

My Family Cares for Soil

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1. Dad and pH Meter

Dad owns a soil pH Meter.

He warns me not to litter

The soil sample to find out

Whether our land is sour or sweet.

If it is sour, he adds some lime.

It then gets more alkane and less acidic.

I find it super fantastic.

He discovers this through colours.

Yellow means neutral, blue is alkane, red means acidic.

Yellow means
neutral



Blue means
alkaline



Red means
acidic



2. Mom and Moisture Meter

Mom knows when her garden is wet or dry.

She has a moisture meter she never tires to apply

If the soil craves for more water, this smart machine tells.

She then adds some water from rain and wells.

See, that is why we never run out of fresh veggies.



Moisture Meter

Yellow means
Dry

Green means
Moist

Blue means
Wet

3. Grandpa and Nutrient Kit

Grandpa still diagnoses the soil

To ensure his farm flourishes every season.

He uses Nutrient Kit to check levels of N.P.K.

If not enough, he fertilizes the soil and spreads mulch around it.

He does add some compost too, rich and fine

So crops would grow in every line and every season.



4. Grandma and Temperature Probe

I used to wonder why grandma doesn't sow seeds of tomatoes

Anyhow, only to realize later she owns a temperature probe

That enables her to check whether the soil is cool or warm.

If it is too warm, she irrigates and adds some mulch to boost its moisture.

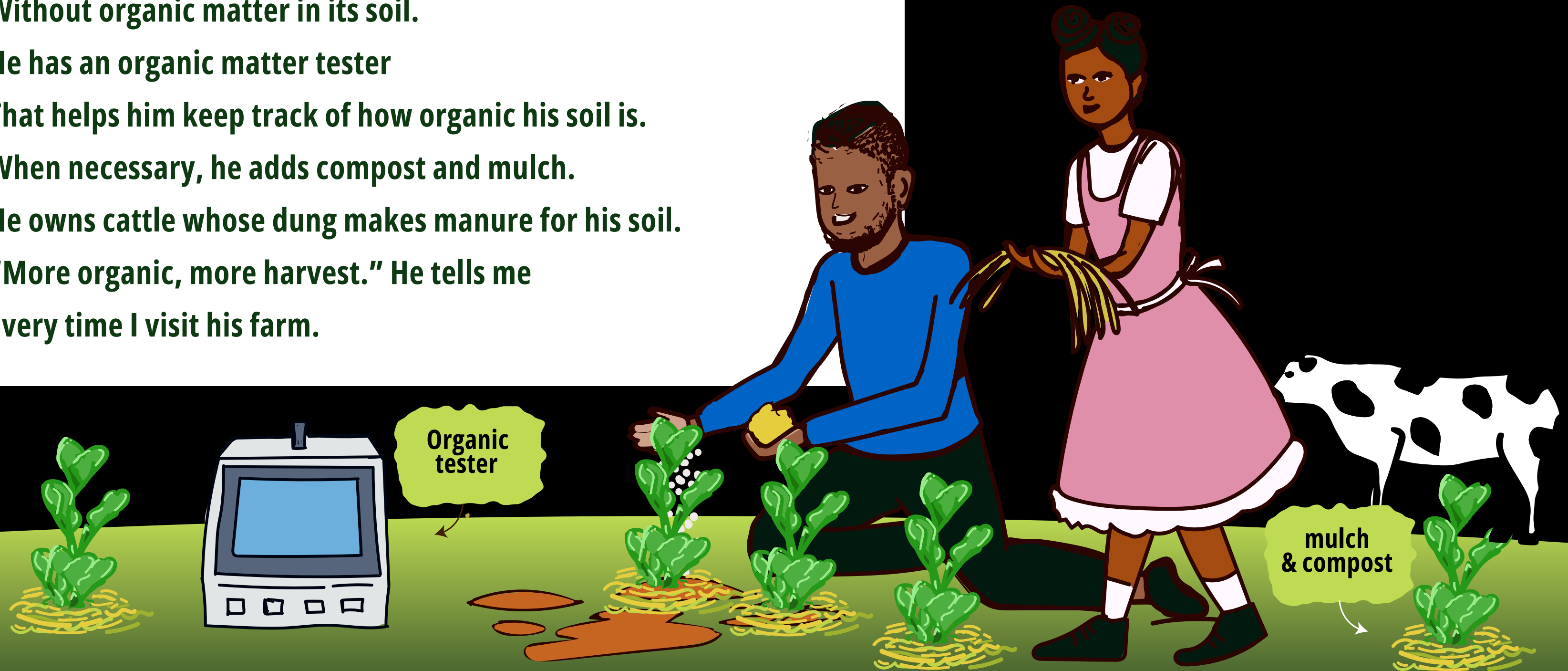
If it is too cool, she waits for some sunlight to come through.

She keeps a record to check each time, to know when planting is prime.



5. Uncle and Organic Tester

My uncle loves his land,
And can't afford finding it
Without organic matter in its soil.
He has an organic matter tester
That helps him keep track of how organic his soil is.
When necessary, he adds compost and mulch.
He owns cattle whose dung makes manure for his soil.
"More organic, more harvest." He tells me
Every time I visit his farm.

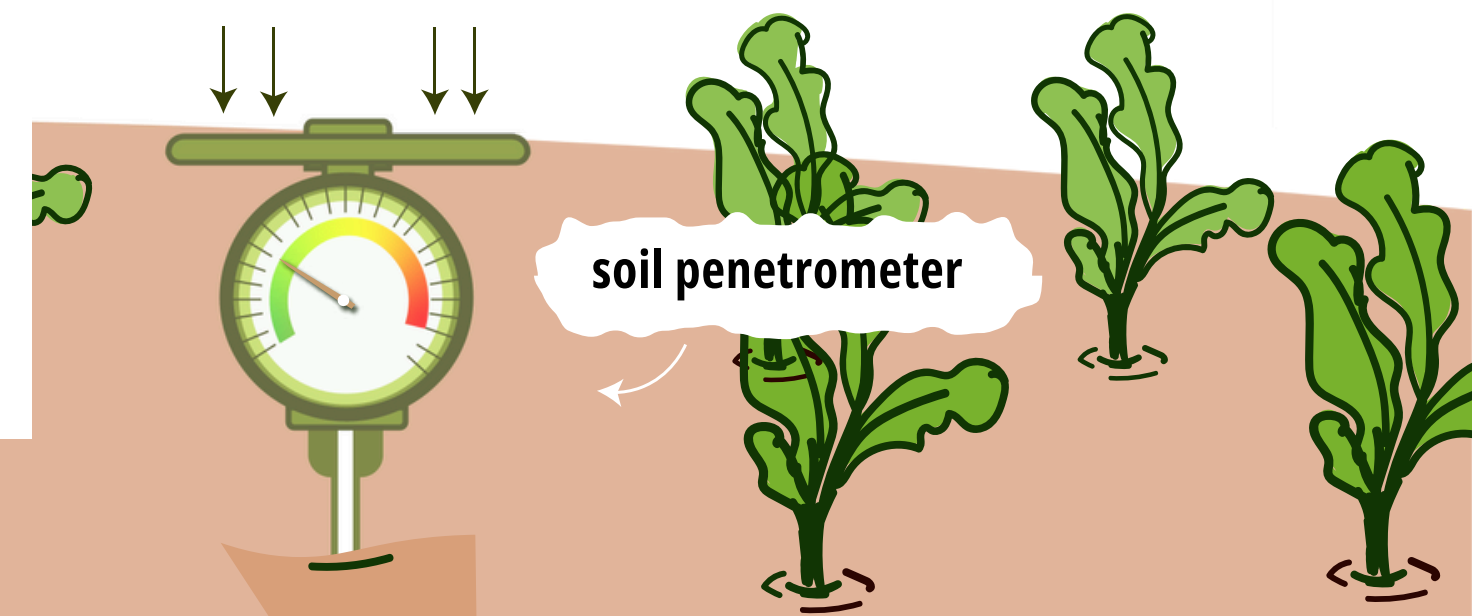


6. Aunt and Penetrometer

When I crushed an earthworm in her farm,
Aunt got angry at me and started telling me
That these small beings under our feet
Aerate our soils for crops roots and water to penetrate.
They also allow soil life in it to breathe just as we do.
When I asked her what she uses to check soil hardness,
She replied that she has a penetrometer
That makes her farming plans better.
“To soften the soil, I till it, add organic matter to invite more earthworms
That will aerate it, and regulate cultivation, allowing more vegetation.”



- Roots grow well
- Roots grow fair
- Roots grow poor



7. Nephew and Electrical Conductivity Meter

On visit to my nephew, I found him complain.

He had found the soil in his farm too salty.

I wondered what was wrong with his brain.

- "Nephew, how could soil ever be salty!" I asked.

- "My child, soils can get salty if salt seawaters submerge our lands.

Also, it happens when rocks and minerals dissolve on our lands."

- "That is interesting, and how do you find it out?"

- "We use that tool in front of you to measure levels of salt in soil.

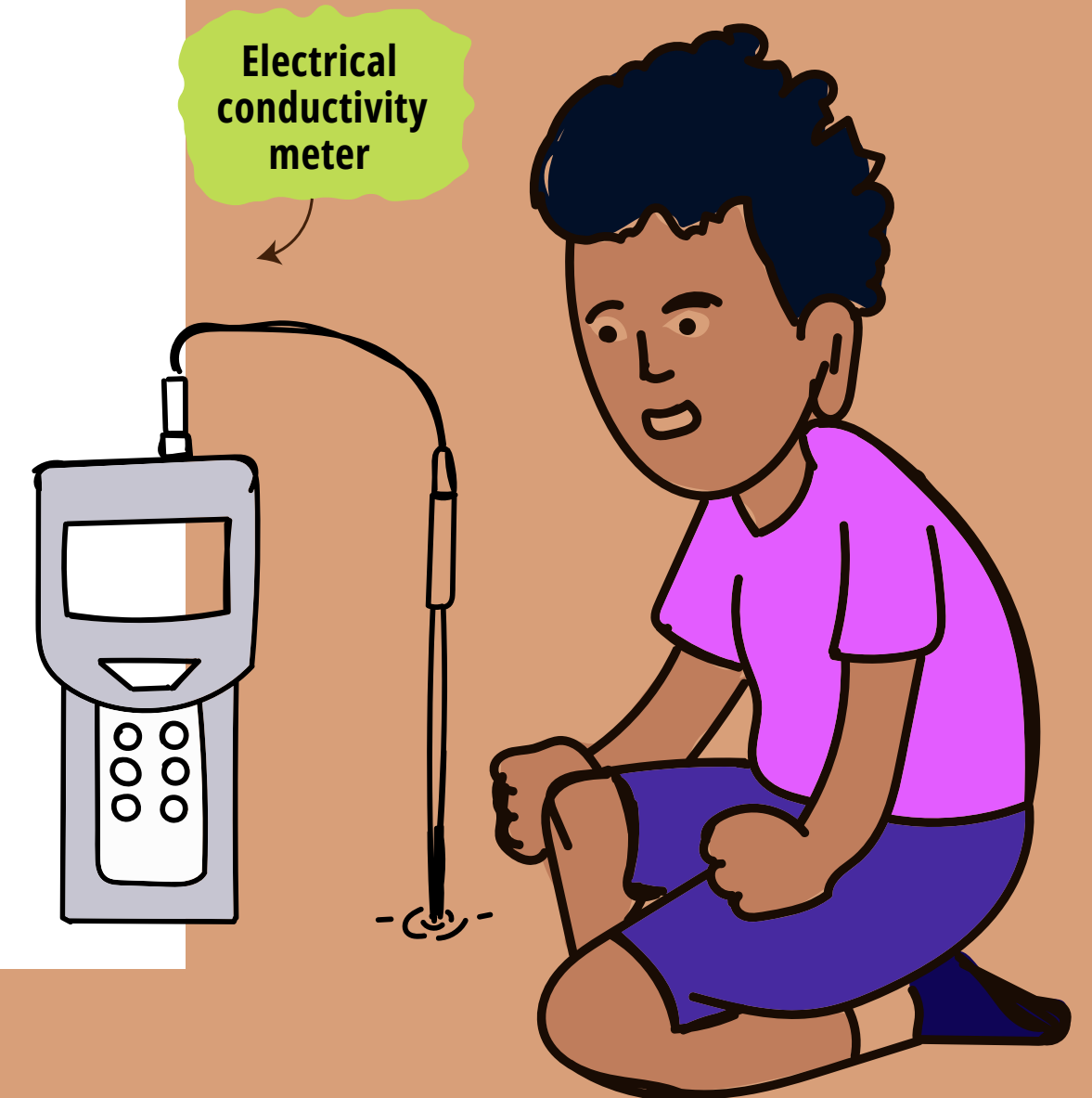
It is called electrical conductivity meter or EC Meter.

Now, we remove the salt from soil by ponding fresh water on its surface

And making it easier to infiltrate. The process is called leaching.

It takes long time, and sometimes we have to plant salt-tolerant crops."

- "Wow, thank you, I didn't know. I thought salt is from seawater and for food."



8. Niece and Respiration Kit

My niece is a soil microbial expert.

She told me not all microbes are pathogens. She said those tiny living beings in our soils enable us to farm and feed our humankind. For instance, earthworms recycle nutrients and aerate soils. She has a respiration kit she uses to measure the microbial respiration activity. Increased respiration means soil's treasure. Whoever finds more worms and bugs in the ground knows they have found riches to keep around.



9. Cousin and Remote Sensing Drone

Once a week, my cousin flies her drone sensor

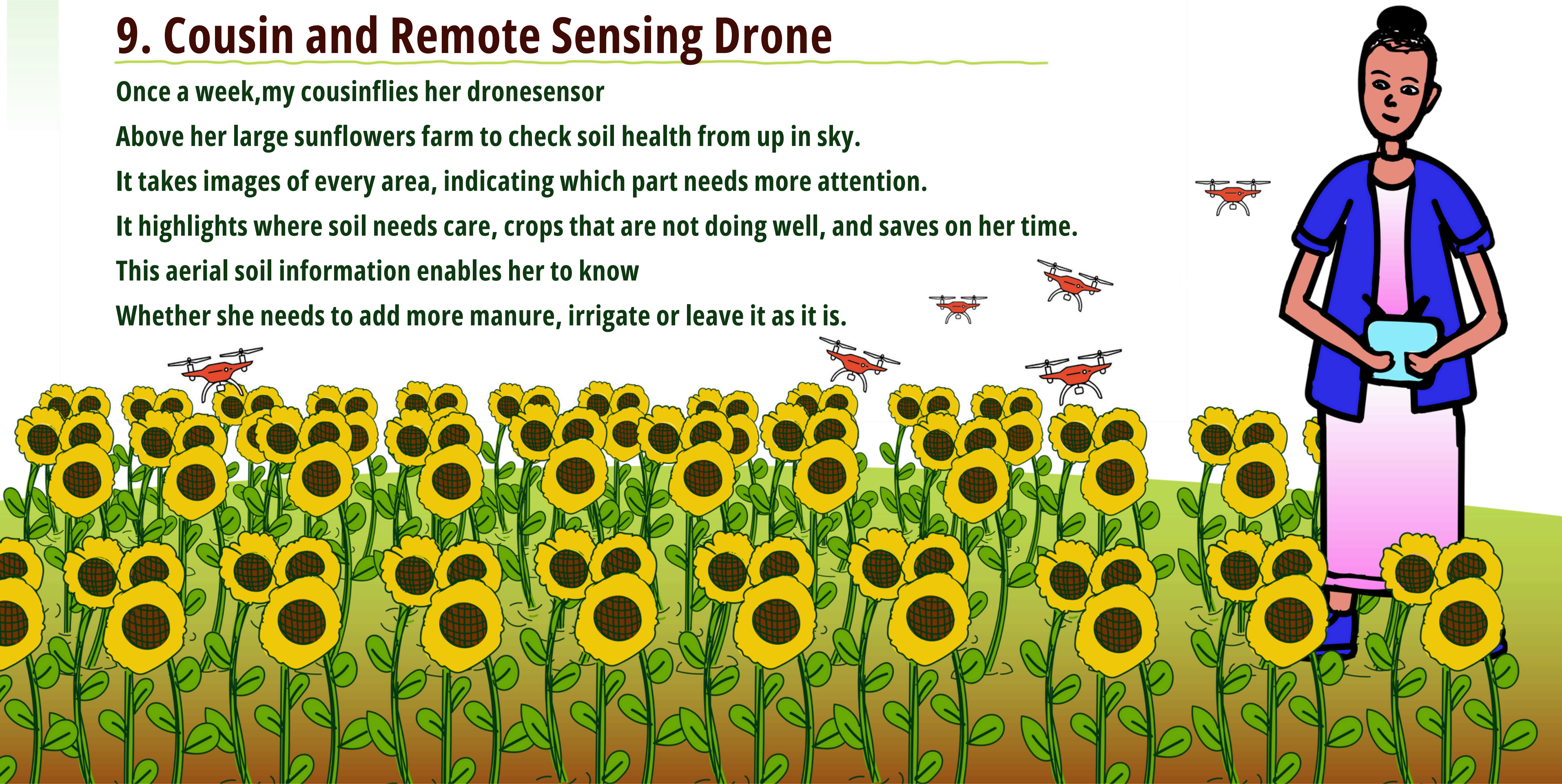
Above her large sunflowers farm to check soil health from up in sky.

It takes images of every area, indicating which part needs more attention.

It highlights where soil needs care, crops that are not doing well, and saves on her time.

This aerial soil information enables her to know

Whether she needs to add more manure, irrigate or leave it as it is.



10. Brother and Soil Data Logger

My elderbrother has a loggerthatrecords

Soil's health status everyday.

From pH, salt, temperature, and water's share.

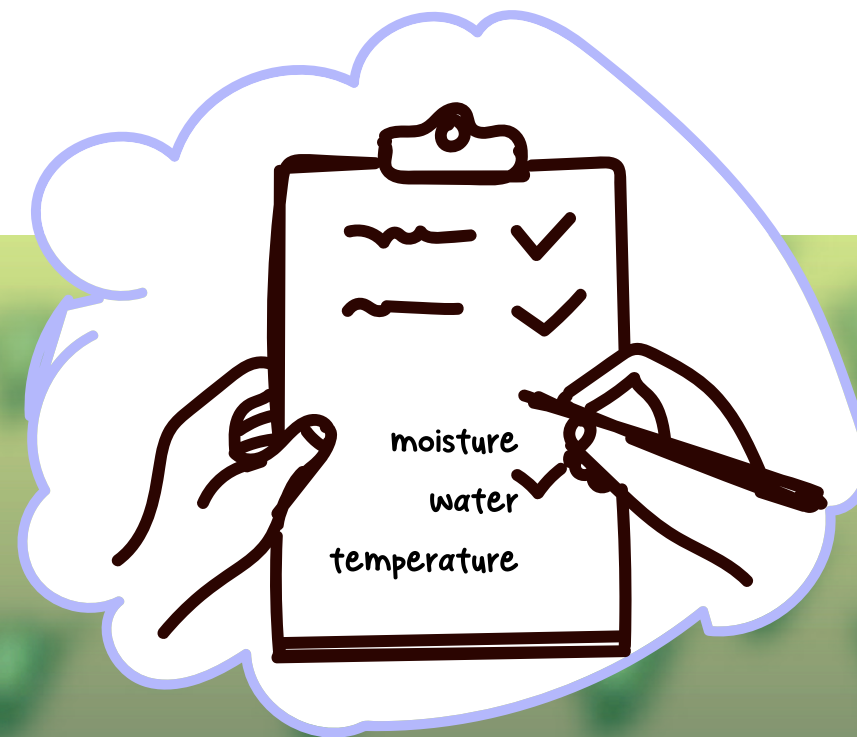
He treats soil as a baby in mom's arms.

He knows how it breathes, what it eats, and avoids what would harm it.

He uses the data to know when to plant, and when to harvest.

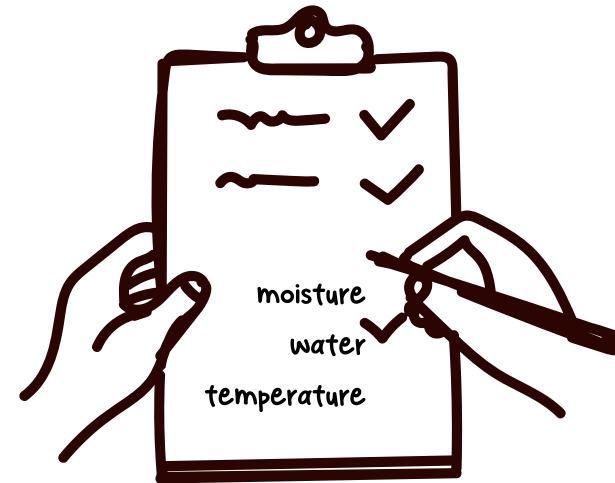
He understands fruits or fries we enjoy come from it.

Data logger

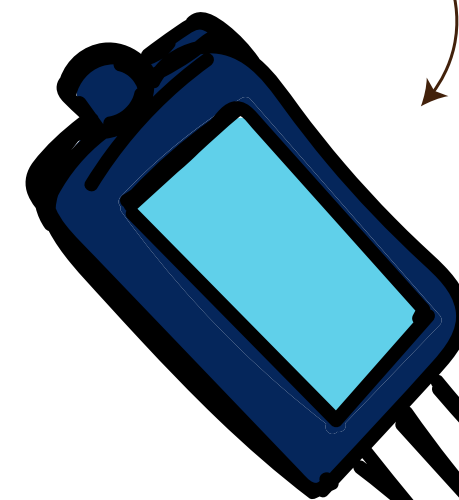


11. My Sister and Soil Journaling and Mapping

Every weekend, my elder sister surveys lands.
She moves around with her tablet and a camera.
She has a sifter she uses to catch pebbles.
She also has soil quality sensors and a scoop.
She gets some dirty soil she tests,
And notes down findings in her journal notebook.
With her camera and soil quality sensors,
She is able to map out types of soils,
Highlights moisture, water and temperature levels.
She draws a map, and subdivides it in line with plants
And microorganisms found in every zone.
With this data, she can inform local farmers
What to plant and what to do to take care of their farms.
She is taking soil science studies at college.



soil sensor



The End!



