PADFERT 2

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In 1990, PADFERT 1 was released to assist the development and extension of soil testing as a key diagnostic tool for whole farm fertiliser management in the South Burnett region of Queensland. By 1991, the principal users of this computerised decision aid were fertiliser distributors and agribusiness and DPI agronomists. In 1992, a project team was established to develop the PADFERT 1 concept for all major cereal cropping regions of Queensland. Soil testing use had increased rapidly and was a major component of crop nutrition extension strategies being developed for the production of higher-value quality grain. The PADFERT 1 concept however, had to be developed in a format which incorporated different regional methods of sampling, nutrient analysis and interpretation of soil test information.

METHOD

Workshops and individual interviews were conducted with agribusiness and DPI agronomists to demonstrate PADFERT 1, and establish the essential components needed in a decision aid, if this concept was to be extended into the remaining cereal cropping regions of Queensland. Current fertiliser distributors, who interpret large numbers of soil tests were particularly targeted for their requirements. From this consultation with potential end-users, it became obvious that a completely new program was required to extend this concept to other regions. Draft hard copies of the program and look-up charts were circulated to agronomists and individual interviews were carried out with key fertiliser distributors.

RESULTS AND DISCUSSION

The new design and programming incorporates the features and layout developed through collaboration with potential end-users in each region. As a result of the surveys and interviews, programming was carried out in C rather than the original compiled spreadsheet or a GUI format. This allows PADFERT 2 to be run on computers with limited hard drive and RAM capacity, and computers either not using or not powerful enough to use a GUI program. Specific soil test interpretations are based on region, soil type, individual crop requirements, fertilisers to be used and method of application. PADFERT 2 allows the user to store client, property, paddock, cropping season, soil test and fertiliser use data. This data can be held on disc and carried in the field for in-crop referral or client printout. Summary crop performance and soil test data are also stored for reference or printout. This allows farmers and agronomists to quickly review crop performance and soil test data over time. The reference fertiliser list includes product analyses. Individual lists of available fertiliser products, incorporating a local price, can also be stored.

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