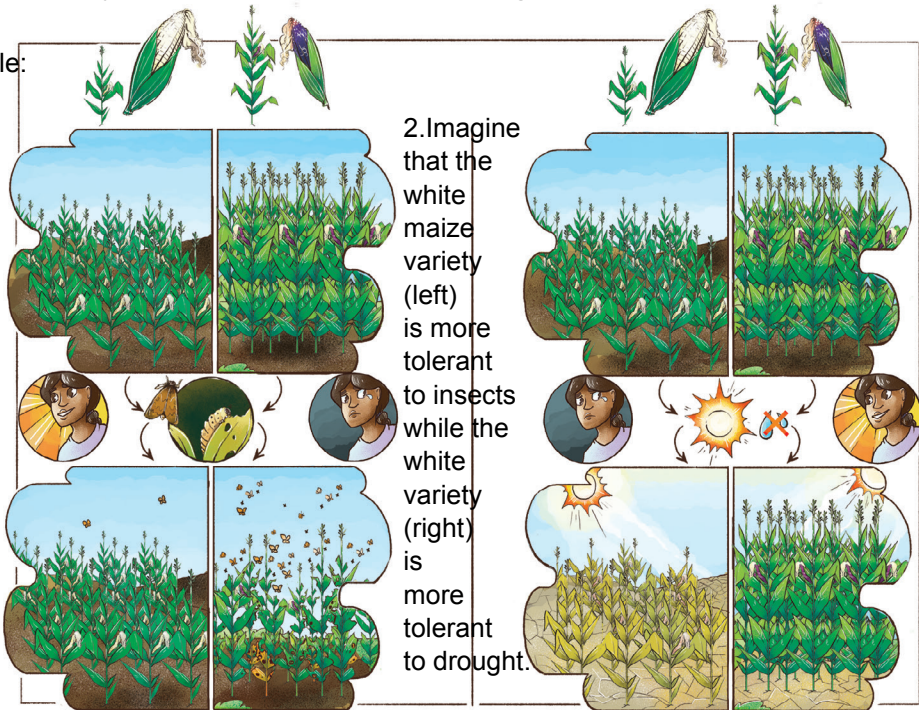
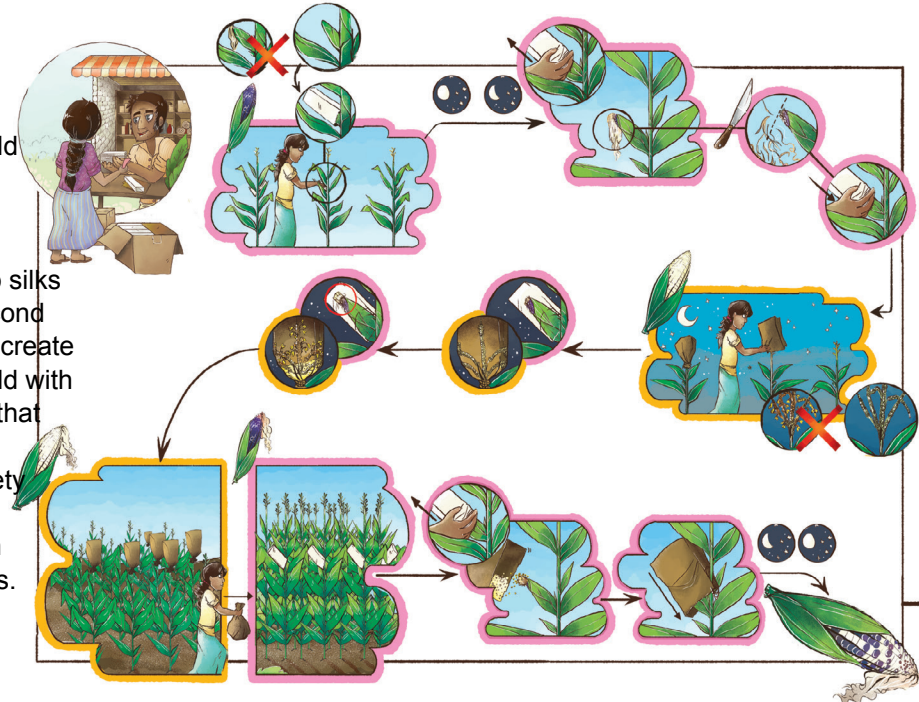


Lesson: After the best benefits of two crop varieties have been combined into a single variety, it is possible to have the new variety closely resemble one of the original varieties (part 1)

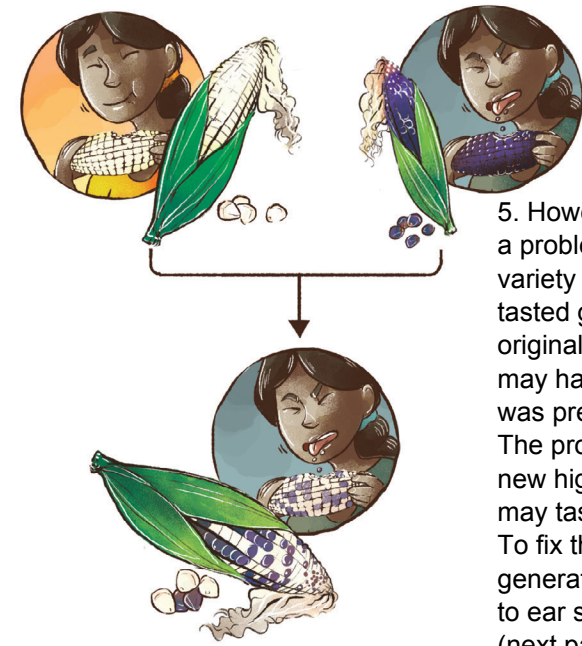
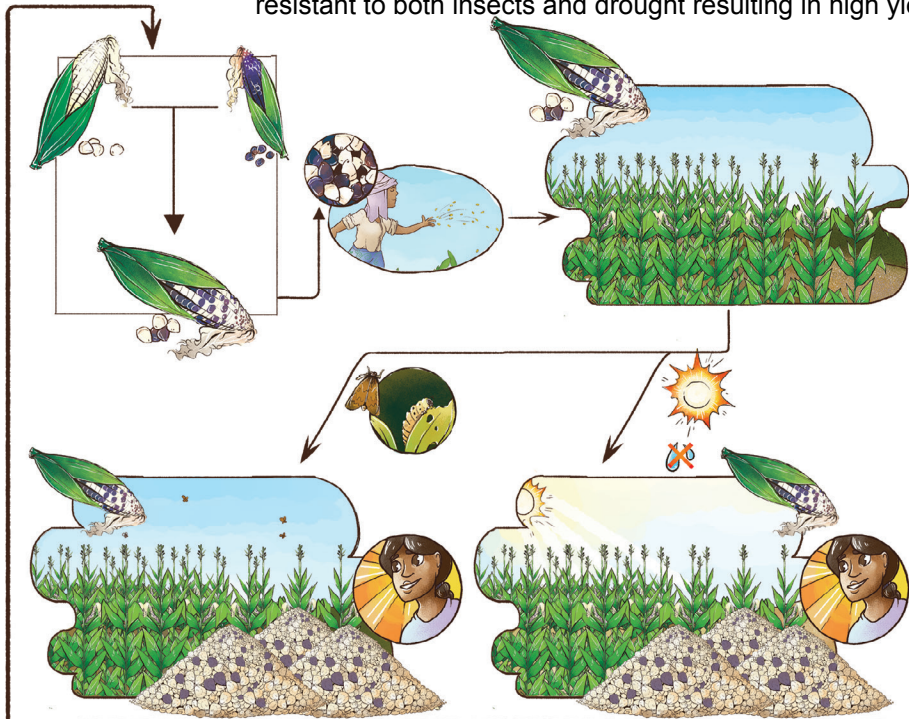
1. Example: Imagine two varieties of maize (white, purple)



3. As described earlier, add the pollen of one variety to the cob silks of the second variety to create a new child with the hope that the child variety would have both good traits.



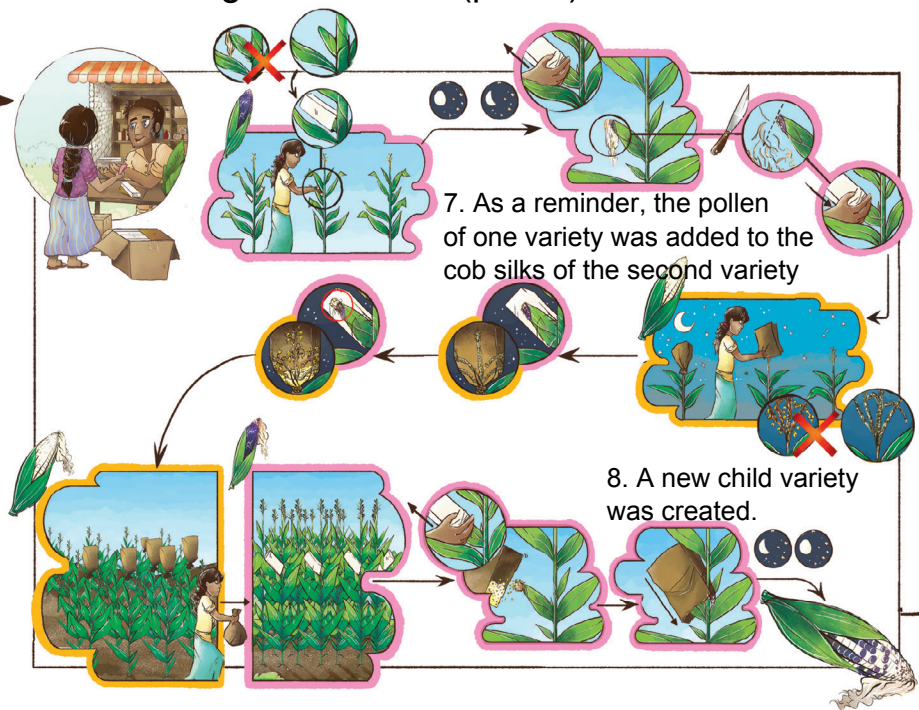
4. As described earlier, it is hoped that the new variety will be resistant to both insects and drought resulting in high yield.



5. However, there may be a problem: the original white variety parent may have tasted good, while the original purple parent variety may have tasted bad (but was preferred by chickens). The problem is that the new high-yielding child variety may taste bad to humans. To fix the problem, multiple generations of adding pollen to ear silks will be required (next page).

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 varieties (part 2)

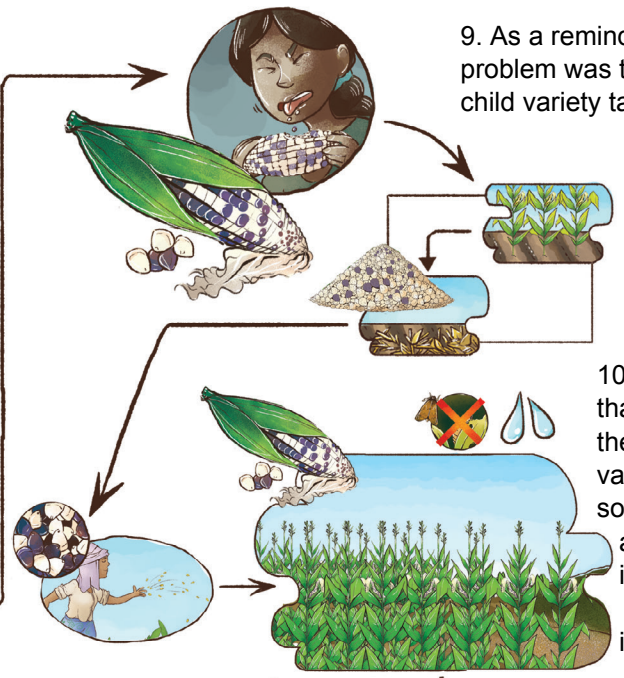
6. As a reminder, the white parent variety of maize tastes good, but the purple variety of maize tastes bad to humans.



7. As a reminder, the pollen of one variety was added to the cob silks of the second variety

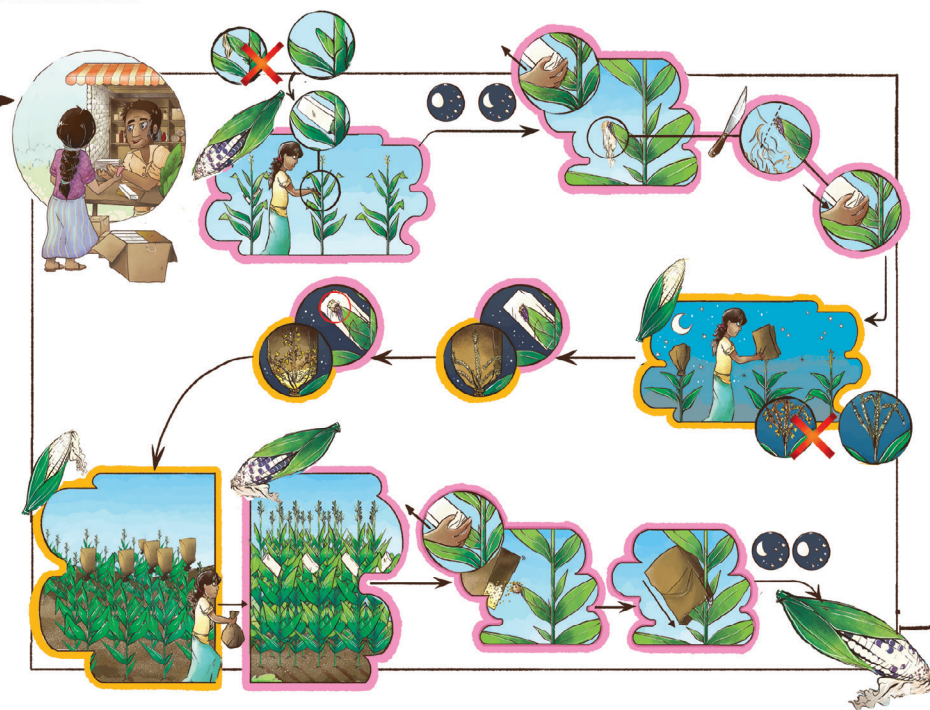
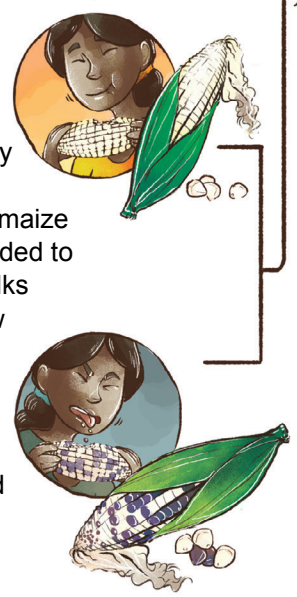
8. A new child variety was created.

9. As a reminder, the problem was that the child variety tasted bad.

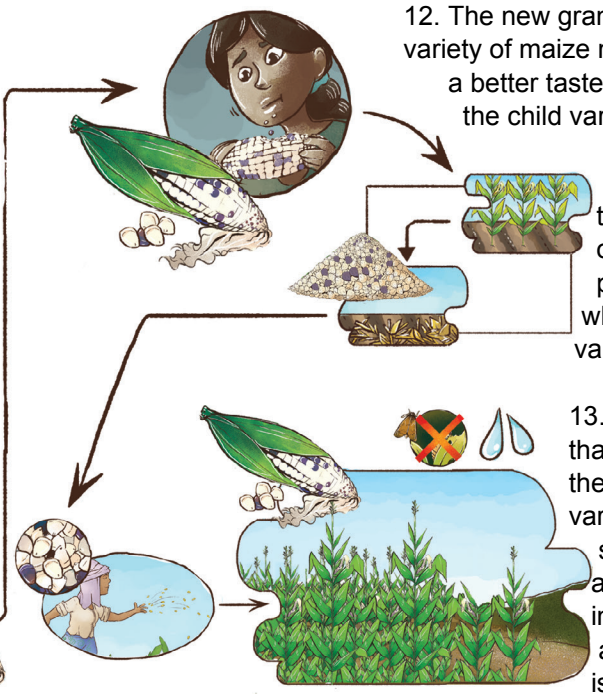


10. Imagine that when the child variety is sown, there are no insects and water is sufficient

11. To start to fix the taste problem, the pollen of the tasty white variety of maize can be added to the cob silks of the new child variety to create a grandchild variety.



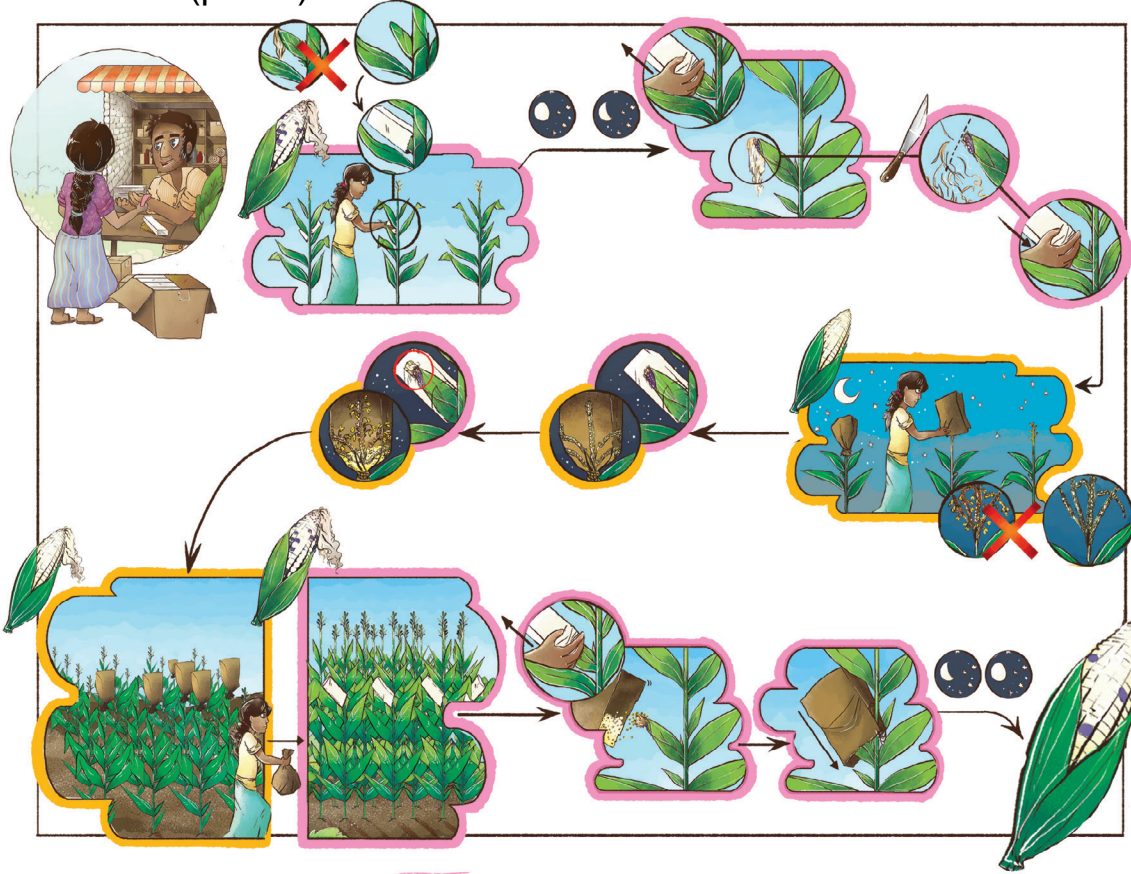
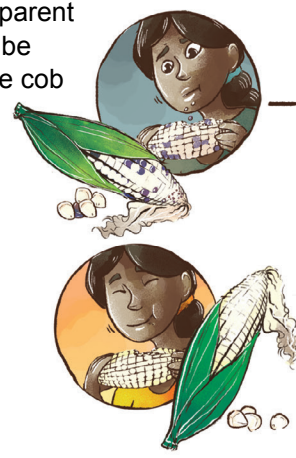
12. The new grandchild variety of maize may have a better taste than the child variety but not as good as the original parent white maize variety.



13. Imagine that when the grandchild variety is sown, there are no insects and water is sufficient.

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 varieties (part 3)

14. 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.

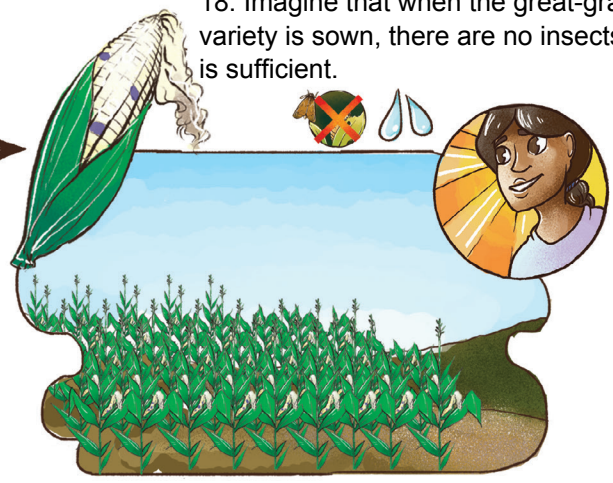


15. The new great grandchild variety will more resemble the original white parent variety

16. The great-grandchild variety of maize is now tasty.



18. Imagine that when the great-grandchild variety is sown, there are no insects and water is sufficient.



19. It is not clear whether the great-grandchild variety has kept its resistance to both insects and drought.



17. Sow the great-grandchild variety.

