. In particular, he is currently continuing his studies at Janabadra University majoring in Informatics Technology, while still working full-time at Agrisoft. Djuwadi hopes to be able to continue putting his programming knowledge to use to further improve OMP-AMIS and to ensure that it remains a powerful management tool that fits our customer's needs.

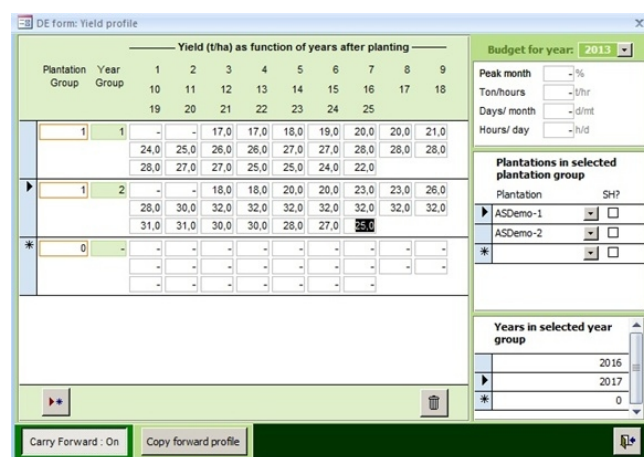## New Release

Ten Year Crop Budget

Having access to quantitative estimates of future yields is of course invaluable for many aspects of oil palm management that require medium to long term planning. For example, a reliable yield forecast is essential when deciding whether milling capacities need to be expanded, whether additional harvesting labour is required, or whether additional distribution channels for the oil palm products should be sought. The preparation of such long term crop budgets by hand can be a time consuming process, as one must take into account temporal variations of the palm yield profiles, which can additionally vary spatially over the different planted areas.

With the Ten Year Crop Budget, Agrisoft Systems is developing a program to easily generate long term yield forecast scenarios in a largely automated process. The application generates annual yield forecasts for the next 10 future years, based on a minimal input data set. Namely, the initial conditions are set by entering for each plantation division a list of hectarages corresponding to each planting year. One then defines a set of yield profiles, which serve as a reference for the expected FFB yield by palm age. It is possible to assign different yield profiles to different parts of the estate, to take into account possible variations that may arise e.g. due to different planting materials used or due to different soil conditions. In addition, a given division may be assigned to different yield profiles in different years, in case these are expected to change for example by a planned infrastructure improvement allowing for better fertilizer application or perhaps to anticipate longer term climatic changes.

Based on this initial input data, the program then automatically calculates the expected yield for the next ten years, taking the progressively changing palm age into account by always applying the suitable respective yield profile for each year and each part of the estate. In particular, the calculation automatically takes replanting effects and the following immature phase into account, where the palm age at which replanting should be carried out as well as any possible expected hectarage change at replant are adjustable global parameters. Furthermore, the program includes the option of incorporating planned new plantings that may be scheduled for future years..

New Release

The yield and production forecast calculated in this manner is displayed in a flexible data analysis form, which can be used to view the yearly projected yield not only for the overall estate but also for individual plantations or as a function of the palm age classes.

Finally, the 10 Year Crop Budget application allows for an export of comprehensive crop budget data to a set of Excel spreadsheets. These spreadsheets are preformatted to give an easy overview of all the relevant information, including a detailed summary of the hectarages by palm age for each plantation or division and for each year. It also allows for comparison with the previous budget, showing how well previous expectations were met and how the forecast is changed by any changes in the

initial expectations that may have been put in.

We are confident that the new application, scheduled for release this summer, will greatly facilitate the production of realistic long-term production budgets in an easy-to-use and thoroughly transparent manner, which can be used as a quantitative basis for long-term planning and strategic management decisions.

Benefits at a glance:

➢ Plan realistic production budget based on productivity indicators and site characteristics parameters.

➢ Plan harvesting labor, milling, transport requirements and crop residue use, based on expected production.

➢ Set targets and work plans for harvester and workers.

➢ Support CPO trading with accurate production.

➢ Evaluate the quality of forecast against actual yield and crop budget.

➢ Long-term data storage and statistics.

From our developer desk

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

New Applications

Ten Year Crop Budget

New add-in to generate long-term yield forecast scenario.

OMP-AI Weather Station Recording

Add-In for recording of weather station data

TC-DBMS

Revamped tissue culture database management system.

New features and additions

OMP-DBMS

☞ New "Under Development" stage for blocks under replanting.
☞ Diesel consumption analysis.
☞ Greenhouse gas emission module

OMP Nursery

By batch analysis for fertilizer program and vegetative growth

OMP-AI Crop Budget

☞ Data of previous four years included for more reliable budgeting
☞ Age group information. Allows the users to get information about the yield phase of a block based on the age of planting.

Development Plans

OMP-AMIS Enterprise Edition

Web based application for main office (group level) using SQL-Server Reporting Service (SSRS).

OMP-AI SIS

OMP extension to capture and store essential smallholder data to be finalized for commercial release following extensive beta testing

OMP-DBMS

☞ New collection form for pests and diseases data with associated report
☞ Improved report for occurrence of pests and diseases
☞ New fields and improved layout of form for storage of vegetative growth data.
☞ Improvement of soil analysis form.
☞ Addition of new fields to record thinning and ablation procedures including data analysis forms for effects of these measures.
☞ New report on available fertilizer types and constant system settings