

# Scaling of Fertilizer Recommendations for Maize

Maize is the second most important crop next to rice in Southeast Asia. Current yields in the region are still well below attainable yields, largely due to inadequate and, often times, unbalanced fertilizer application. The 4R Nutrient Stewardship concept of applying the right source of nutrients, at the right rate, at the right time, and in the right place provides the principles for developing fertilizer recommendations that will help farmers increase their yield and profit. *Nutrient Expert*<sup>®</sup> (NE) is a nutrient decision support tool that enables crop advisers to quickly develop fertilizer recommendations based on the 4R principles. Scaling 4R recommendations for maize can be achieved through the wide use of NE Maize by crop advisers or extension agents who are in direct contact with farmers.

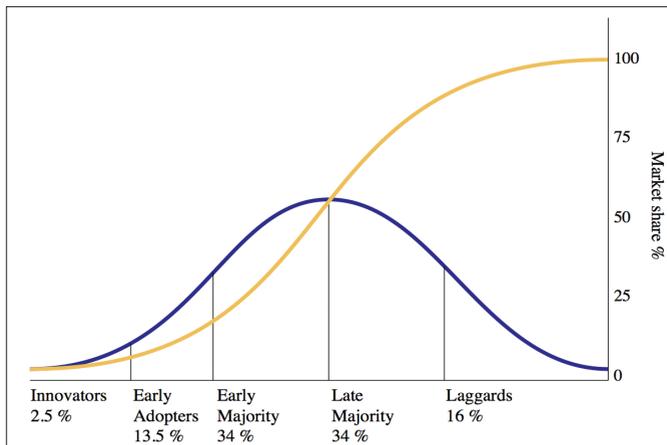


Figure 1. The 5 customer segments of innovation diffusion adoption (adapted from Rogers 2003).<sup>1</sup>

Our scaling strategy aims to reach the Innovators and Early Adopters of target users (i.e., maize farmers) in a period of about five years by moving up the adoption curve (Figure 1). To achieve that goal, we are looking at two possible pathways: (1) coupling product (i.e., fertilizer) with use knowledge and fertilizer recommendations, and (2) enabling agents with vested interests to generate the required knowledge (i.e., agronomists in the fertilizer or seed companies, marketing agents of cooperatives, lead farmers, and government field technicians).

<sup>1</sup> Rogers, E. 2003. *Diffusion of innovations*, 5th edition. Simon and Schuster (Eds.).

Marketing agents of farm inputs can play a key role in scaling out 4R fertilizer recommendations. The recommendations, if partnered with their products, will strengthen their credibility and boost their sales. In developing countries, farmers often rely on marketing agents for farming advice. *Nutrient Expert*<sup>®</sup> can be a key component of the marketing strategy of farmer groups (e.g., cooperatives) or suppliers of farming inputs. Capacity building of marketing agents and farmer leaders on the use of *Nutrient Expert*<sup>®</sup> through training coupled with NE field demonstrations showing that the recommendations are effective in increasing farmer yields and profits will facilitate scaling of 4R recommendations for maize.

At present, we are at the level of innovators, but implementation of the strategy with multiple sectors will enable us to get through 'Early Adopters' in a couple of years. Once that is reached, the rest of the population is expected to naturally follow.



*Left photo: A farmer demonstrating the effect of NE recommendation to his maize crop  
Right photo: Training on the use of Nutrient Expert<sup>®</sup> Maize*