

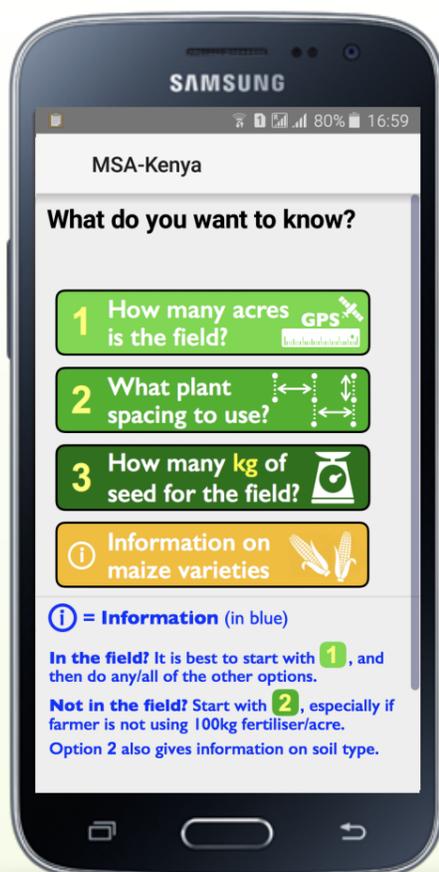
Maize-Seed-Area

Mobile agronomic advice for smallholder maize farmers

Maize-Seed-Area advice options:

1 How many acres is the field?

Smallholder farmers often do not know how big the field area they want to plant is. Consequently, they buy too little or too much fertiliser and seed, or pay too much for ploughing and weeding services. GPS-measurement of the field can prevent unnecessary expenditure or buying too few seeds.



Why provide agronomic advice through mobile phones?

Increasing the knowledge delivery capacity

Few farmers have regular contact with (government) extension workers. Mobile phone applications can improve access to independent advice; they can be used by agrovet, extensionists, and phone-owning farmers themselves.

From standard advice to site-specific advice

Mobile phone apps can deliver field-specific advice, adjusted to the farmer's circumstances. For instance, local differences in soil type, farming practices or variety preferences may enable farmer's to plant closer or save a little on fertiliser use, and/or harvest more.

Understanding farmers better by crowdsourcing data

Besides providing advice, mobile apps can also collect information on the advice given (use info). In this way, we can learn from farmers: what they do on their fields, what varieties they prefer, etc. Thus we can improve agronomic advice provision!

2 What plant spacing to use?

Plant spacing advice for maize is usually standard, typically 75 x 25 cm (between x within rows) and one (1) seed per planting hole. Yet, plant spacing should depend on available nutrients (and water) in the soil. Using information on the field's soil fertility, this option uses farmers' use of manure, fertiliser and type of maize seed, to advise on the best plant spacing.

Soil type identification



Manure use



Fertiliser use



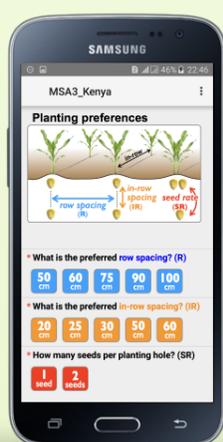
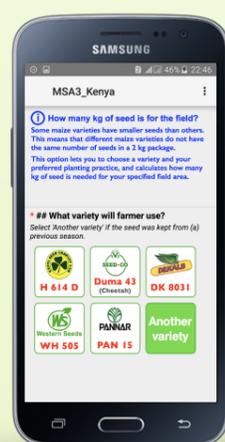
Field slope



field-specific plant density advice

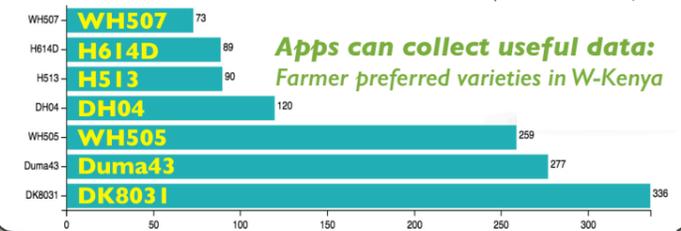
3 How many kg of seed for the field?

Some maize varieties have big seeds, while others have small seeds. How much seed one should buy therefore also depends on the variety one wants to grow. This option uses the farmer's preferred variety and plant spacing to calculate how many kilograms of seed is needed of a particular variety. Never buy too little or too much seed anymore!



Piloting maize agronomy advice delivery in Western Kenya

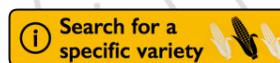
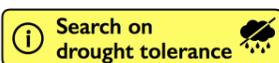
Some 100 extension workers and agrovet in West-Kenya were equipped with the Maize-Seed-Area app in early 2018. They provided advice on demand to maize growing farmers, either in the field, or when the farmer visited an agrovet shop. In a period of three months, some 3,000 farmers received more than 5,000 advices on plant density, field size, required amount of seed for their field, or information on their preferred variety.



Apps can collect useful data: Farmer preferred varieties in W-Kenya

Information on maize varieties

Is this variety Striga weed resistant? Which varieties mature quickly? Which varieties are drought tolerant? These kind of questions can now be answered quickly and easily: all variety information is in your phone!



Different search options: (1) What drought tolerant varieties are available? (2) What variety fits best to the length of the growing season in my area, or the time I want to plant and harvest? (3) Search information on all maize varieties* available on the market. (*more than 40 in West-Kenya)

