

Abstract

Use of GIS for Oil Palm Agronomy Data Analysis

Track: Agriculture

Author(s): Armin Gfroerer Kerstan, Thomas Fairhurst, Ian Rankine

Whilst static maps have long been used by planters to portray management information, new GIS technology incorporating modern Global Positioning System equipment can be used to produce affordable digitized maps. An agronomy database, however, is required to provide the necessary information for plotting key agronomic information in spatial analysis maps. Dynamic links must be established between the GIS and the agronomy database so that up-to-date maps can be produced as required. This paper describes how "live links" can be established between an agronomic database and a GIS application to provide managers with an agronomy management information system. Each time a map is required, data is extracted from a regularly updated database containing all key agronomic information and stored in a data table. GIS software is used to generate maps from pre-defined map templates (e.g., for yield analysis, leaf data, soil fertility parameters) that plot data contained in the data table. Such maps can be used to pin-point and monitor areas where agronomic problems require remedial attention.

The GIS system is now in use in major plantation companies in Malaysia, Indonesia and Papua New Guinea covering an area of about 200,000 ha.

Armin Gfroerer Kerstan

Agrisoft Systems

Condong Catur

Jl. Prisma 66A

Pojok , Yogyakarta DIY 55283

Indonesia

Phone: 62 274 882 606

Fax: 62 274 882 606

E-mail: armin@agrisoft-systems.de

Thomas Fairhurst

Potash & Phosphate Institute

ESEAP

126, Watten Estate Road

Singapore 287599

Singapore

Phone: 65 6468 1143

Fax: 65 6467 0416

E-mail: tfairhurst@eseap.org

Ian Rankine

Agrisoft Systems Pty Ltd

PO Box 1946

Emerald , Queensland Qld 4720

Australia

Phone: 61 7 4982 4100

Fax: 61 7 4982 4055

E-mail: agrisoft@tpgi.com.au