

Nutrient Expert® Data Analytics

The *Nutrient Expert*® decision support tool enables crop advisers and agricultural extension workers to obtain fertilizer recommendations tailored to field-specific conditions, which can help farmers increase their yield, profit, and fertilizer use efficiency. In 2016, International Plant Nutrition Institute developed the Web app version of *Nutrient Expert*® for personal computers and Android mobile devices, available at software.ipni.net. An important feature of the *Nutrient Expert*® app is its ability for automatic data capture and analytics. The major functions of *Nutrient Expert*® Data Analytics are:

1. Capture user input data and information – e.g., farmer’s current yield and fertilizer practice, site and farming information
2. Storage of *Nutrient Expert*®-generated agronomic parameters for each farmer’s field – e.g., attainable yield, yield response to fertilizer N, P, K and fertilizer recommendations based on the 4Rs
3. Identification of users and farm locations (with geographic coordinates)
4. Data processing and visualizing – e.g., maps, data summaries (Figure 1).

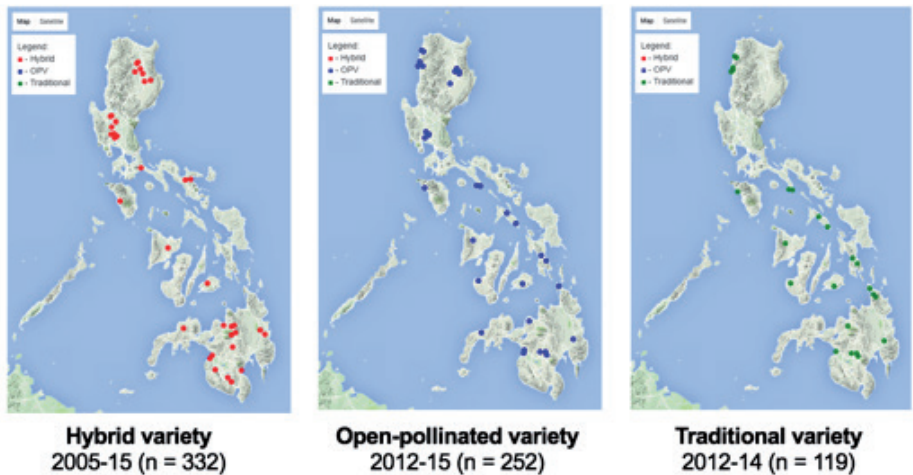


Figure 1. Data collection sites for developing *Nutrient Expert*® for Maize in the Philippines, 2010 -2015 (Figure generated using *Nutrient Expert*® Data Analytics).

The *Nutrient Expert*[®] Data Analytics (Figure 2), through its automated capture of agronomic data and information, processing, and faster data analysis, will help agricultural decision-makers, agri-business providers and farmers in making decisions and developing strategies for production and marketing of agricultural inputs and products. The data analytics will provide timely strategic information to decision makers and improved tactical information (i.e., recommendations) to farmers.

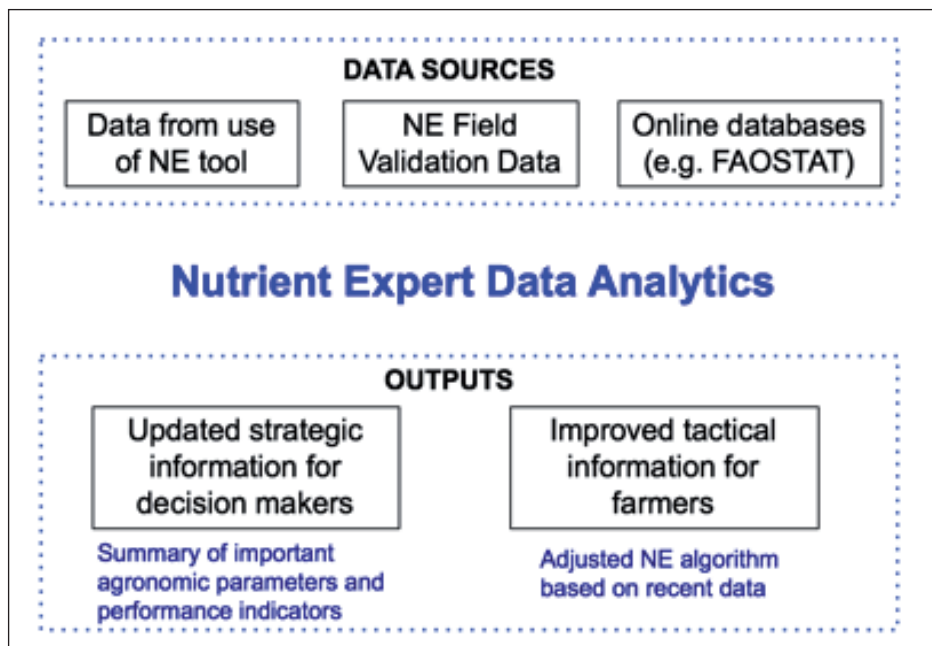


Figure 2. The *Nutrient Expert*[®] (NE) Data Analytics: data sources and outputs.