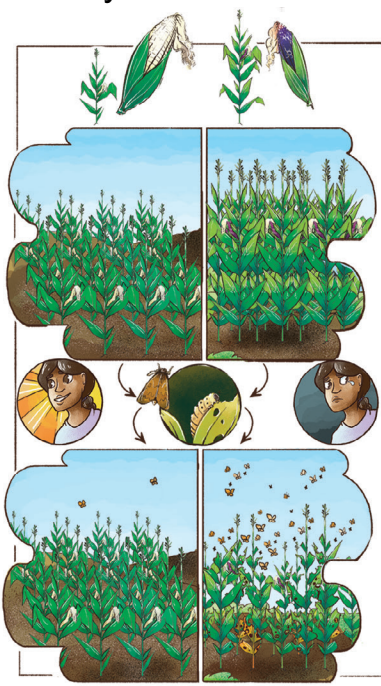
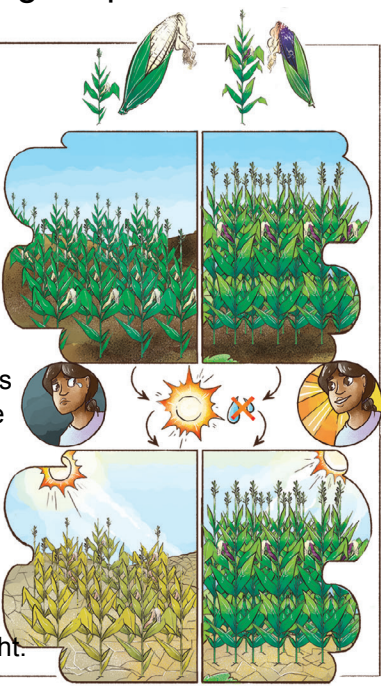


Lesson: After the best benefits of two crop varieties have been combined into a single variety, it is possible to have the new variety closely resemble one of the original parent varieties but to maintain the benefits of both varieties (part 1)

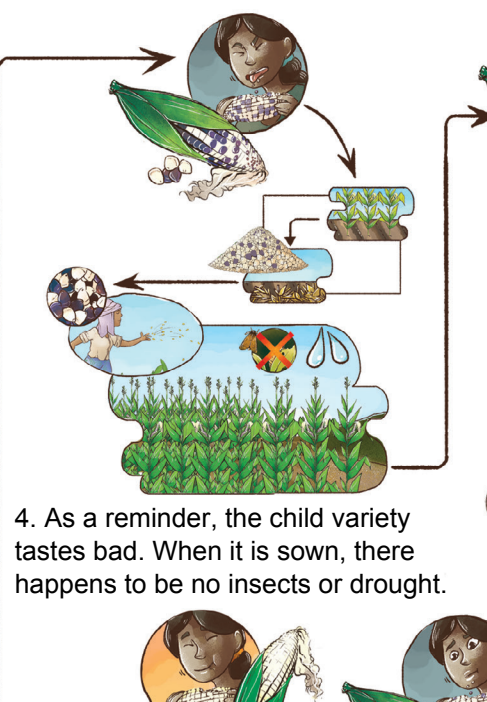
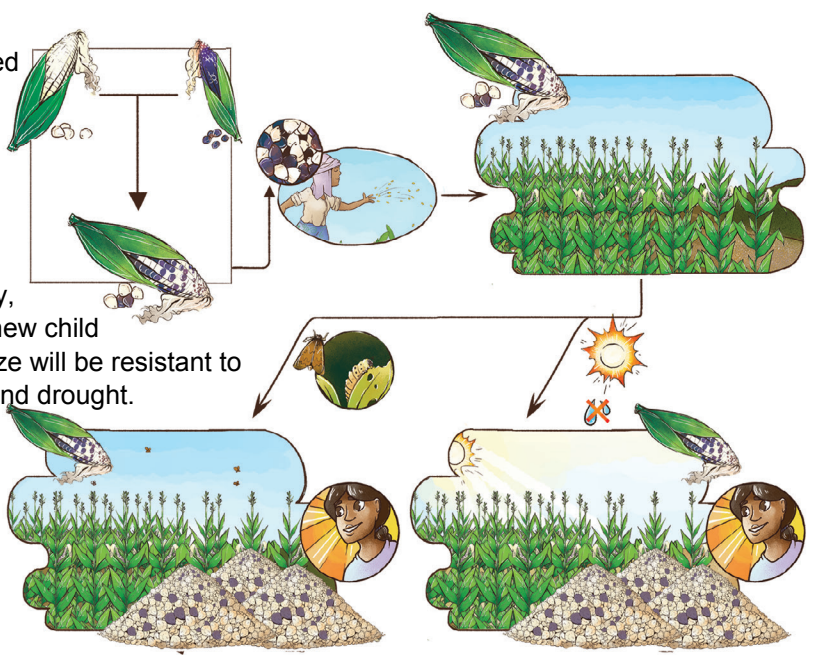
1. As a reminder, imagine two varieties of maize (white, purple)



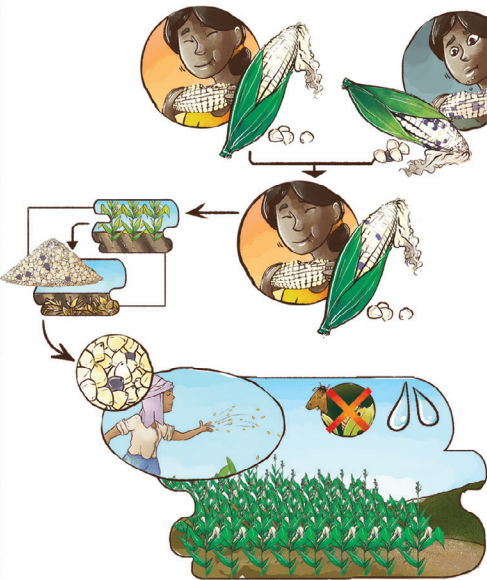
2. Again, imagine that the white maize variety (left) is more tolerant to insects while the white variety (right) is more tolerant to drought.



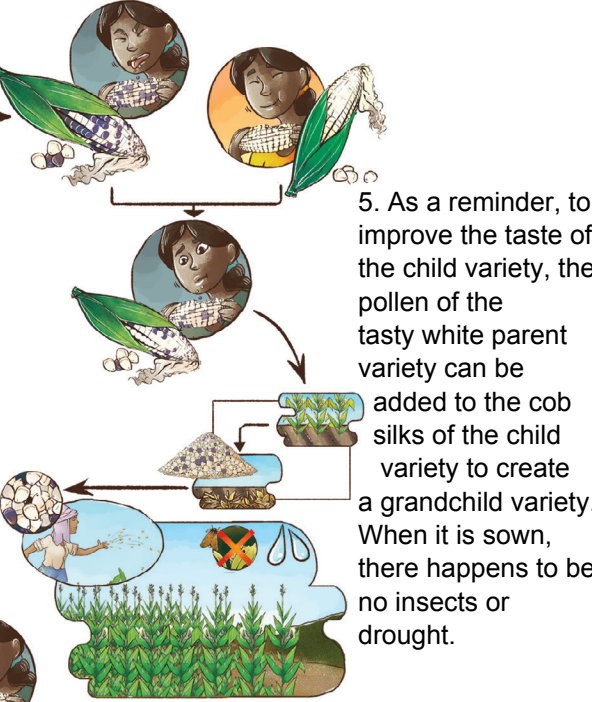
3. As described earlier, it is hoped that by adding the pollen of one variety to the silks of the second variety, the resulting new child variety of maize will be resistant to both insects and drought.



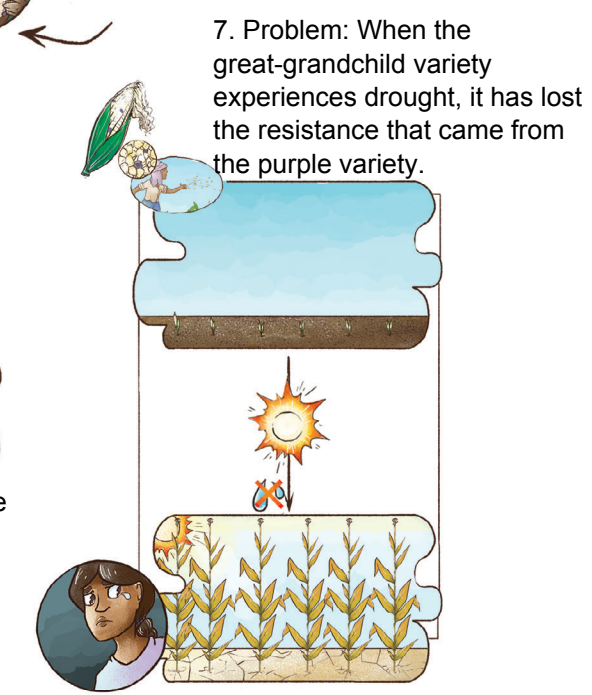
4. As a reminder, the child variety tastes bad. When it is sown, there happens to be no insects or drought.



6. As a reminder, to continue to improve the taste of the grandchild variety, the pollen of the tasty white parent variety can be added to the cob silks of the grandchild variety to create a great-grandchild variety. When it is sown, there happens to be no insects or drought.



5. As a reminder, to improve the taste of the child variety, the pollen of the tasty white parent variety can be added to the cob silks of the child variety to create a grandchild variety. When it is sown, there happens to be no insects or drought.



7. Problem: When the great-grandchild variety experiences drought, it has lost the resistance that came from the purple variety.

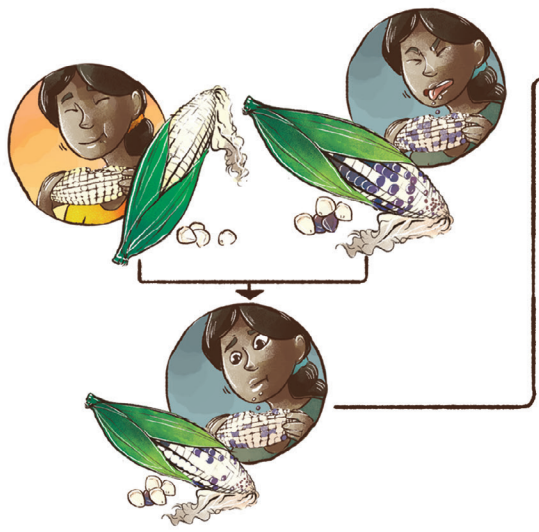


Lesson: After the best benefits of two crop varieties have been combined into a single variety, it is possible to have the new variety closely resemble one of the original parent varieties but to maintain the benefits of both varieties (part 2)

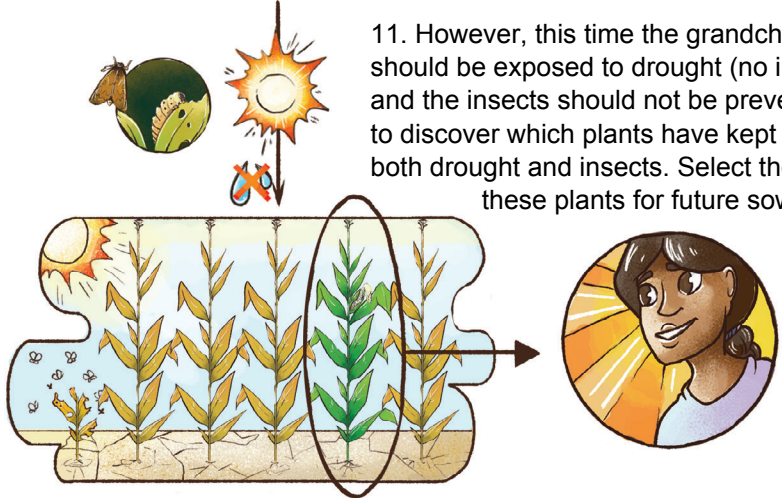
8. There is method to maintain the benefits of both the white variety and purple variety, but at the same time have the variety resemble the most desired white variety that is tasty.



9. After creating the child variety from the white and purple parent maize varieties, sow the child variety.

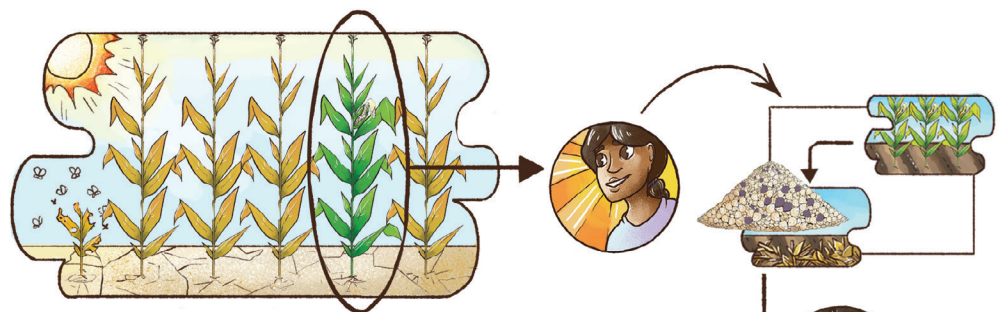


11. However, this time the grandchild variety should be exposed to drought (no irrigation) and the insects should not be prevented, in order to discover which plants have kept resistance to both drought and insects. Select the seeds of only these plants for future sowing.

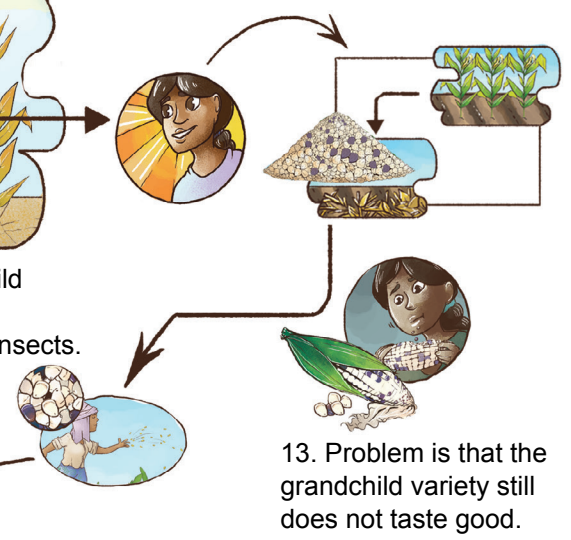


10. As before, to improve the taste of the child variety, the pollen of the tasty white parent variety can be added to the cob silks of the child variety to create a grandchild variety.

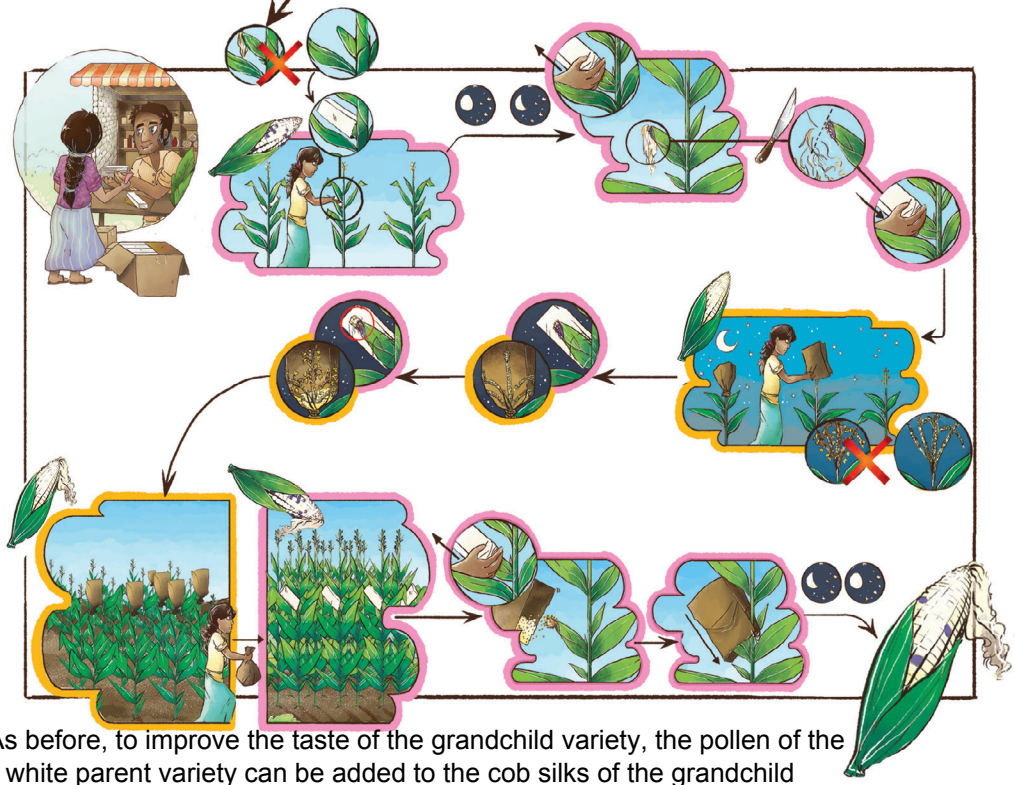
Lesson: After the best benefits of two crop varieties have been combined into a single variety, it is possible to have the new variety closely resemble one of the original parent varieties but to maintain the benefits of both varieties (part 3)



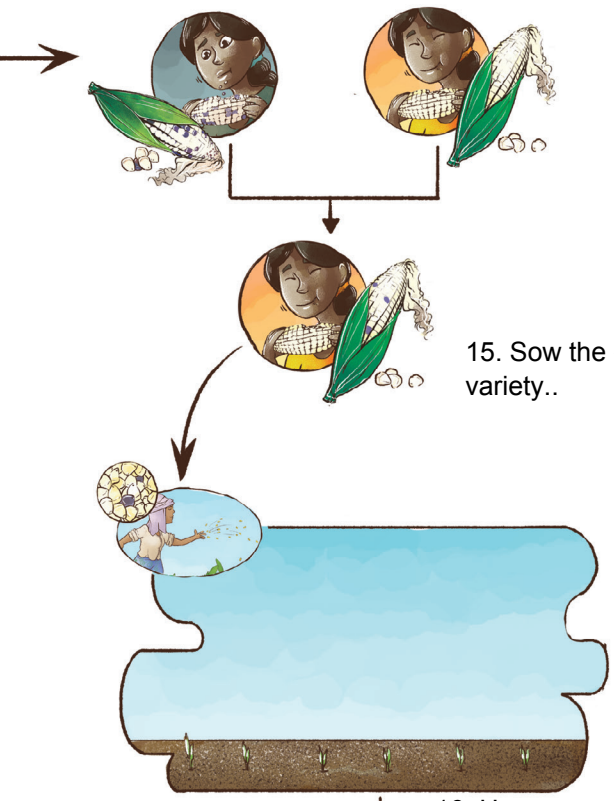
12. To repeat, sow the seeds of the grandchild plants which have resistance similar to both parent varieties, in this case to drought and insects.



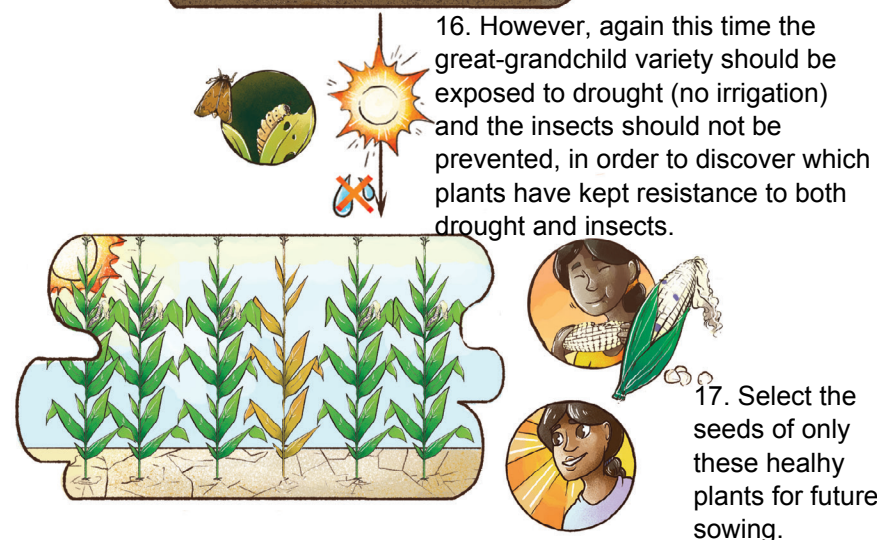
13. Problem is that the grandchild variety still does not taste good.



14. As before, to improve the taste of the grandchild variety, the pollen of the tasty white parent variety can be added to the cob silks of the grandchild variety to create a great-grandchild variety.



15. Sow the great-grandchild variety..



16. However, again this time the great-grandchild variety should be exposed to drought (no irrigation) and the insects should not be prevented, in order to discover which plants have kept resistance to both drought and insects.

17. Select the seeds of only these healthy plants for future sowing.