



#25 Rasa Tower, 555 Phaholyothin Rd., Chatuchak,
Bangkok, Thailand, 10900
Tel: +66 2 937 0487; Fax: +66 2 937 0491

DSSAT

Name : Decision Support for Agrotechnology Transfer

Authors : The International Benchmark Sites Network for Agrotechnology Transfer

E-mail : icasa@icasa.net

website : <http://www.icasa.net/dssat/index.html>

To acquire the software the website should be consulted.

DSSAT 3.5 is a DOS-based software package integrating the effects of soil, crop phenotype, weather and management options. By simulating probable outcomes of crop management strategies, DSSAT offers users information with which to rapidly appraise new crops, products, and practices for adoption.

DSSAT also allows users to compare simulated outcomes with observed results. The DSSAT software allows linking the crop models and linkage with Geographic Information Systems (GIS).

The following crops are included:

wheat	sorghum	peanut	millet	tomato
maize	dry bean	cassava	soybean	sunflower
barley	chick pea	potato	sugarcane	pasture

DSSAT is being used as:

- As a teaching and training tool by providing interactive responses to "what if" questions related to improved understanding of the influence of season (weather), location (site and soil) and management on growth processes of plants.
- As a research tool, to derive recommendations concerning crop management and to investigate environmental and sustainability issues.
- As a business tool, to enhance profitability and improve input marketing.
- As a policy tool, for yield and area forecasting and land use planning.

The present version is DSSAT v3.5, but by the end of 2002 a Windows based version (DSSAT 4) will be released. This new version will also include: banana, cabbage, cotton, cowpea, faba bean, pepper, pineapple, tao and velvet bean.

The following minimum data set is required:

1. **Weather:** latitude and longitude, daily solar radiation, maximum and minimum air temperature and rainfall
2. **Soil:** upper and lower horizon depths, texture, bulk density, organic carbon, pH and aluminum saturation, and
3. **Management:** planting date, dates when soil conditions were measured prior to planting, planting density, row spacing, planting depth, crop variety, irrigation, and fertilizer practices.

There exists a very lively listserver for DSSAT users and others interested in crop model development, crop model applications and decision support systems (see website).

Reference

Jones, J.W., G.Y. Tsuji, G. Hoogenboom, L.A. Hunt, P.K. Thornton, P.W. Wilkens, D.T. Imamure, W.T. Bowen and U. Singh (1998): Decision support system for agrotechnology transfer: DSSAT v3. in: G.Y. Tsuji et al. (eds): Understanding options for Agricultural production, p. 157 - 177. Kluwer Academic Publishers.