

Growing Farmer-saved Seed of Improved, Open-pollinated Maize Varieties



CIMMYT
MIR



Recycling open-pollinated varieties


Points to remember:

1. If you recycle seed, use an improved, drought tolerant, open-pollinated variety (OPV), rather than a hybrid.
2. Choose an OPV recommended for your area and obtain certified seed from a reputable dealer.
3. Manage your fields as well as possible, practicing conservation agriculture, using manure and/or fertilizer, and controlling weeds and pests.
4. To keep your OPV "pure" and your fields looking uniform, try (1) to grow your crop at least 200 meters away from other maize fields, or (2) to sow your maize two to three weeks earlier or later than nearby crops so that it flowers at a different time from the maize in neighbors' plots. Also, inspect your crop before flowering and remove plants that look different from the others.
5. When you harvest, select the best ears for seed from the center of your field.
6. Store seed separate from grain, in a cool, dry place and protect it from pests.

Young man, I've been watching your fields for some time. Your maize is growing well. What's your secret?

Good morning, Sekuru. I'm happy you like my maize. I've been growing an improved, open-pollinated maize variety that's drought tolerant and well adapted. With this OPV I can plant on time, because I can recycle my own seed.





Recycled seed? When I tried that, my maize yields went down.

With hybrids, Sekuru, that's true. Your yields will go down, if you recycle the seed.



So how are OPVs different, Mzuzukuru?

Well, you can recycle them for one or two seasons, before you need to buy certified seed again.

With OPVs you can maintain the purity of your own seed, if you manage your crop carefully. You see, Sekuru, in maize the male flower is at the top of the plant and female flower, or silks, are on the cobs.

Male flower, the tassel, produces the pollen


Female flower, the cob, produces the seed



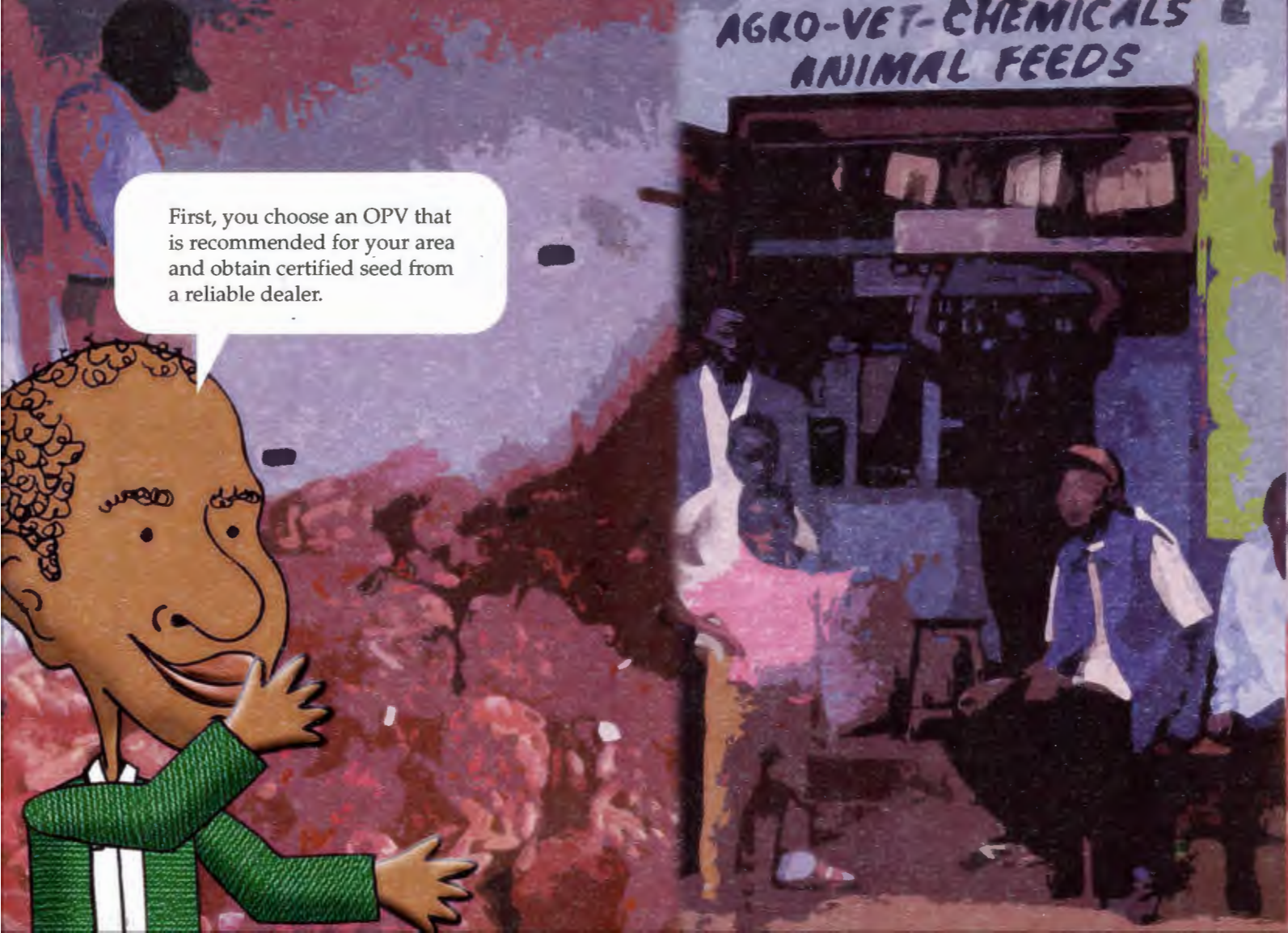
The pollen from the male flower can fall on silks of the same plant or be blown by the wind to silks on other plants. In this way, the characteristics from different maize plants can mix, specially when varieties are grown next to each other.

Hmmm. But there's another thing: when I recycled my seed, besides losing yield, I had tall and short plants in my field. Even my grain was mixed. What can I do to avoid this mixing and have a uniform field, Mzuzukuru?






First, you choose an OPV that is recommended for your area and obtain certified seed from a reliable dealer.



AGRO-VET-CHEMICALS
ANIMAL FEEDS

And the further away you plant your new OPV from other maize varieties, the less it will mix with them.







Then, you should inspect your field before flowering and remove any plants that look different from the others. This will keep your seed pure.

When you harvest for seed, take the ears from the center of the field. Also, select the best cobs from the best plants.



The image shows two cartoon characters in a rural setting. On the left, a man with curly brown hair, wearing a green cardigan over a white shirt and light-colored trousers, is gesturing with his hands. On the right, a man with a grey hat and a yellow jacket over a white shirt and blue trousers is listening. The background features several traditional huts with thatched roofs. A speech bubble from the man on the right contains the text: "Finally, keep your seed separate from other grain, store it in a cool and dry place, and protect it from storage pests by applying recommended insecticides."

Finally, keep your seed separate from other grain, store it in a cool and dry place, and protect it from storage pests by applying recommended insecticides.



Why start with certified seed?

Certified seed germinates well and is free of seed-borne diseases. It's produced carefully to avoid contamination. It's grown, harvested, stored, and sold under set standards. The government and seed services inspect and approve it. So it's a pure variety, not a mixture.

Certified Seed

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So!! You say that certified seed is high quality seed. Can farmers like me produce it and sell it?

Yes, you can. But first you need to register with the government and the seed services as a **SEED GROWER**, to be able to sell seed outside the community or to a seed company.

You also need to meet certain standards set by seed services for seed growers. This is to ensure the quality of all certified seed available to farmers. If you're interested, seed services and seed houses can give you more details.



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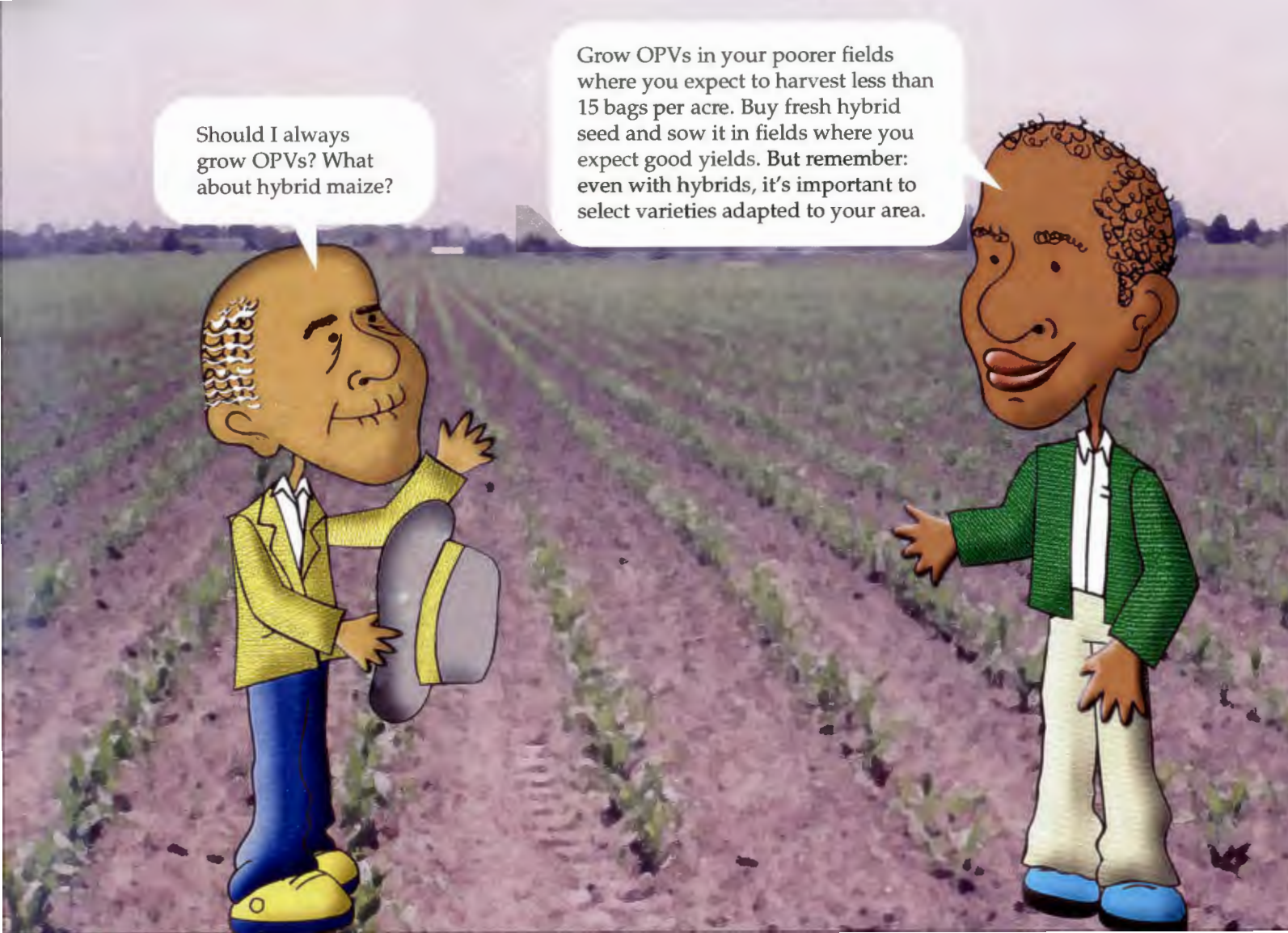
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Improved OPVs are available on the market. They are sold as certified open-pollinated maize seed. Just ask at your local shop. Your extension worker can tell you which OPV is best suited to your area.

I almost forgot, Mzuzukuru: Where can I get certified seed of these OPVs?



- Matuba
- KEP
- ZM 521
- Obatanpa
- ZM 621



Should I always grow OPVs? What about hybrid maize?

Grow OPVs in your poorer fields where you expect to harvest less than 15 bags per acre. Buy fresh hybrid seed and sow it in fields where you expect good yields. But remember: even with hybrids, it's important to select varieties adapted to your area.

Lastly, Sekuru, both OPVs and hybrids do better if you apply some manure or fertilizer and keep your field free of weeds and pests.

Thanks for your advice!





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