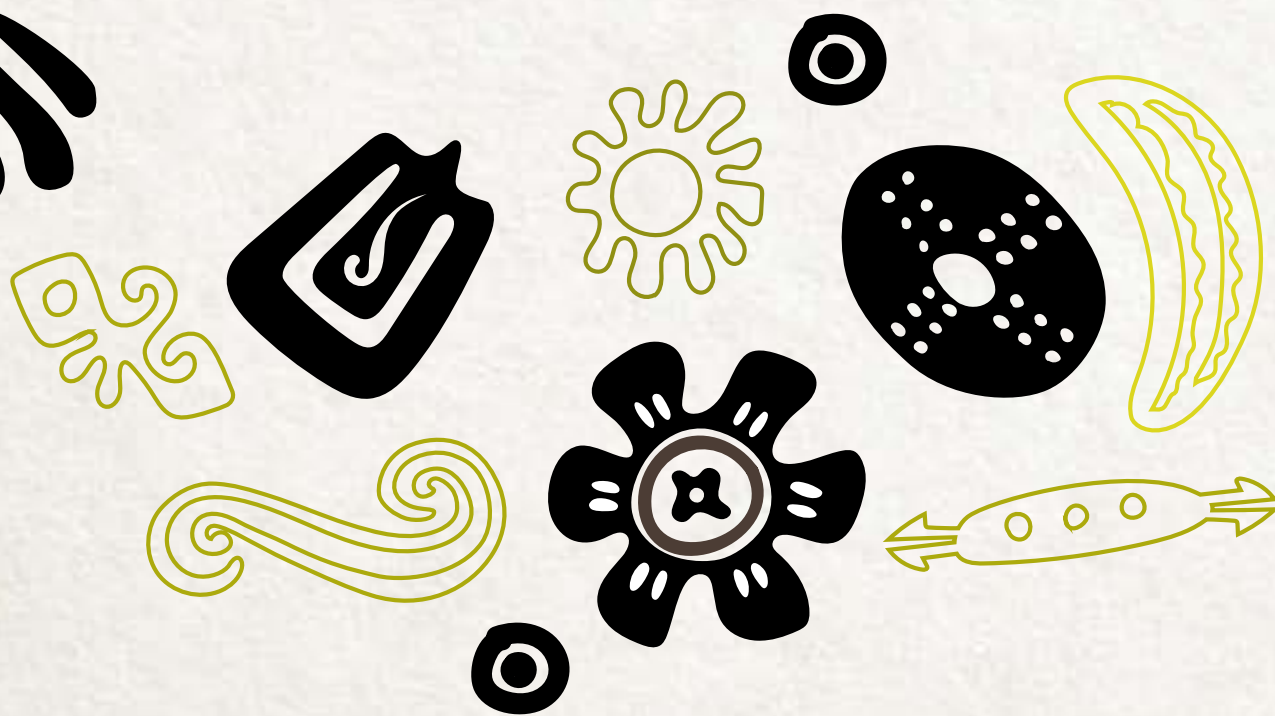

SEED SAVING

— an illustrated guide —



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WELCOME

IF YOU ARE LOOKING FOR BASIC INFORMATION TO PRODUCE YOUR OWN SEEDS IN AN ECOLOGICAL MANNER, THIS HANDBOOK IS FOR YOU.

IT WAS PUT TOGETHER BY **RED DE GUARDIANES DE SEMILLAS** (SEED GUARDIANS NETWORK), AN ECUADORIAN SOCIAL ORGANIZATION FORMED BY FAMILIES THAT CREATE THEIR OWN REGENERATIVE LIFESTYLES. FOLLOWING DEMAND BY BIODIVERSITY FRIENDLY AGRICULTURE MOVEMENTS ACROSS REGIONS, WE HAVE NOW DECIDED TO PRODUCE AND DISSEMINATE OUR GUIDE.

TRANSLATING AND SHARING THIS LOCAL KNOWLEDGE WITH A GLOBAL COMMUNITY HAS BEEN MADE POSSIBLE THROUGH FARMING FOR BIODIVERSITY, A PROJECT SUPPORTED BY THE **INTERNATIONAL CLIMATE INITIATIVE OF THE GERMAN MINISTRY FOR ENVIRONMENT, NATURE CONSERVATION AND NUCLEAR SAFETY (BMU ICI)**. FARMING FOR BIODIVERSITY IS IMPLEMENTED BY **RARE AND IFOAM - ORGANICS INTERNATIONAL**, IN COOPERATION WITH THE **CONVENTION ON BIOLOGICAL DIVERSITY (CBD)**.

SWISSAID ECUADOR FINANCED THE INITIAL MATERIAL.

THIS GUIDE WILL HELP YOU UNDERSTAND THE ESSENTIAL ASPECTS OF WORKING WITH SEEDS. YOU CAN LOOK FOR MORE SPECIFIC INFORMATION ON THE INTERNET. OUR WEB PAGE AND OUR MAGAZINE ALLPA ARE VERY USEFUL SOURCES FOR SPANISH SPEAKERS.

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GLOBAL OUTREACH



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Supported by:



based on a decision of the German Bundestag

WWW.INTERNATIONAL-CLIMATE-INITIATIVE.COM

WE HOPE THIS GUIDE WILL HELP YOU **CULTIVATE YOUR OWN AUTONOMY**. SEEDS ARE THE FOUNDATION FOR FOOD SOVEREIGNTY AND TAKING CARE OF THEM IS A WONDERFUL JOURNEY.

WHAT IS A SEED ?

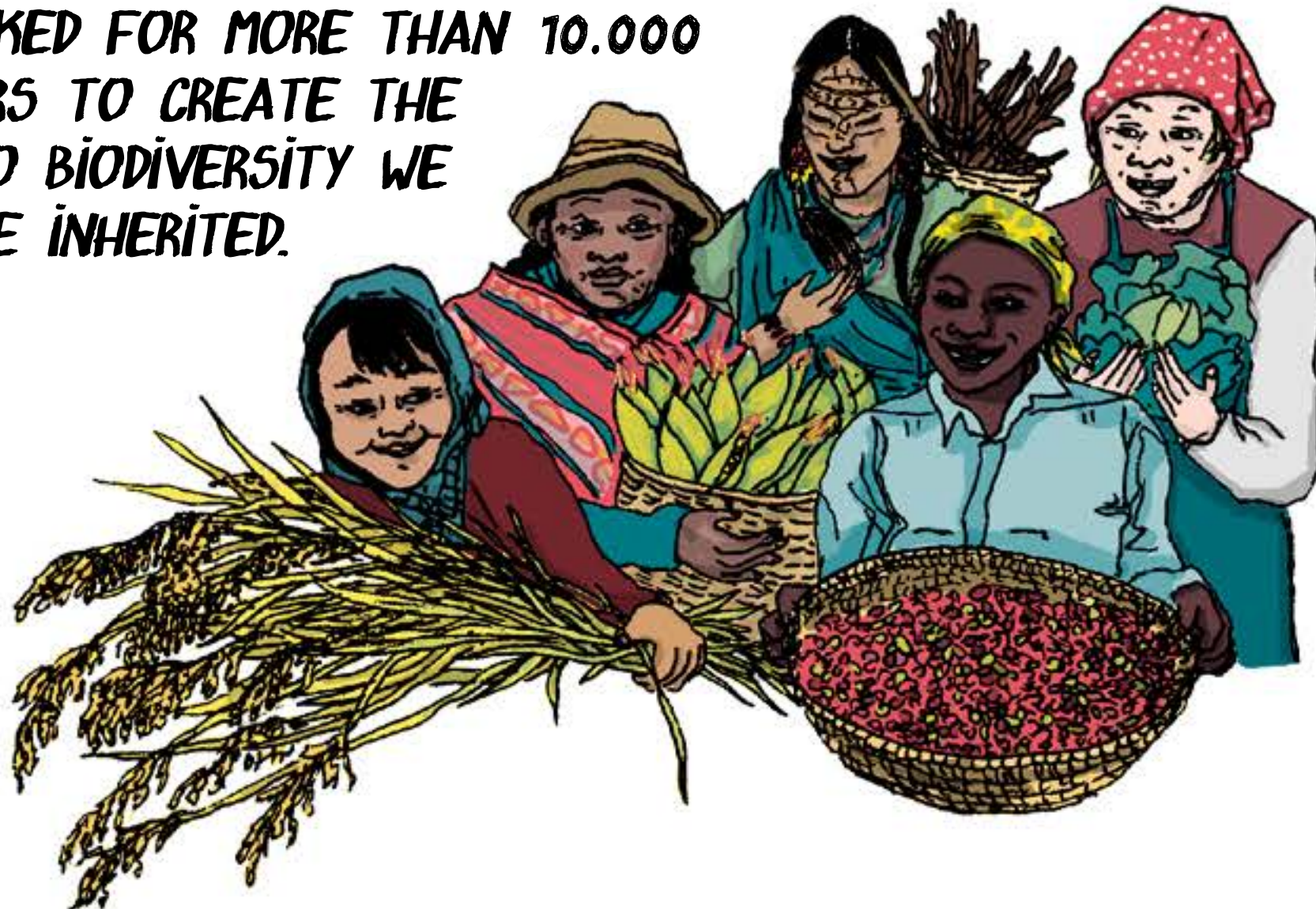


FOR THE ANCESTRAL PEOPLES OF ECUADOR,
A SEED IS THAT **WHICH REPRODUCES LIFE**.

THIS INCLUDES BOTANICAL SEEDS SUCH AS CORN,
AND VEGETATIVE MATERIAL SUCH AS CASSAVA
CUTTINGS.

THE SEEDS OF THE CROPS WE USE TODAY,
WERE CREATED BY INDIGENOUS PEOPLES
THROUGH A PROCESS CALLED DOMESTICATION:
THE SELECTION, YEAR AFTER YEAR, OF PLANTS
THAT HAVE USEFUL CHARACTERISTICS, TO CARRY ON
REPRODUCTION WITH THEM.

MILLIONS OF SEED GUARDIANS HAVE
WORKED FOR MORE THAN 10.000
YEARS TO CREATE THE
AGRO BIODIVERSITY WE
HAVE INHERITED.

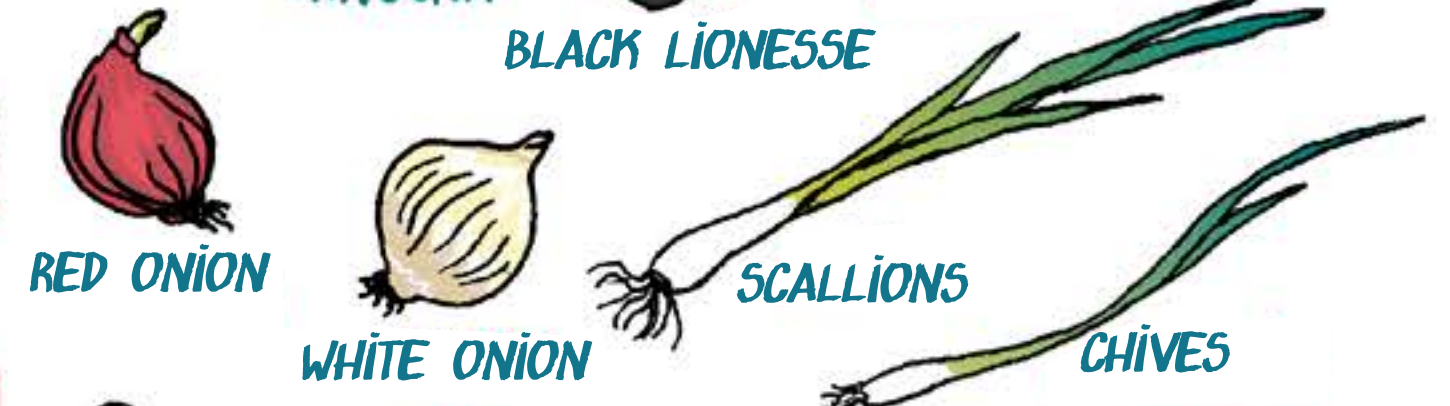


SPECIES AND VARIETIES

POTATO



ONION



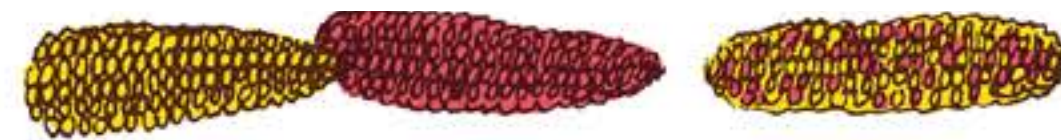
BEANS



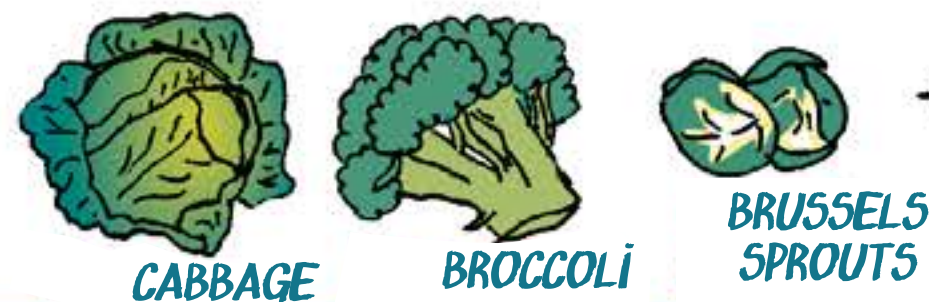
SPECIES

VARIETIES

A SPECIES IS DEFINED BY THE CAPACITY OF INDIVIDUALS TO
BREED AND PRODUCE **FERTILE OFFSPRING**.



SOMETIMES THE SHAPES CAUSE CONFUSION:



THEY SEEM VERY DIFFERENT
BUT THEY BELONG TO THE
SAME SPECIES, AND CAN
CROSS WITH EACH OTHER.

IT IS ESSENTIAL TO KNOW WHICH PLANTS BELONG TO THE
SAME SPECIES, IN ORDER TO PRESERVE A VARIETY OR TO
CREATE NEW VARIETIES.

WHERE TO GET THEM ?

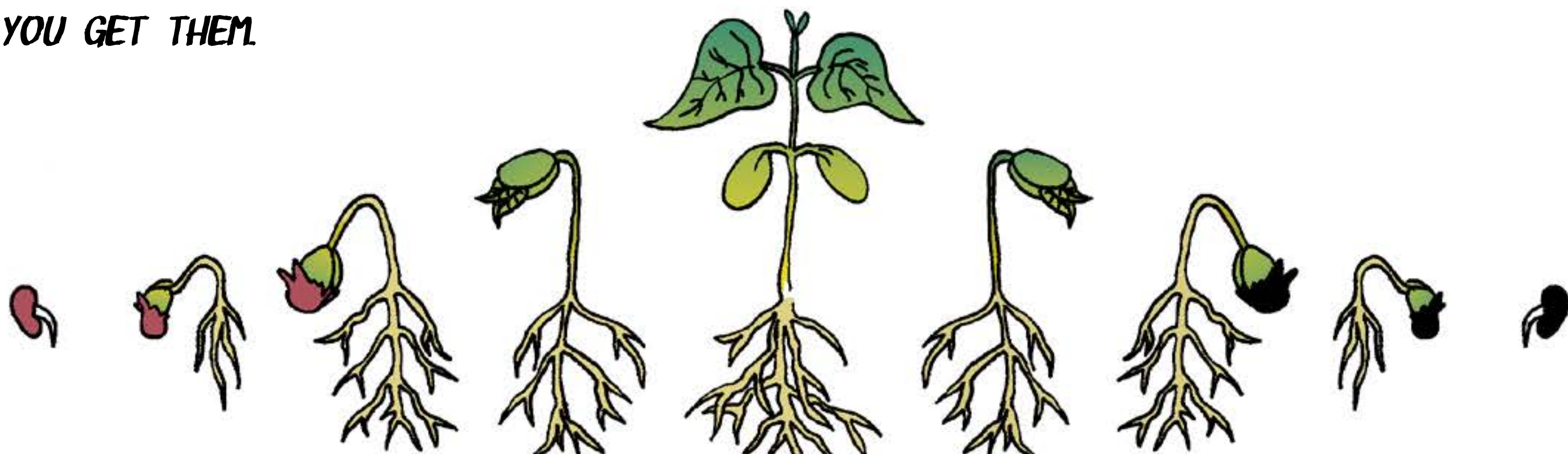
1. IN MOST COUNTRIES TODAY, THERE ARE **INDEPENDENT NETWORKS** THAT SELL AND EXCHANGE SEEDS. THEY USUALLY HAVE INTERESTING VARIETIES. MANY ARE TAILORED TOWARDS ORGANIC FARMING AND THE QUALITY OF THEIR SEEDS IS SUSTAINED BY THE PASSION OF THEIR PRODUCERS.

2. **SMALL SEED FARMS AND FAMILY OR COMMUNITY ENTERPRISES.** IT IS ESSENTIAL TO SUPPORT THEIR WORK. TRY TO CREATE PERSONAL RELATIONSHIPS WITH THEM.

3. **FARMER'S MARKETS,** EVEN IF SEEDS ARE NOT FOR SALE AT THE MOMENT, YOU MAY ASK THE FARMERS TO HELP YOU GET THEM.

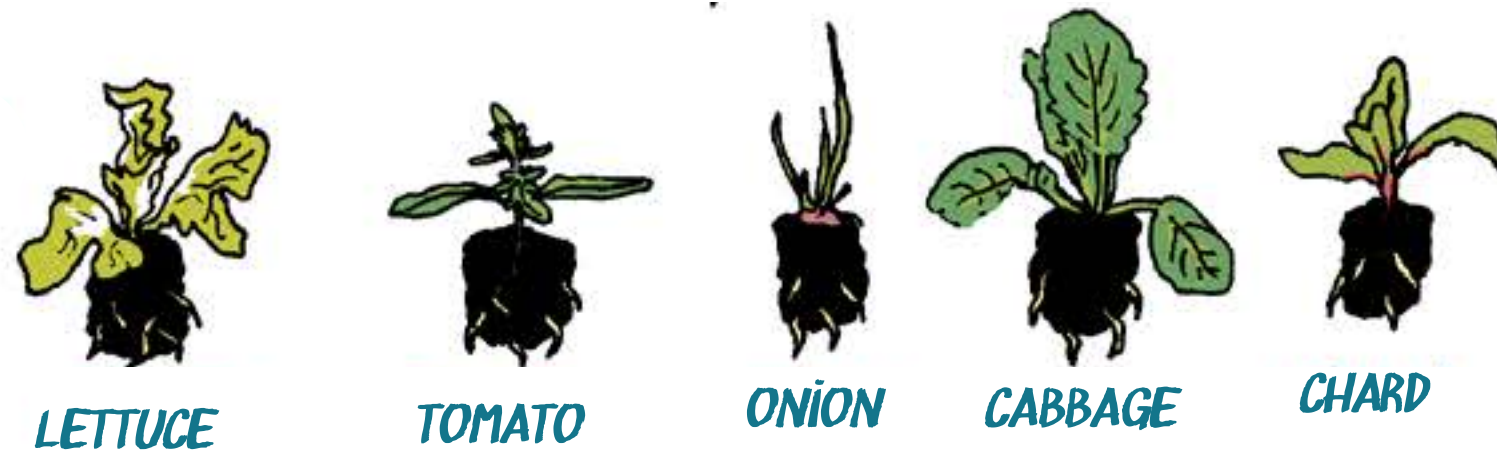
4. IN **STATE-MANAGED SEED BANKS.** GENERALLY, THESE VAST COLLECTIONS ARE NOT OPEN TO THE PUBLIC, BUT WE MUST ADVOCATE FOR THE RIGHT TO ACCESS AND HELP THEM PRESERVE THEIR COLLECTIONS VIA IN-FIELD REPRODUCTION.

5. ON THE **ROADSIDES,** WALKING IN THE FIELDS. ASKING YOUR NEIGHBORS. THE WORLD IS FULL OF TREASURES



GERMINATION

SOME SEEDS WILL DO BETTER IF YOU PLANT THEM IN A SEEDBED. EXAMPLES INCLUDE:



THE SEEDBED MAY BE DUG IN THE GROUND, OR YOU CAN USE ANY CONTAINER THAT IS AT LEAST 5 CM (2 INCHES) DEEP, WITH SMALL HOLES TO LET OUT EXCESS WATER. THERE ARE ALSO PROFESSIONAL SEED STARTER TRAYS YOU CAN BUY.



SEED STARTER TRAY

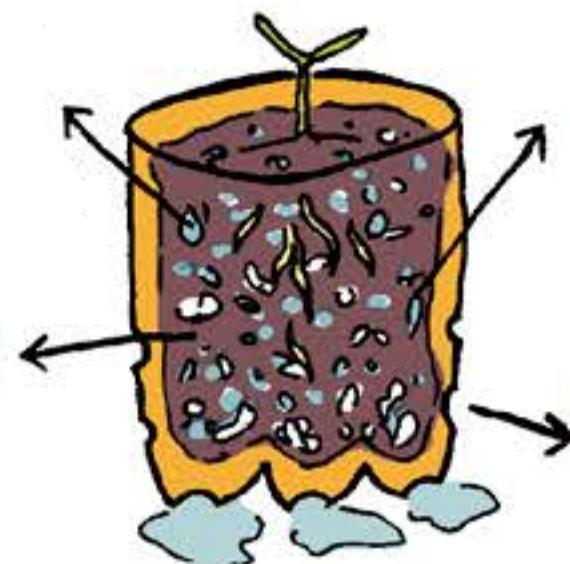


CUT PLASTIC BOTTLES

YOU SHOULD PREPARE A SPECIAL MIXTURE THAT INCLUDES:

50% OR MORE
COMPOST
(SMALL CHUNKS)

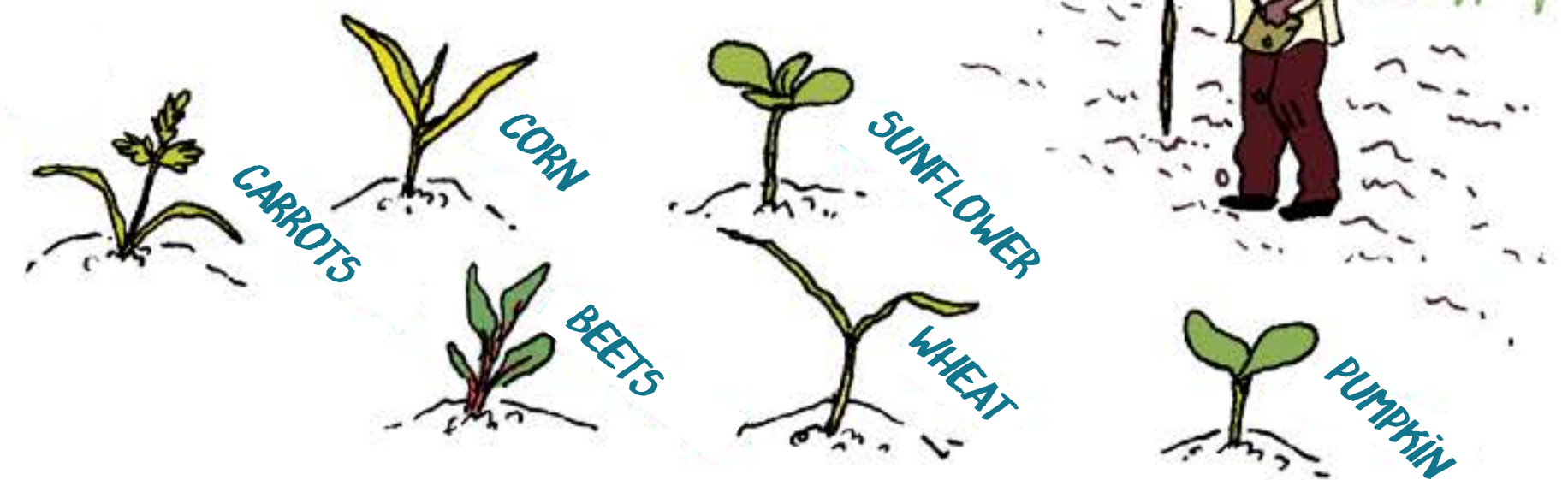
40% LOOSE
GARDEN SOIL



10% **AERATION MATERIAL**: FINE GRAVEL, SAND, RICE HUSKS OR SIMILAR

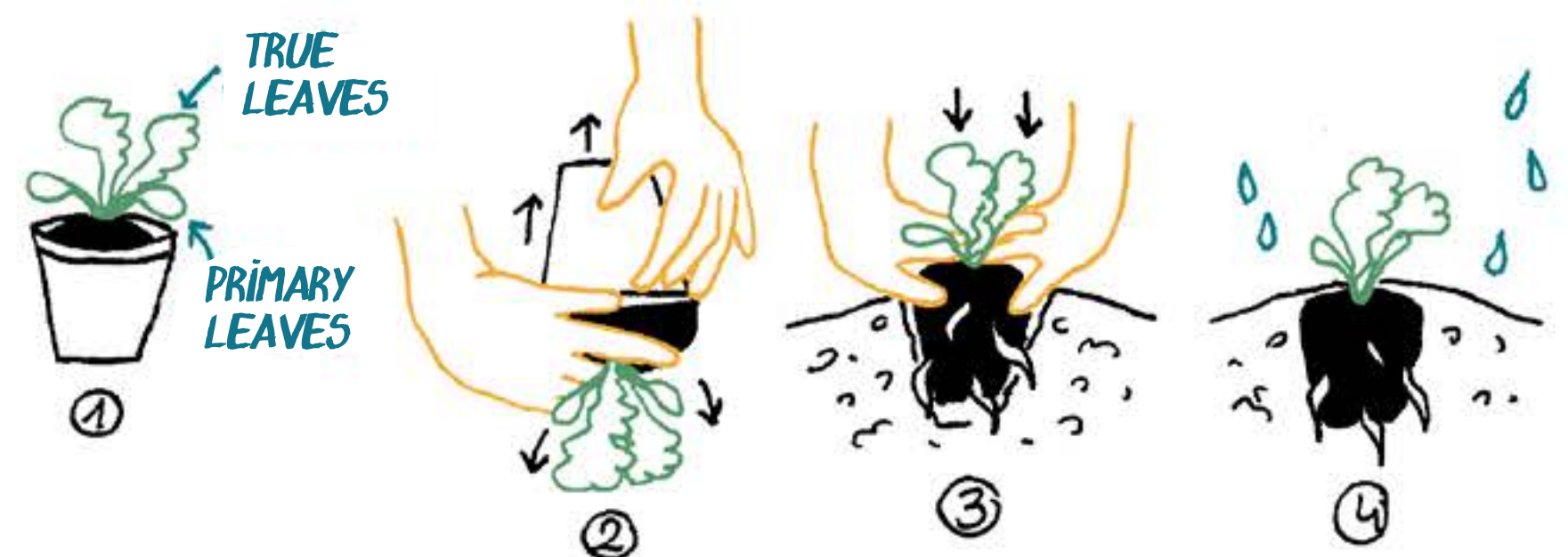
HOLES IN THE RECIPIENT TO EVACUATE THE WATER

OTHER PLANTS, INCLUDING ROOT CROPS AND GRAINS, ARE BETTER OFF PLANTED DIRECTLY IN THE GROUND.



- * PLANT THE SEED NEAR THE SURFACE, SLIGHTLY COVERED BY SOIL.
- * ALWAYS KEEP THE AREA MOIST.
- * IN MANY CASES, SOAKING THE SEED IN WATER OVERNIGHT ACCELERATES GERMINATION BEFORE PLANTING.

WHEN THE PLANT HAS THREE OR MORE LEAVES, IT CAN BE **TRANSPLANTED** IN THE GROUND. DO IT WITH CARE, TRYING NOT TO BREAK THE ROOTS.



CULTIVATION

PLANTS SELECTED FOR SEEDS SHOULD NOT RECEIVE **ANY SPECIAL TREATMENT**. THE SAME CARE SHOULD BE TAKEN AS IN STANDARD CULTIVATION: GOOD SOIL, COMPOST, ENOUGH IRRIGATION, WEEDING WHEN NECESSARY, PROTECTION FROM PREDATORS.

IN OTHER WORDS, YOU SHOULD SELECT PLANTS THAT GROW WELL IN NORMAL CONDITIONS, WITH NO NEED FOR SPECIAL TREATMENT.

WE RECOMMEND TO USE **EXCLUSIVELY ORGANIC FARMING METHODS**:

WE WANT TO SELECT PLANTS THAT CAN DEFEND THEMSELVES AND REACH GOOD PRODUCTION LEVELS IN LOCAL CLIMATES, UNDER NATURAL CONDITIONS.

IF WE SPRAY AGAINST PESTS, ALL THE PLANTS MAY SURVIVE AND IT WILL BE DIFFICULT TO SELECT THOSE THAT ARE TRULY RESISTANT.

SELECTION

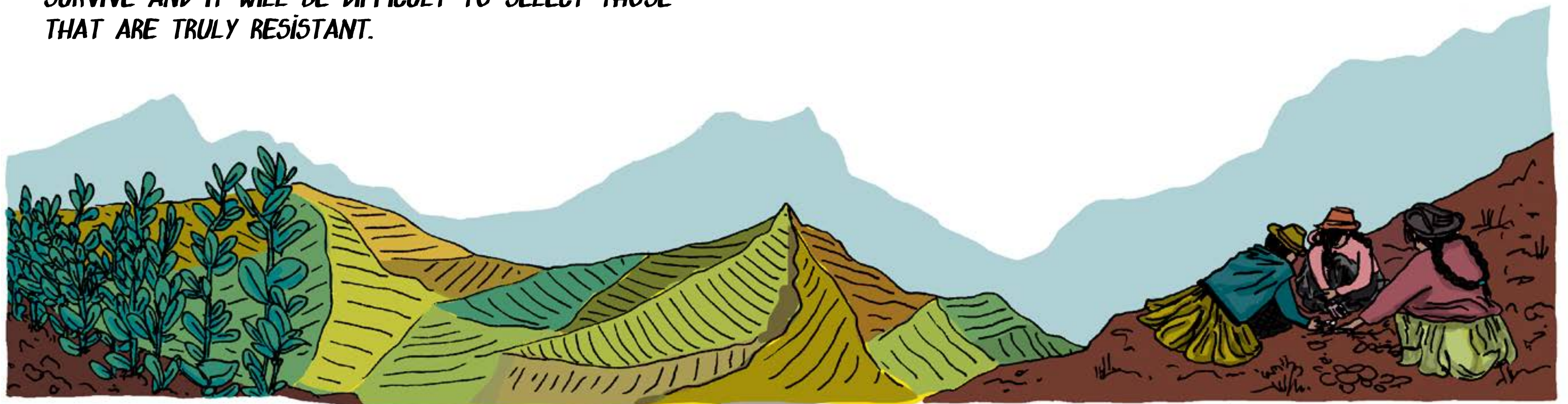
THIS IS THE MOST IMPORTANT ASPECT OF SEED PRODUCTION. EACH INDIVIDUAL PLANT HAS A SERIES OF PARTICULAR CHARACTERISTICS:

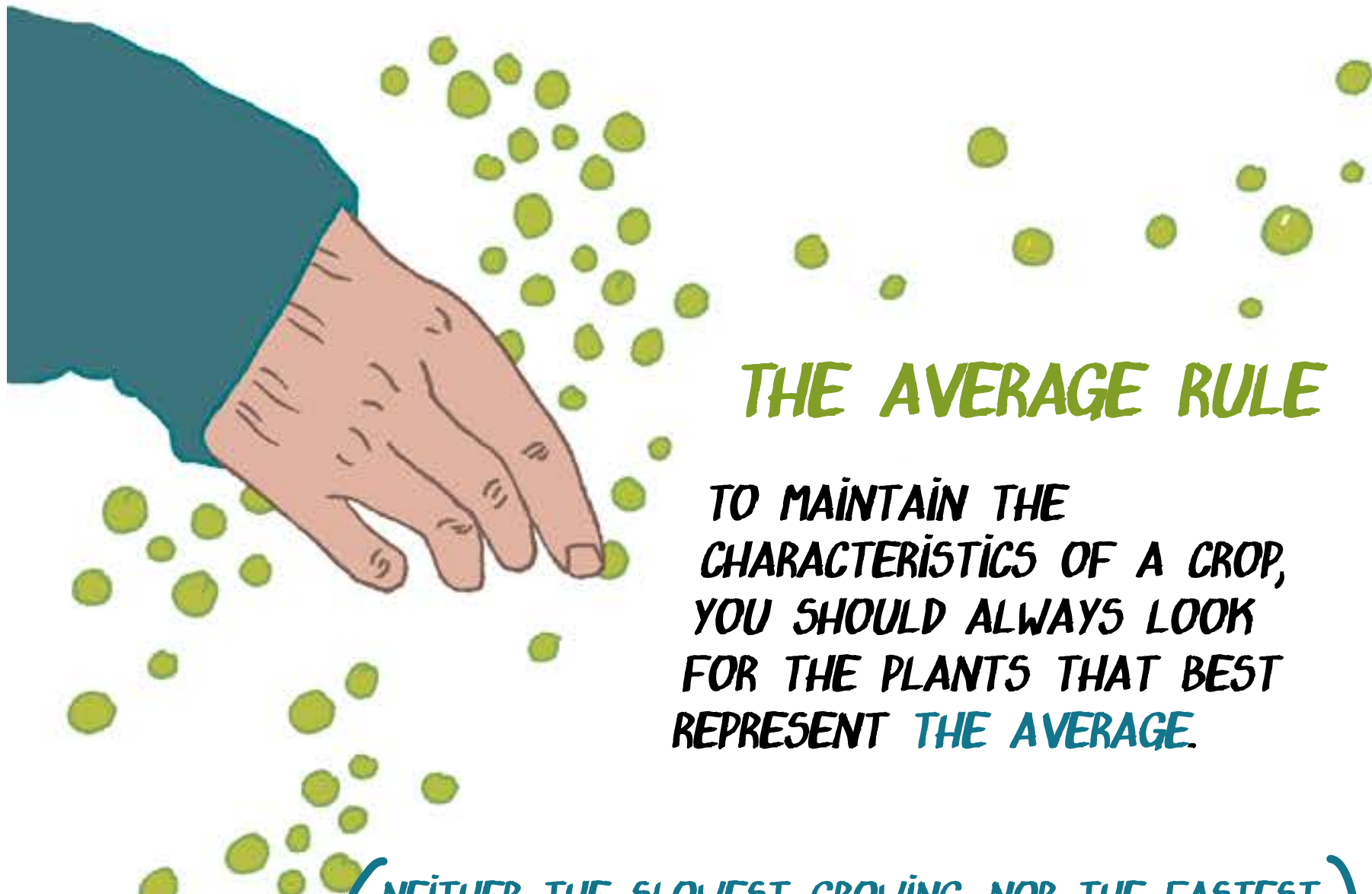
- SIZE - SHAPE - NUTRITIONAL QUALITY
- FRUIT COLOR - RESISTANCE TO PESTS AND DISEASES

THESE CHARACTERISTICS ARE INHERITED THROUGH ITS GENES.



SEED SAVERS PAY ATTENTION TO THE PLANT'S CHARACTERISTICS IN EACH GENERATION, LOOKING FOR INTERESTING FEATURES TO PROMOTE, OR DEFICIENCIES TO REMOVE.





THE AVERAGE RULE

TO MAINTAIN THE CHARACTERISTICS OF A CROP, YOU SHOULD ALWAYS LOOK FOR THE PLANTS THAT BEST REPRESENT **THE AVERAGE**.

(NEITHER THE SLOWEST GROWING, NOR THE FASTEST;
NEITHER THE LARGEST, NOR THE SMALLEST)

IF YOU FIND A SPECIAL TYPE OF VEGETABLE OR FRUIT, PLANT THESE SEEDS IN A **SEPARATE PLACE** AND BE VIGILANT WHILE THEY GROW. IT COULD BE SOMETHING INTERESTING

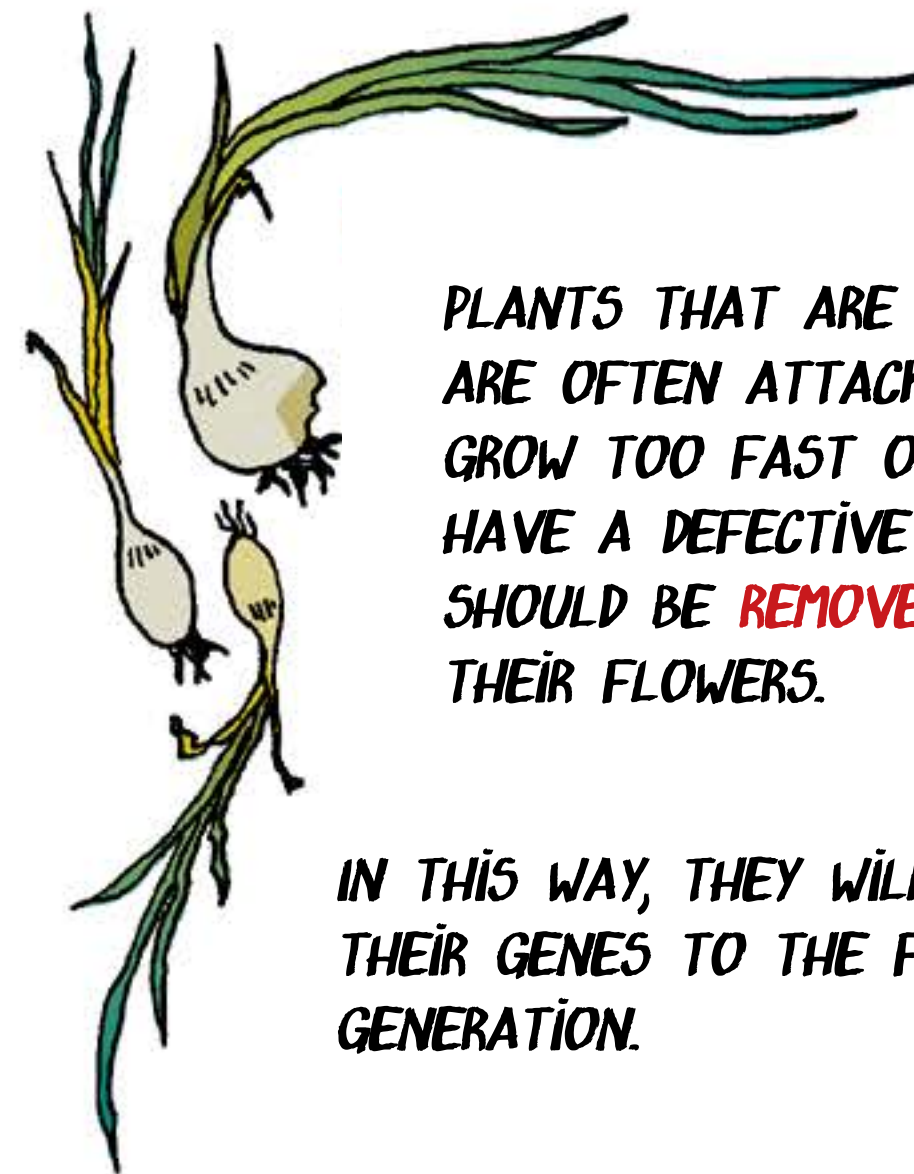
...MAYBE THE BEGINNING OF A NEW VARIETY! ...OR IT COULD BE A HYBRID THAT WILL YIELD DEFECTIVE SEEDS, THAT YOU WOULD NOT WANT TO TRY TO PROPAGATE.



SEXUAL SELECTION

FOR PLANTS THAT REPRODUCE SEXUALLY, IT IS NECESSARY TO **SELECT THEIR PROGENITORS**.

THE KEY MOMENT IS **BEFORE FLOWERING**. IT IS THROUGH THE FLOWERS THAT THE PLANTS CROSSBREED, AND ONCE THEY HAVE DONE IT, WE CANNOT CARRY OUT SELECTION.

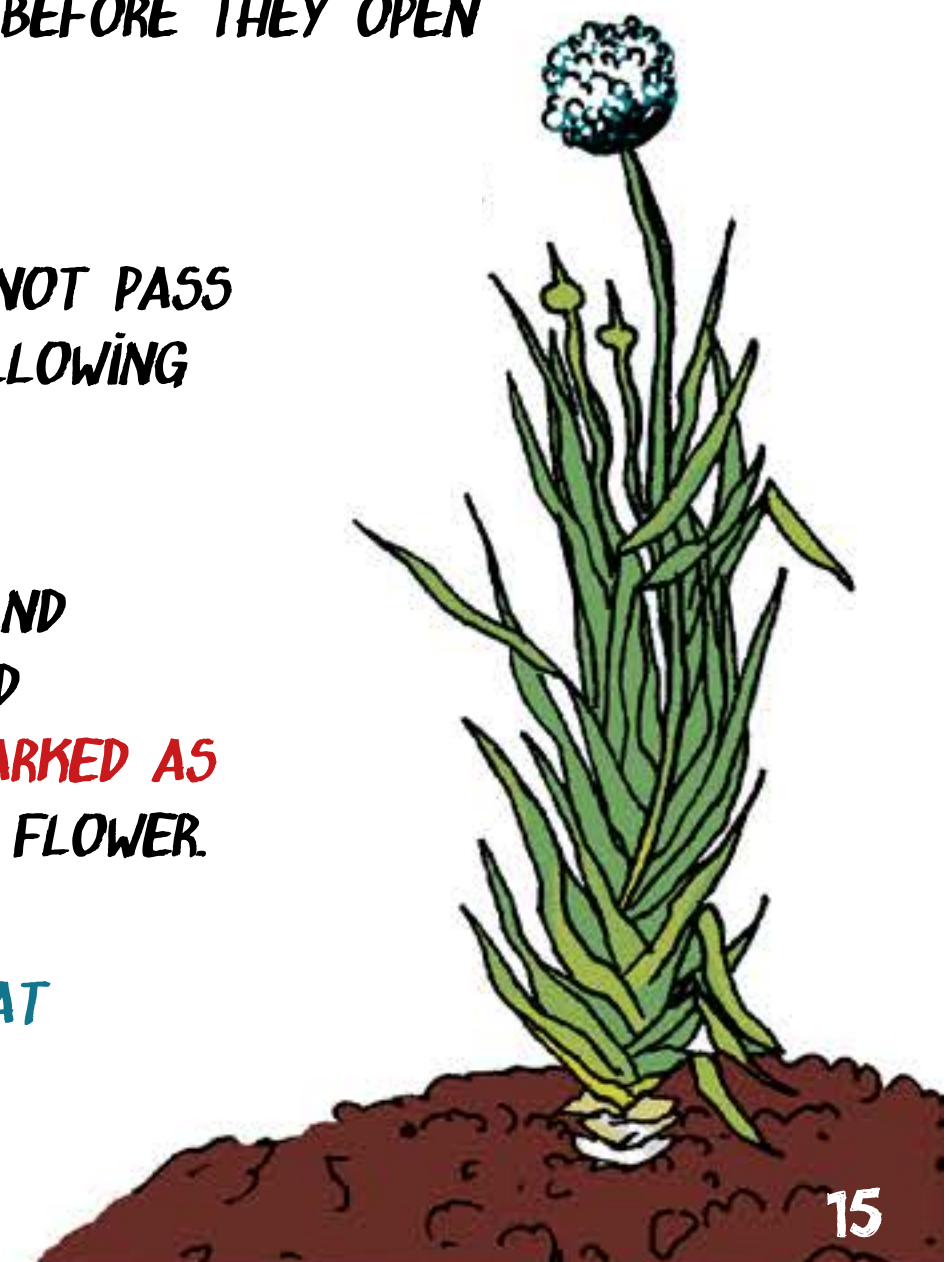


PLANTS THAT ARE TOO WEAK -THOSE THAT ARE OFTEN ATTACKED BY PESTS, THOSE THAT GROW TOO FAST OR TOO SLOW, THOSE THAT HAVE A DEFECTIVE SHAPE OR BAD FRUIT - SHOULD BE **REMOVED** BEFORE THEY OPEN THEIR FLOWERS.

IN THIS WAY, THEY WILL NOT PASS THEIR GENES TO THE FOLLOWING GENERATION.

PLANTS THAT SEEM HEALTHY AND THAT COMPLY WITH THE DESIRED CHARACTERISTICS SHOULD BE **MARKED AS REPRODUCERS** AND ALLOWED TO FLOWER.

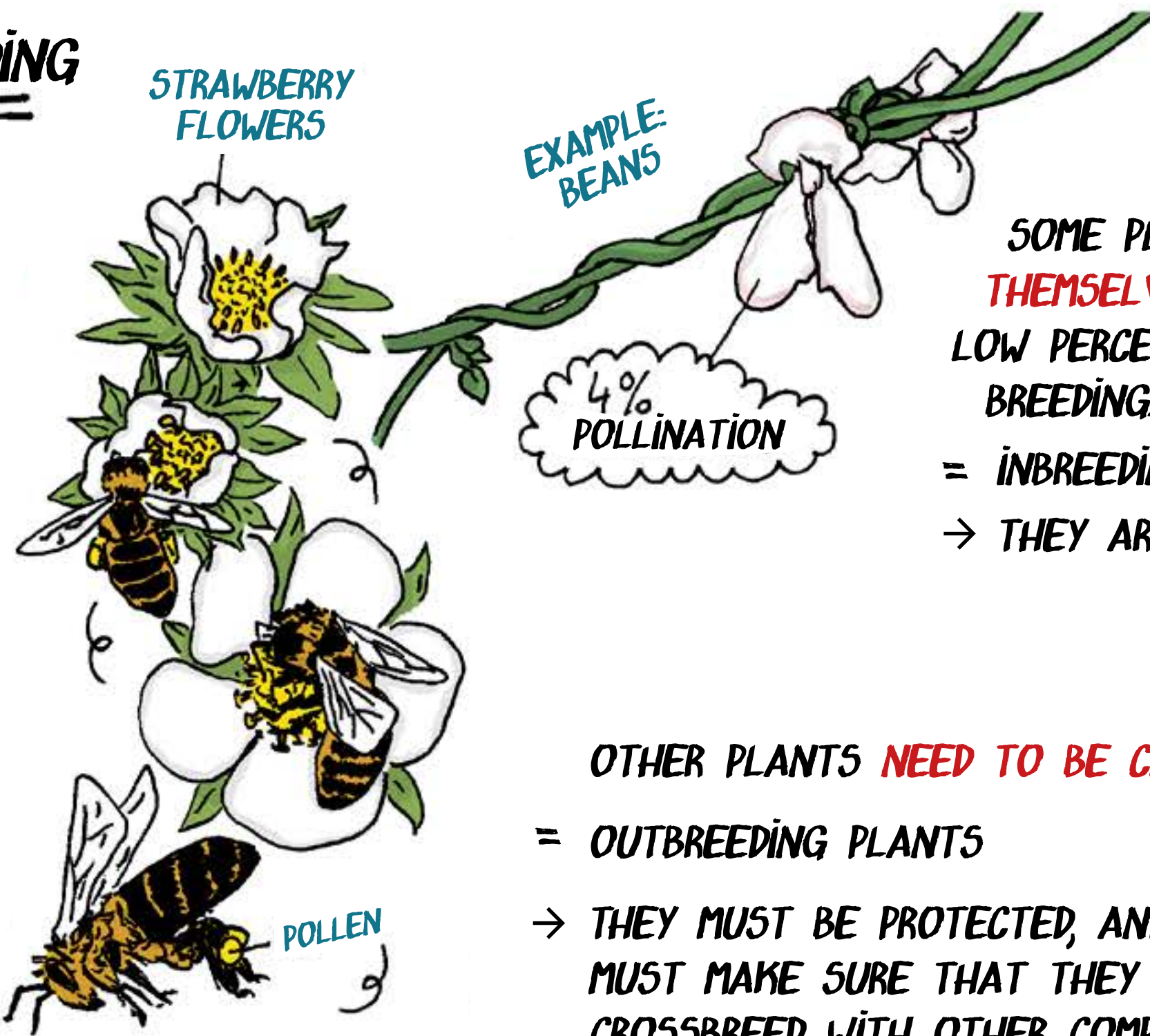
IT IS FROM THOSE PLANTS THAT YOU WILL GET YOUR SEEDS.



POLLINATION AND CROSS-BREEDING

PLANTS SEXUALLY REPRODUCE THROUGH POLLINATION, WHEN THE FERTILE **POLLEN** REACHES A FLOWER THAT IS READY TO BREED.

IN GARDEN VEGETABLES, POLLINATION IS DONE MAINLY **BY INSECTS** WHO VISIT THE FLOWERS IN SEARCH OF NECTAR AND CARRY THE POLLEN ON THEIR BODIES.



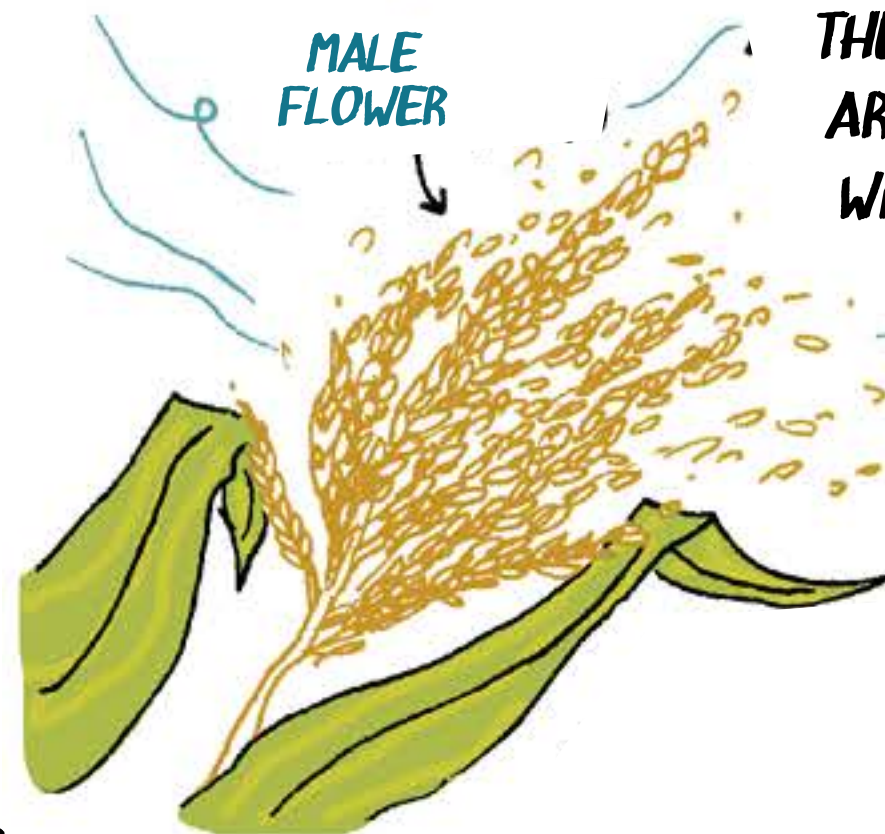
SOME PLANTS **POLLINATE THEMSELVES**. THEY HAVE VERY LOW PERCENTAGES OF CROSS BREEDING.
= **INBREEDING PLANTS**
→ THEY ARE EASIER TO REPRODUCE



FOR EXAMPLE: BEES FLY UP TO 3 KM AROUND THEIR HIVE. THEY CAN CROSSBREED ALL THE CROPS OF THE SAME SPECIES WITHIN THIS AREA.

SOME VEGETABLES AND GRAINS ARE POLLINATED **BY WIND**, FOR EXAMPLE CORN.

THEIR LIGHT POLLEN MAY TRAVEL AROUND TEN KILOMETERS ON A WINDY DAY.



OTHER PLANTS **NEED TO BE CROSSBRED**.
= **OUTBREEDING PLANTS**
→ THEY MUST BE PROTECTED, AND YOU MUST MAKE SURE THAT THEY DO NOT CROSSBREED WITH OTHER COMPATIBLE VARIETIES.

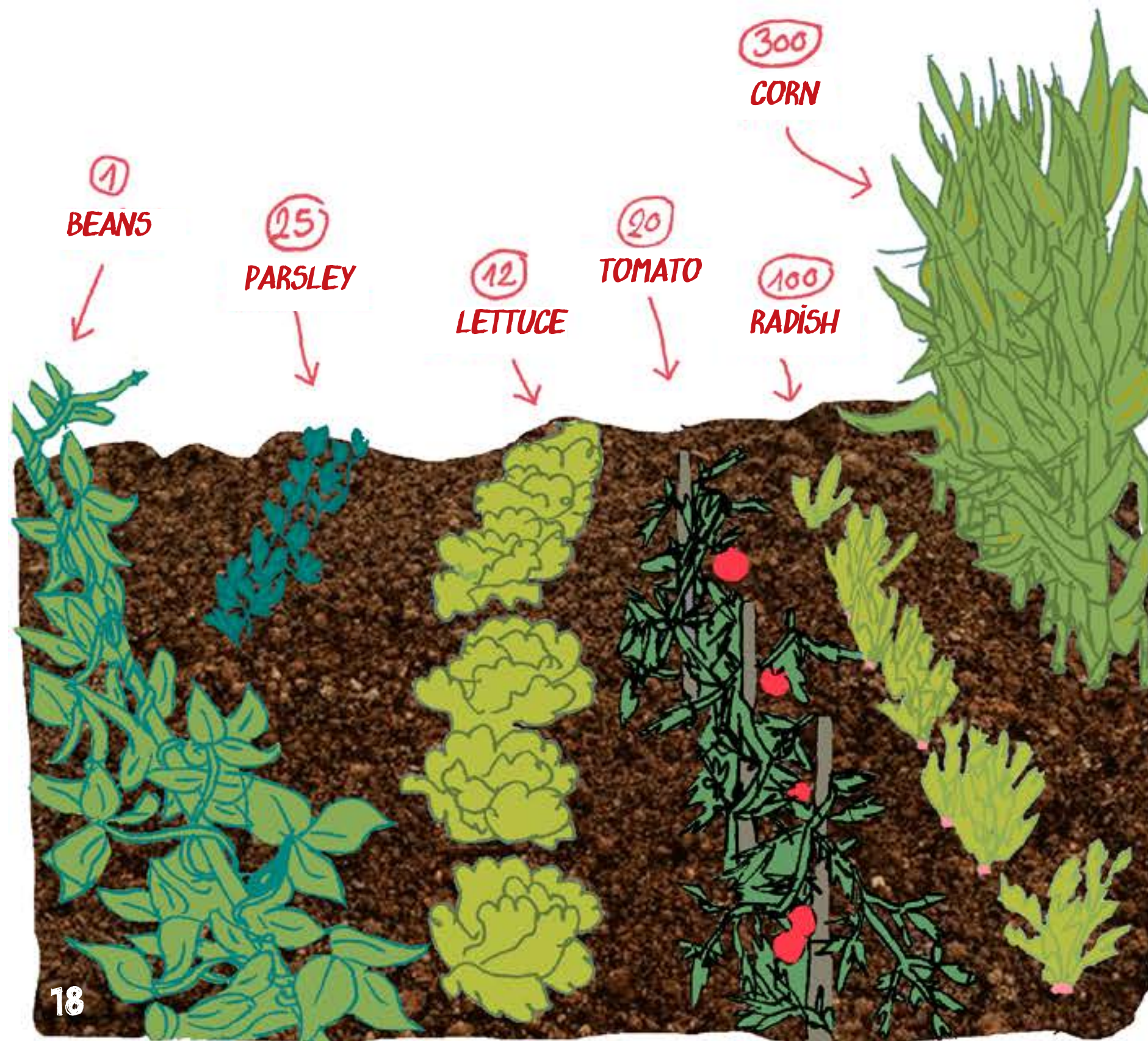
EX. CABBAGE, CORN



POPULATION

FOR EACH SPECIES, THERE IS A MINIMUM TOTAL POPULATION NECESSARY TO KEEP THE **GENETIC VIGOR** AND PRODUCE SEEDS OF GOOD QUALITY.

THIS POPULATION IS DEFINED BY THE NUMBER OF PLANTS THAT CROSS POLLINATE.



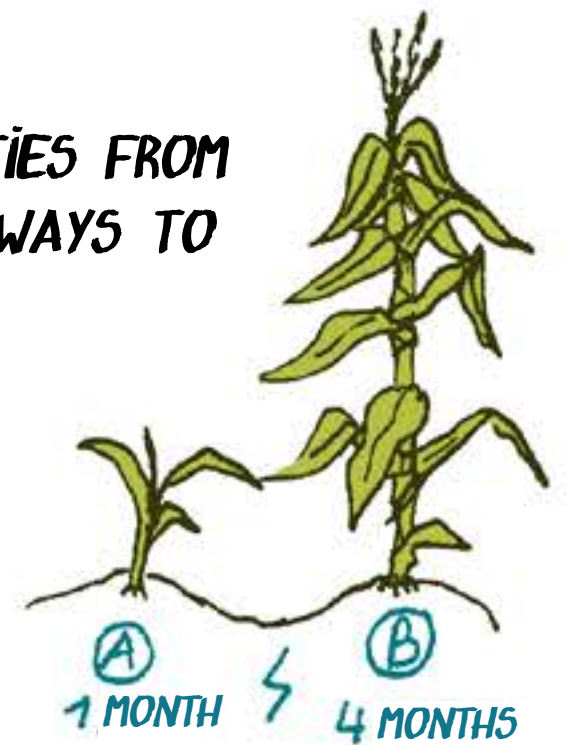
ISOLATION

WHEN YOU WANT TO PREVENT DIFFERENT VARIETIES FROM CROSSBREEDING, THERE ARE SEVERAL EFFECTIVE WAYS TO ISOLATE THEM.

* ISOLATION IN TIME

= PLANT DIFFERENT VARIETIES AT DIFFERENT TIMES, SO THEY DON'T FLOWER AT THE SAME TIME.

⚠ THIS IS NOT EFFECTIVE IN SMALL PROPERTIES WHERE CROSS POLLINATION MAY COME FROM NEIGHBORS.



* ISOLATION IN SPACE

= PLACE EACH CROP SUFFICIENTLY APART TO IMPEDE CROSS POLLINATION.

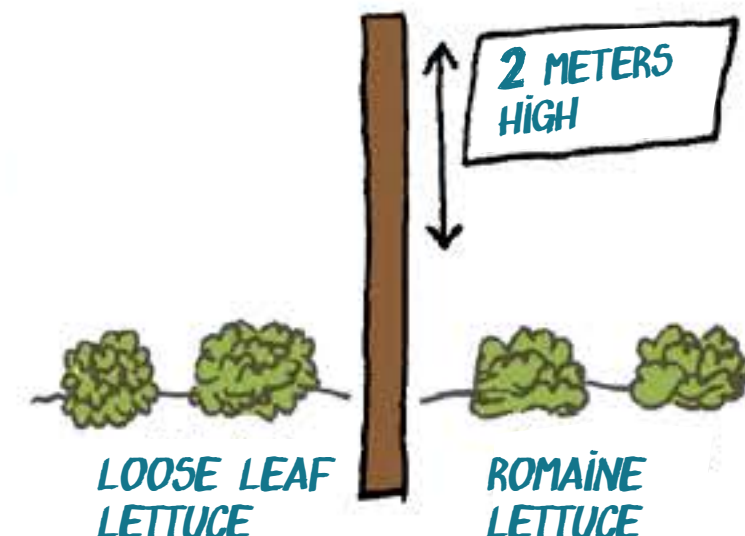
⚠ THIS ALSO IS NOT EFFECTIVE IN SMALL PROPERTIES.



* ISOLATION WITH EXCLUDING DEVICES

= USE EXCLUDING MATERIAL IN ORDER TO PREVENT CROSS POLLINATION

FOR SPECIES THAT DO NOT CROSS POLLINATE MUCH, A TALL BARRIER MAY BE ENOUGH:



FOR SPECIES THAT ARE VERY LIKELY TO CROSSBREED, YOU CAN USE A FINE MESH OR CLOTH THAT COMPLETELY PREVENTS INSECTS FROM ENTERING.



IN THIS CASE, IT MAY BE NECESSARY TO DO POLLINATION BY HAND...

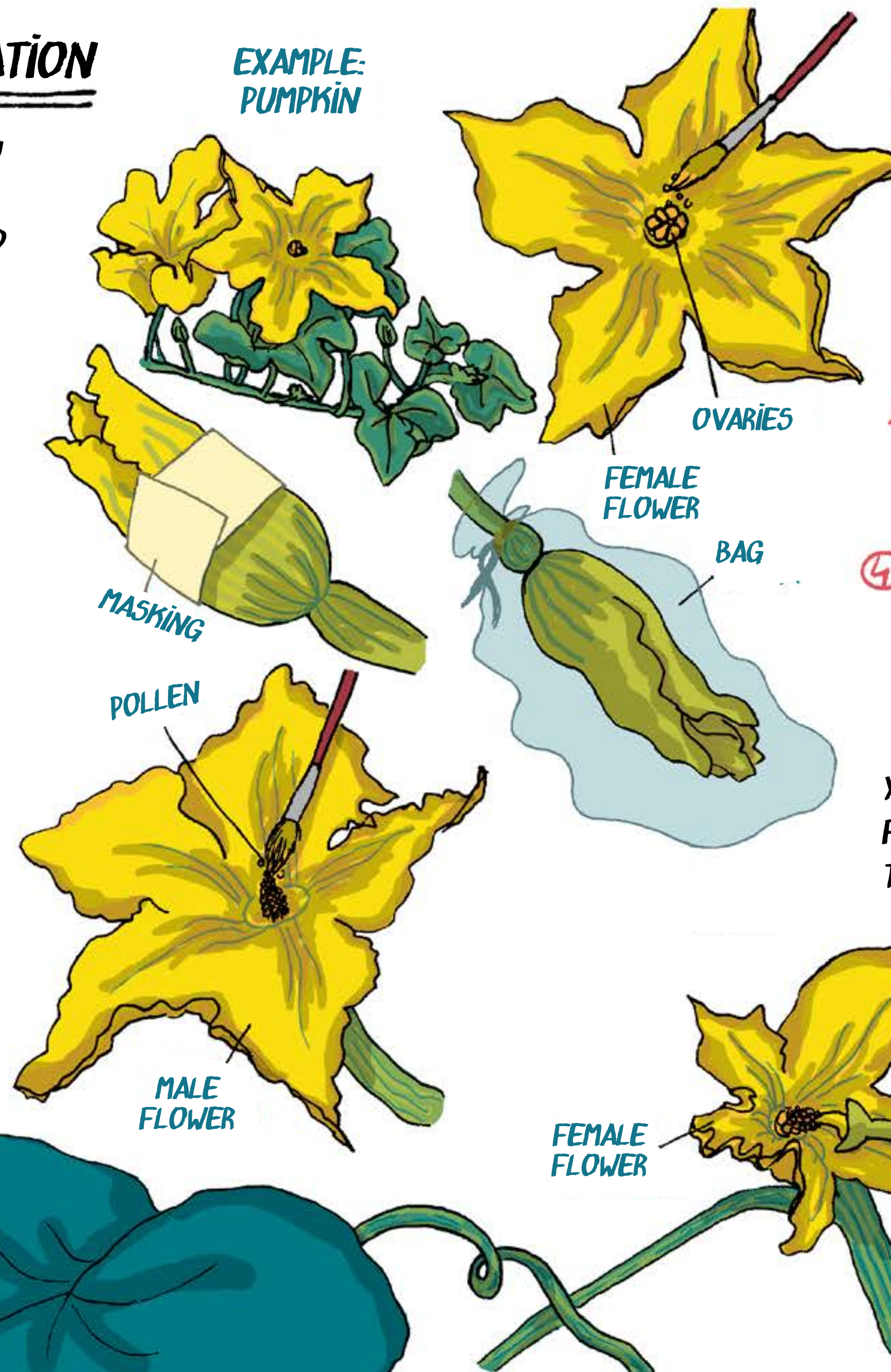
HAND POLLINATION

POLLINATION BY HAND GIVES YOU TOTAL CONTROL OF POLLINATION, HELPING TO ENSURE QUALITY AND ALLOWING YOU TO EXPERIMENT.

① THE FLOWERS MUST BE KEPT CLOSED BEFORE THEY OPEN, USING A FINE MESH OR PAPER BAGS, OR ADHESIVE TAPE IN THE CASE OF LARGE FLOWERS.

② A FINE BRUSH IS USED TO COLLECT THE POLLEN, WHICH CAN BE PLACED IN A SMALL CUP OR IN A PAPER BAG. COLLECT ONLY FROM PLANTS THAT HAVE THE CHARACTERISTICS YOU WANT TO KEEP AND PROMOTE.

EXAMPLE:
PUMPKIN



③ QUICKLY OPEN THE RECEIVING FLOWER AND SPREAD THE POLLEN IN THE OVARIES WITH THE BRUSH. IF NECESSARY, TAKE AWAY THE PETALS UNTIL THE OVARIES ARE REVEALED.

⚠ WATCH OUT THAT INSECTS DO NOT INTERFERE WITH YOUR WORK

④ CLOSE THE FLOWER AGAIN WITH ADHESIVE TAPE, TAKING CARE NOT TO DAMAGE THE OVARIES.

YOU CAN ALSO USE THE MALE FLOWER AS A BRUSH TO APPLY THE POLLEN DIRECTLY.

MALE FLOWER PETALS HAVE BEEN CUT-OFF

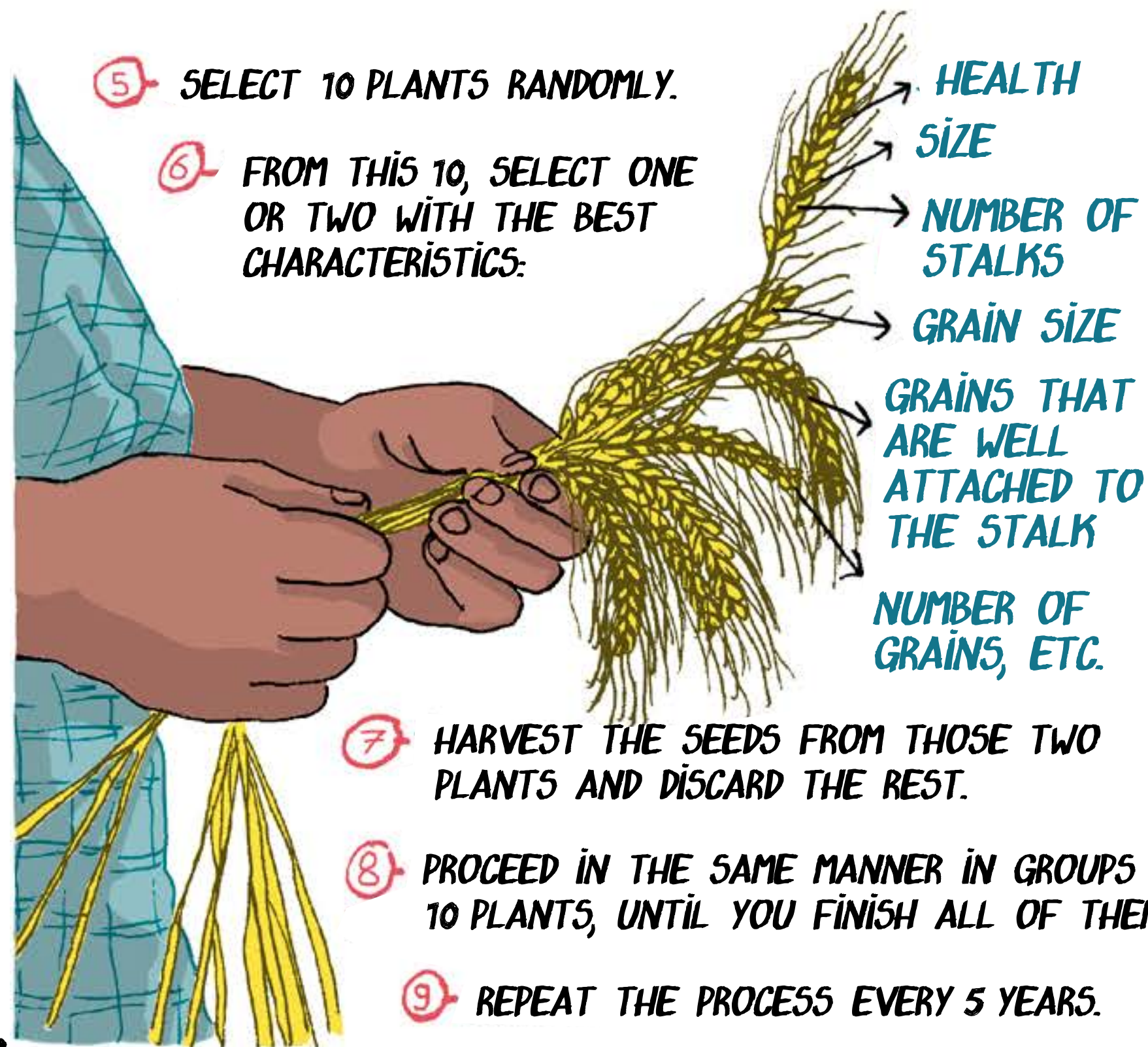
MASS SELECTION

CEREALS AND OTHER GRAINS PLANTED IN LARGE QUANTITIES ARE USUALLY SELECTED "EN MASSE".

- ① SELECT PLANTS THAT ARE NOT AT THE BORDERS, BUT RATHER A FEW METERS WITHIN THE CULTIVATED FIELD, TO AVOID ABNORMAL CONDITIONS.
- ② TAKE OUT WHOLE PLANTS, WITH ROOTS AND ALL.
- ③ IN ORDER TO KEEP THE GENETIC VIGOR, AROUND 500 PLANTS MUST BE PICKED.
- ④ TAKE THESE PLANTS TO A SUITABLE WORKING SPACE TO CARRY OUT SELECTION:

⑤ SELECT 10 PLANTS RANDOMLY.

⑥ FROM THIS 10, SELECT ONE OR TWO WITH THE BEST CHARACTERISTICS:



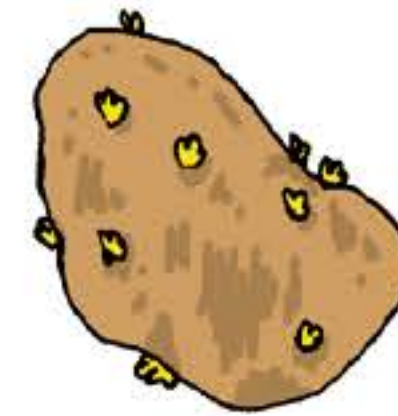
⑦ HARVEST THE SEEDS FROM THOSE TWO PLANTS AND DISCARD THE REST.

⑧ PROCEED IN THE SAME MANNER IN GROUPS OF 10 PLANTS, UNTIL YOU FINISH ALL OF THEM.

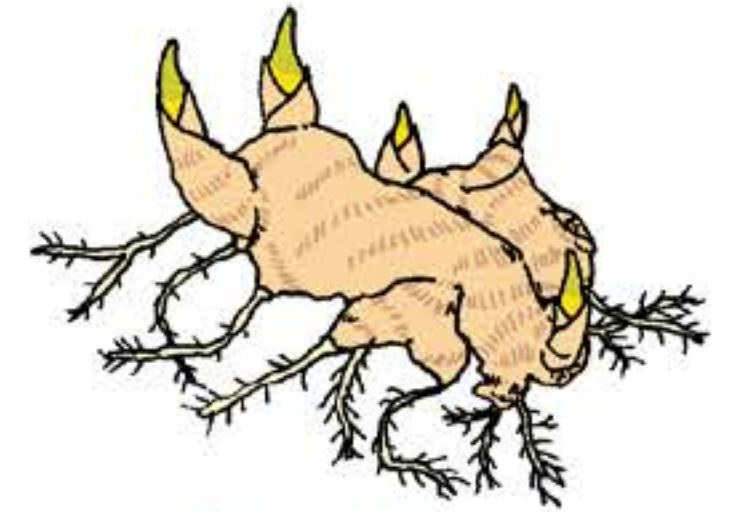
⑨ REPEAT THE PROCESS EVERY 5 YEARS.

VEGETATIVE PROPAGATION

= TO TAKE PARTS OF A PLANT AND CULTIVATE THEM TO PRODUCE NEW COMPLETE PLANTS.



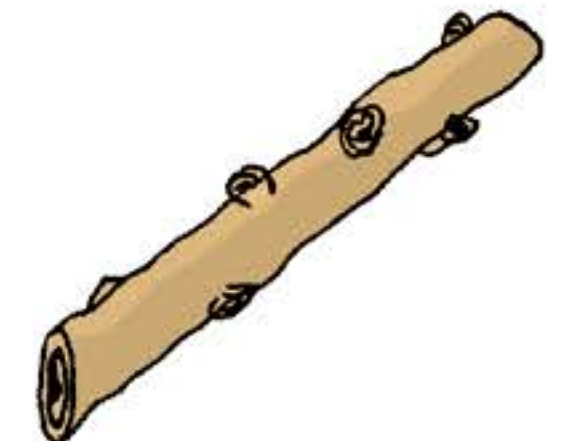
TUBERS



RHIZOMES (PARTS OF ROOTS)



SPROUTS OR SHOOTS



STICKS

IN SOME SPECIES, THE VEGETATIVE PART MUST BE CURED FIRST, BEFORE PLANTING.

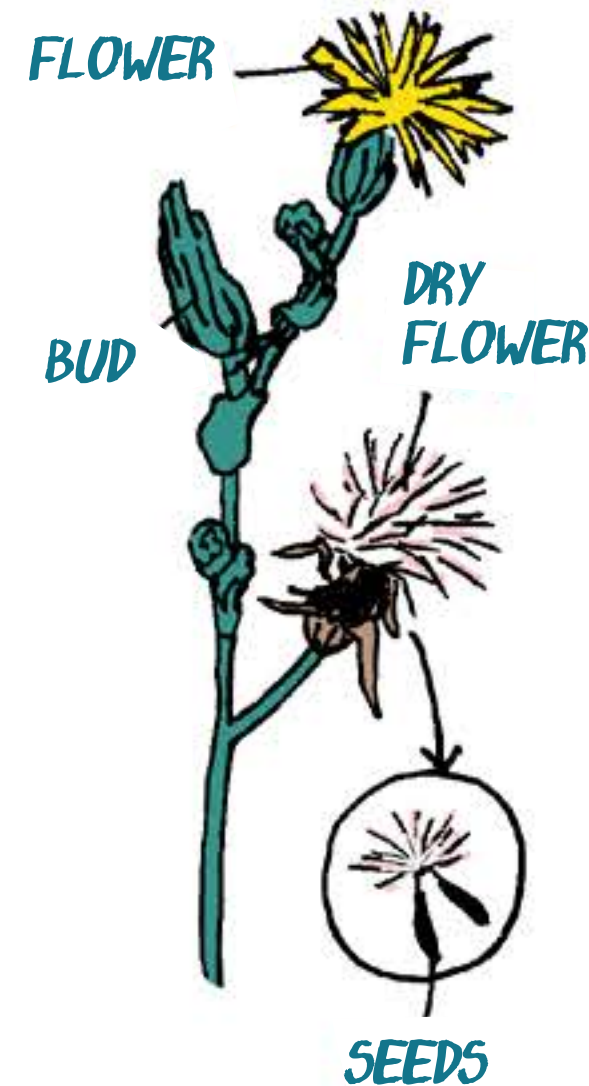
FOR EXAMPLE: WAITING FOR THE POTATO TO DEVELOP SPROUTS CAN TAKE 2 MONTHS.

STICKS MUST BE LEFT IN WATER TO PROMOTE ROOTING.

HARVESTING FOR SEED PRESERVATION

PLANTS SUCH AS **LETTUCE** ARE HARVESTED WHEN 75% OF THE SEEDS ARE FORMED AND DRIED. DO THIS TO AVOID THE LOSS OF SEEDS THAT FALL IN THE SOIL WHEN THEY ARE BLOWN BY THE WIND.

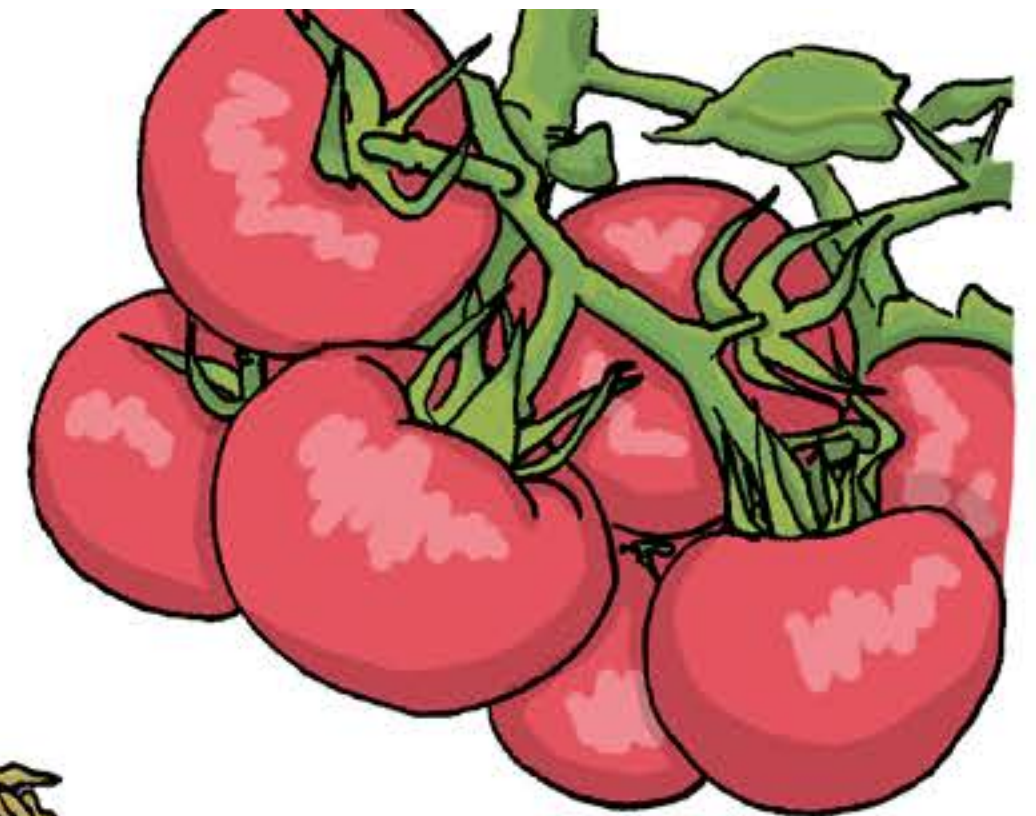
THE ENTIRE PLANT IS TAKEN OUT, AND IT IS HUNG UPSIDE DOWN IN A PROTECTED PLACE UNTIL THE SEEDS ARE ALL DEVELOPED.



BEANS AND THE LIKE ARE HARVESTED WHEN THEY ARE COMPLETELY DRY. THE PODS RATTLE WHEN YOU SHAKE THEM.



FRUITS LIKE **TOMATO** ARE HARVESTED WHEN THE FRUIT IS SLIGHTLY OVERRIPE.



BIG SEEDS SUCH AS **CORN** AND **SUNFLOWER** ARE HARVESTED WHEN THEY ARE COMPLETELY DRY.

THEY SHOULD BE PROTECTED FROM BIRDS WITH A NYLON STOCKING OR A MESH WHILE THEY DRY.



IT IS VERY IMPORTANT TO HARVEST ON A **DRY DAY**, **AFTER 10 AM**, WHEN THE DEW HAS EVAPORATED.



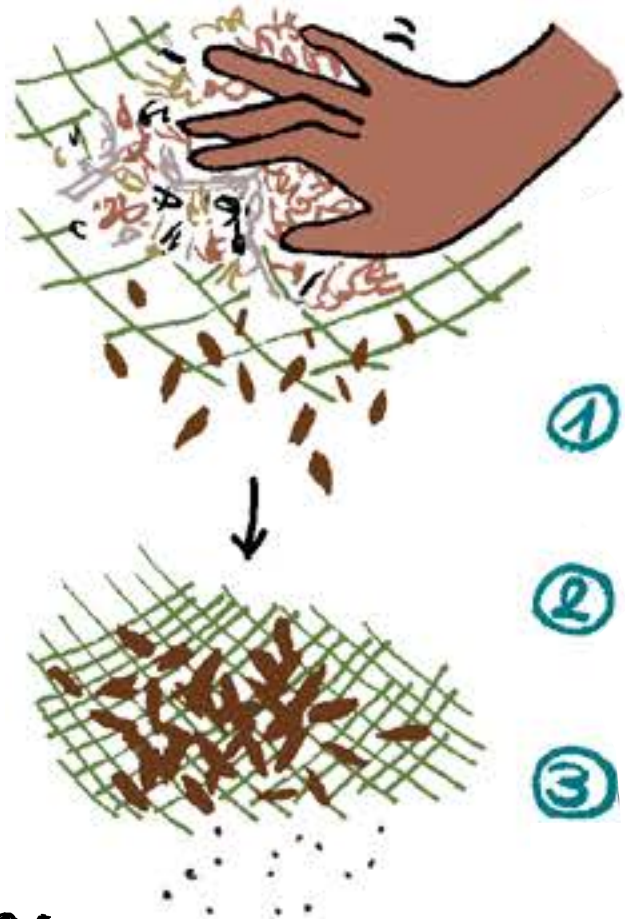
CLEANING SEEDS

THE SEED IS ALIVE, AND IT IS NOT GOING TO ROT IF WE KEEP IT UNDER THE CORRECT CONDITIONS. BUT AS CHAFF AND DEAD PLANT MATERIAL WILL DECOMPOSE, THEY MAY DAMAGE THE SEED IF NOT REMOVED FIRST.



* LARGE GRAINS, SUCH AS BEANS, CORN AND SUNFLOWER ARE EASILY SEPARATED.

* SMALL GRAINS, SUCH AS RICE OR WHEAT: BEAT THE STALK TO SEPARATE THE GRAIN. TRADITIONALLY, A DONKEY OR COW WILL BE PUT TO WALK IN CIRCLES OVER A LARGE AMOUNT OF SEED STALKS.



* SMALL GRAINS SUCH AS LETTUCE ARE CLEANED BY RUBBING THEM BETWEEN GLOVES, OR IN A MESH.

- ① SMALL MESH: THE SEEDS PASS, THE LARGE PIECES OF CHAFF STAY
- ② FINE MESH: THE SEEDS STAY, FINE CHAFF PASSES
- ③ PUT WHAT IS LEFT IN A BOWL, AND GENTLY BLOW OUT THE LIGHTER CHAFF.

CLEANING SEEDS FROM FRUITS

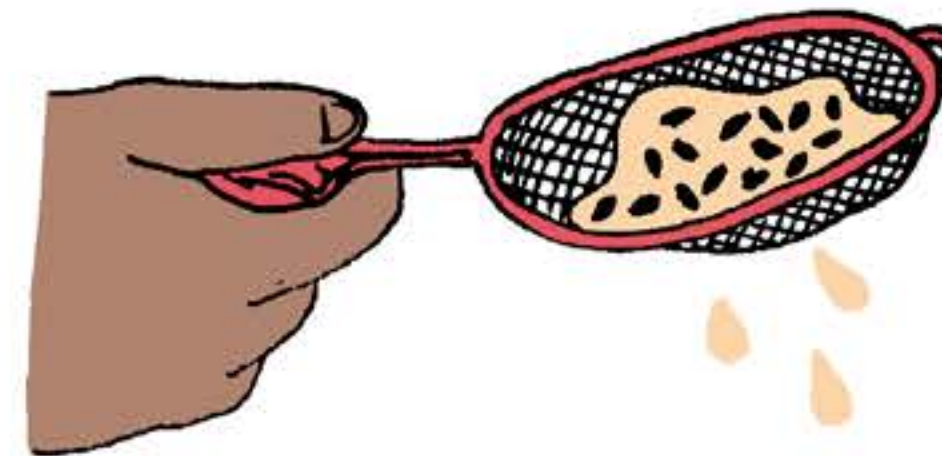


SEEDS THAT COME FROM INSIDE FRUITS SUCH AS TOMATO, PASSION FRUIT, OR PAPAYA, OFTEN HAVE A PROTECTIVE GEL THAT INHIBITS GERMINATION. IT CAN ROT IN STORAGE.



TO REMOVE IT, PUT THE SEEDS IN A GLASS OF WATER - CHLORINE FREE - FOR A COUPLE OF DAYS, UNTIL A WHITE FILM HAS FORMED AT THE SURFACE.

THIS IS A FUNGUS (PENICILLIN) THAT WILL BOTH CLEAN OUT THE GEL AND PROTECT THE SEED FROM POTENTIAL DISEASES.



WASH THE SEED AFTERWARDS BY RUBBING THEM GENTLY AGAINST A STRAINER OR MESH, AND PUT TO DRY.



DRYING

IN THE PLANT THE SEED HAS ABOUT 15% **HUMIDITY**.
IDEALLY, WE MUST LOWER THIS TO 5% FOR STORAGE.

IN DRY CLIMATES, THIS IS ACHIEVED BY LEAVING THE SEED
IN A **WELL VENTILATED PLACE**, IN THE SHADE, FROM 2
WEEKS TO 2 MONTHS.



IN HUMID CLIMATES, YOU CAN USE
SMOKE OR A SOLAR DEHYDRATOR, AND
PACK THE SEEDS IN A VACUUM JAR
DIRECTLY AFTER DRYING.

WHEN THE JAR IS OPENED,
HUMIDITY WILL ENTER.

YOU CAN USE **RAW RICE** TO
ABSORB HUMIDITY.



DRYING WITH SMOKE IS THE MOST
TRADITIONAL AND EFFECTIVE TECHNIQUE.

IN THE PAST, SEEDS WERE
PLACED ABOVE AN **OPEN FIRE**.
NOW WE CAN BUILD HOME
SMOKERS OR **SMOKER ROOMS**.
THE SMOKE DRIES THE SEEDS
AND PROTECTS THEM FROM
PESTS AND DISEASES.



PROTECTION

THE SEED MAY BE ATTACKED BY
PESTS: INSECTS OFTEN LAY THEIR
EGGS ON THE SEEDS WHILE THEY
ARE IN THE FIELD. THEIR EGGS MAY
BE TOO SMALL TO SEE.

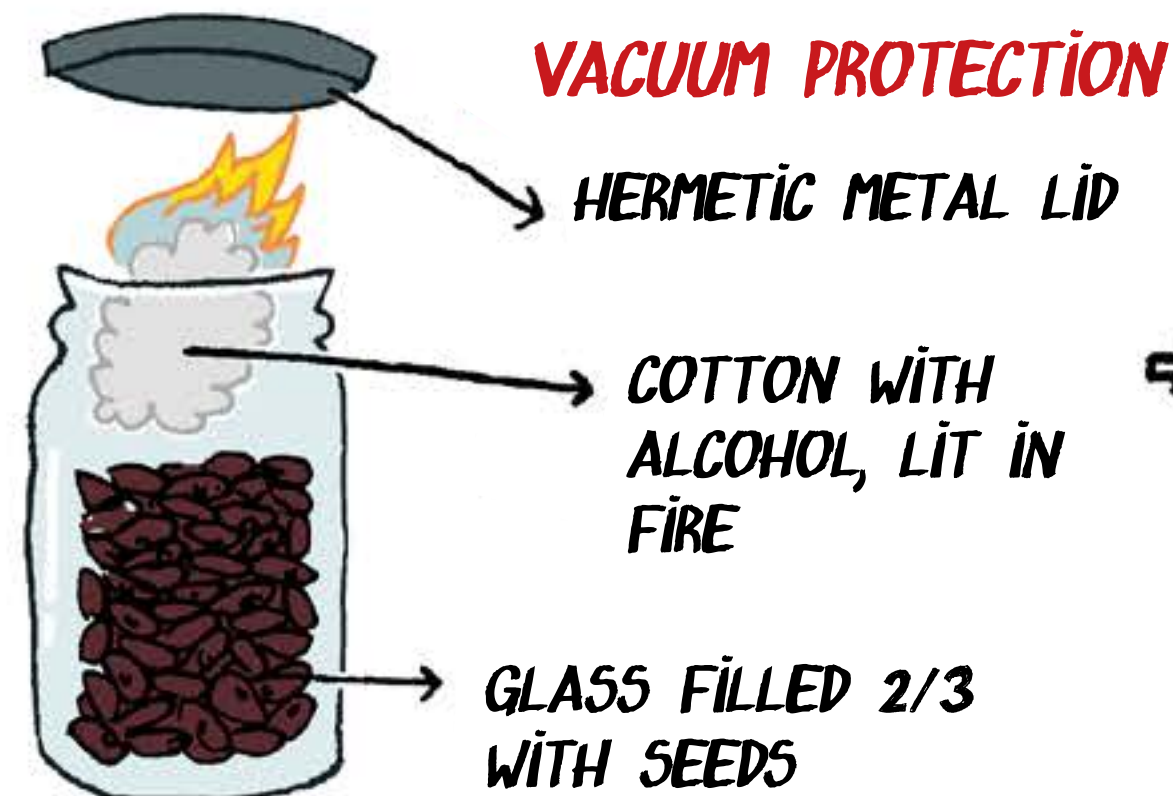
MAIN PESTS:



WEEVIL

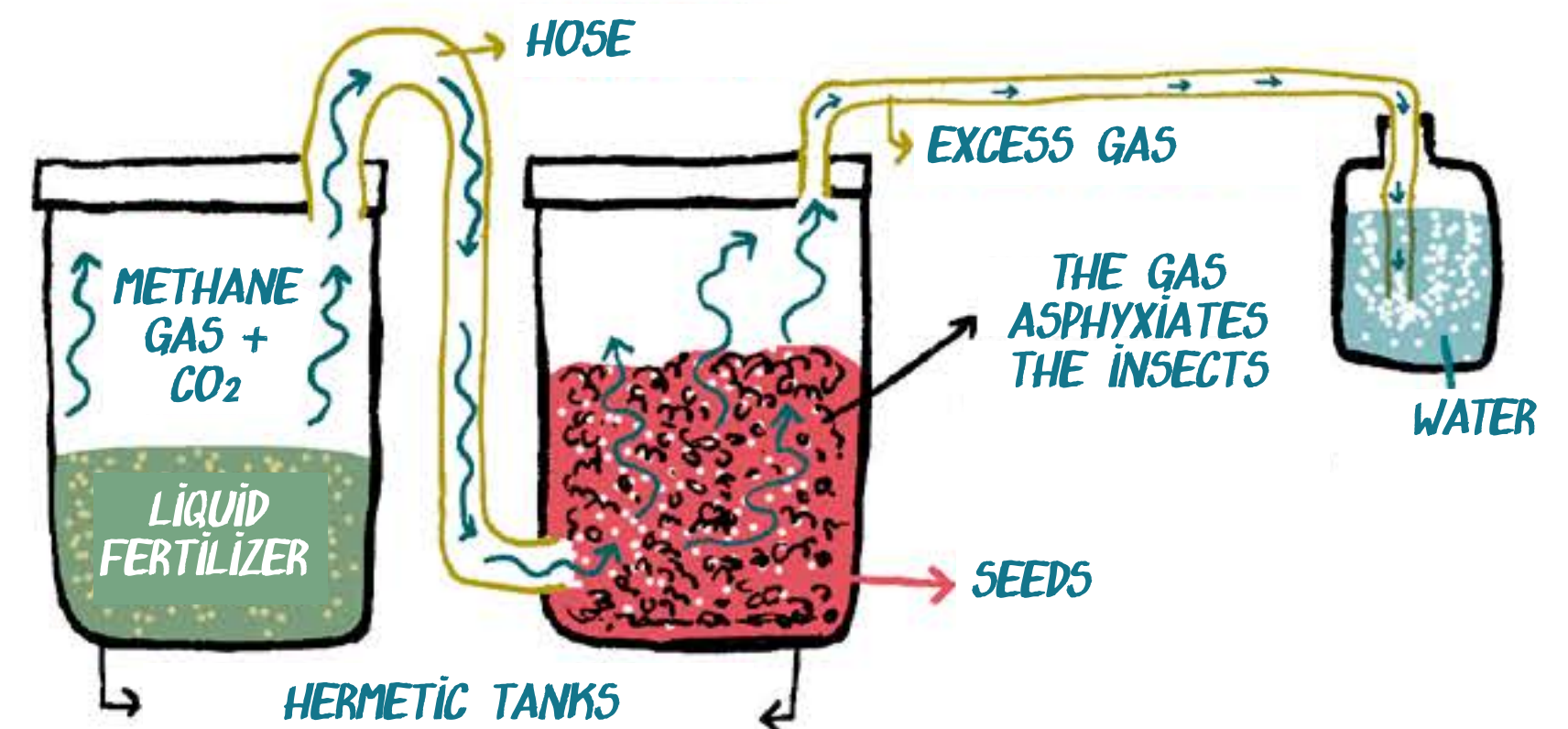


MOTH



WHEN THE JAR IS
CLOSED, THE LID
SINKS IN AND THE
INSECTS DIE FROM
LACK OF OXYGEN.

TANK SYSTEM (FOR LARGER QUANTITIES OF SEEDS)



STORAGE

SEEDS SHOULD BE STORED AND PROTECTED FROM ATTACK BY PESTS.

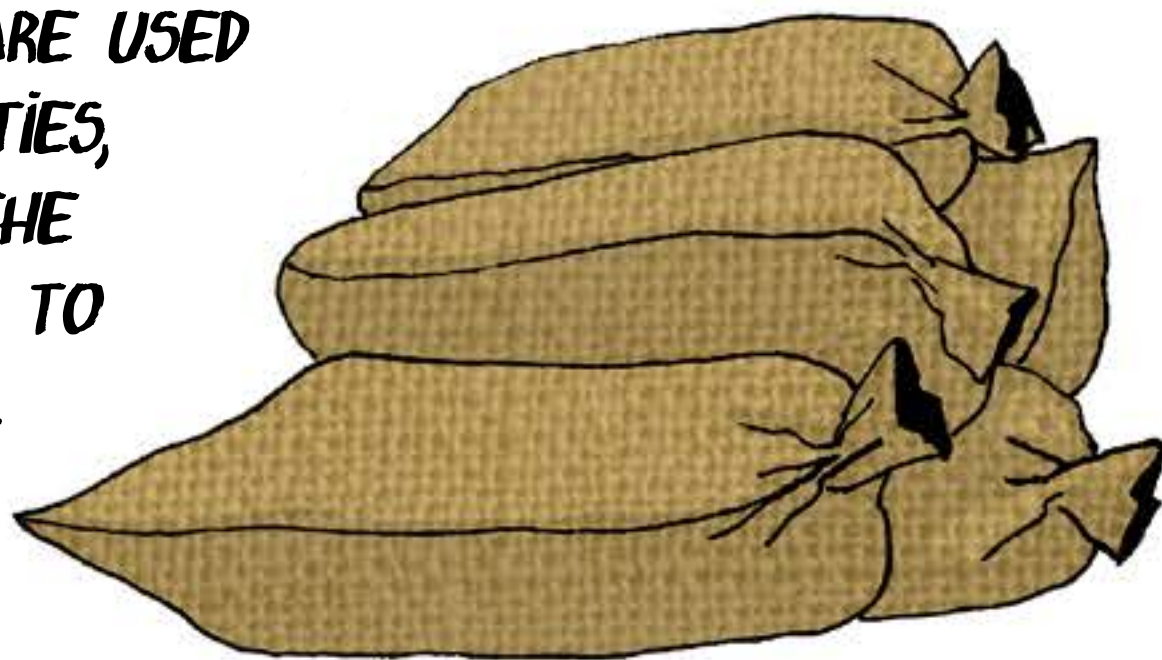
TRADITIONALLY, THIS WAS DONE IN CERAMIC CONTAINERS.



TODAY WE DO IT IN GLASS JARS, PLASTIC OR METAL CONTAINERS.



BAGS AND SACKS ARE USED FOR LARGE QUANTITIES, BUT THEY LEAVE THE SEEDS VULNERABLE TO ATTACKS BY PESTS.



THE SEED MUST BE TOTALLY DRY AND CLEAN BEFORE IT CAN BE STORED.

SEED PASSPORT

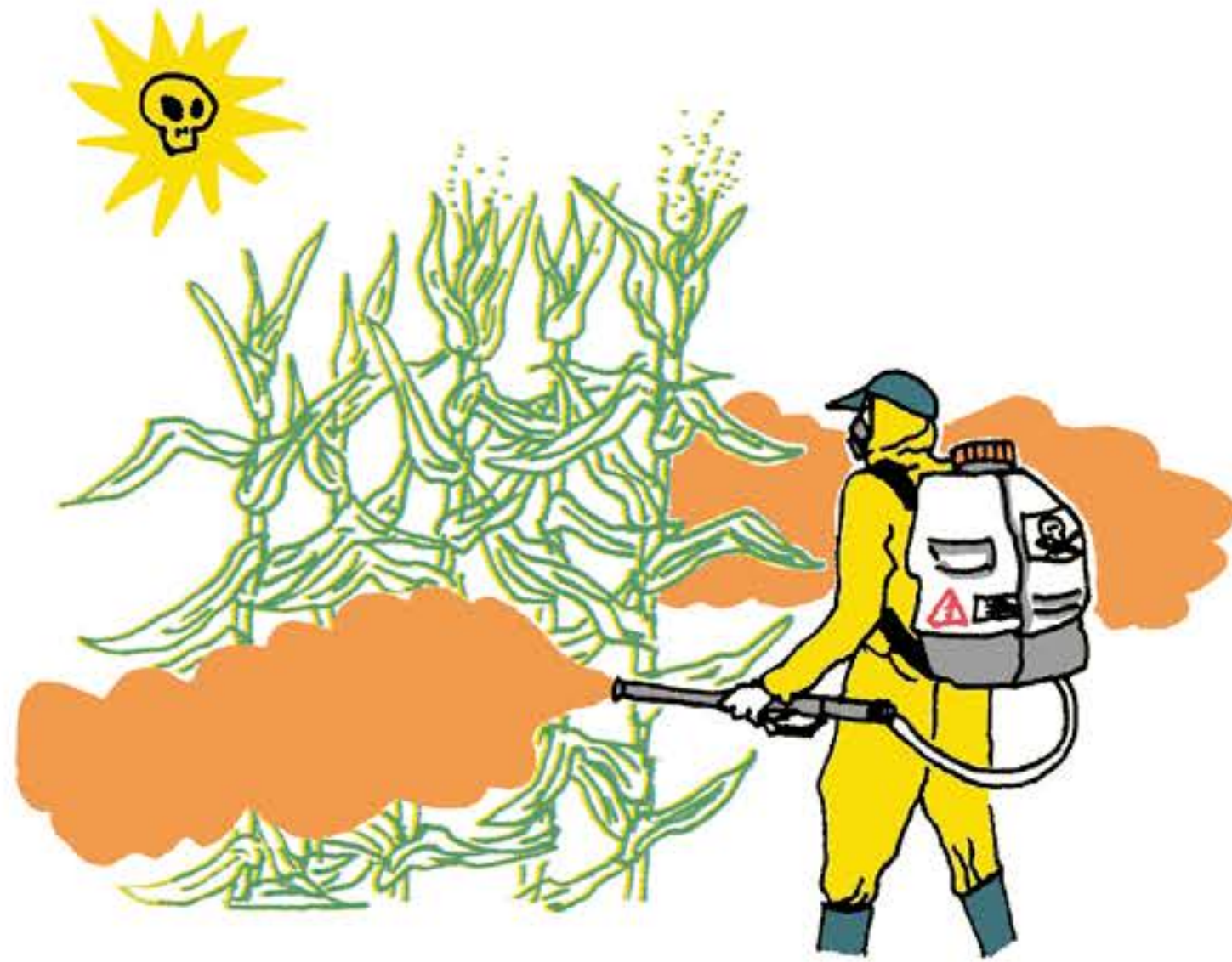
FROM THE MOMENT THEY ARE HARVESTED UP TO STORAGE AND DISTRIBUTION, **ESSENTIAL INFORMATION** MUST GO ALONG EACH BATCH OF SEEDS:

- COMMON NAME
- SPECIES AND VARIETY
- DATE OF HARVESTING
- MONTH AND YEAR
- LOCATION
- PRODUCER



SEED QUALITY

FOR THE INDUSTRY, A QUALITY SEED IS UNIFORM AND STABLE, GENERATION AFTER GENERATION. IT MUST RESPOND WELL TO AGROCHEMICALS, LONG DISTANCE TRANSPORT, AND PREFERABLY BE VULNERABLE TO PESTS AND DISEASES TO ENSURE DEPENDENCY ON AGROCHEMICALS.



FOR THE FARMERS AND THE PUBLIC, A QUALITY SEED IS **DIVERSE, RESISTANT, RESILIENT AND ADAPTABLE** TO LOCAL CONDITIONS. IT MUST PRODUCE TASTY FOOD WITH GREAT NUTRITIONAL VALUE, RELEVANT IN THE ECOLOGICAL AND CULTURAL CONTEXT. IT MUST PROMOTE **INDEPENDENCE**.



WORLD FOOD SECURITY LARGELY DEPENDS ON FARMERS SEEDS. THEIR CONTINUOUS CREATION AND USE ARE ESSENTIAL FOR THE WELLBEING OF HUMANITY.

WE FIND THAT FARMER SEEDS ARE SUPERIOR IN QUALITY TO INDUSTRIAL SEEDS, BUT IT IS NECESSARY TO SUPPORT THE SEED GUARDIANS WHO CONTINUE TO SELECT AND IMPROVE THEM YEAR AFTER YEAR.

PARTICIPATORY GUARANTEE SYSTEM

THE SEED GUARDIANS NETWORK OF ECUADOR HAS DEVELOPED A PARTICIPATORY GUARANTEE SYSTEM WHERE THE PRODUCERS VISIT EACH OTHER TO MAINTAIN QUALITY STANDARDS IN AGROECOLOGY AND SEED PRODUCTION.

THE PARAMETERS ARE:

- ① **INHERITANCE:** NATIVE OR CREOLE SEEDS, COMING FROM INHERITED MATERIAL, CAPABLE OF MULTIPLYING LIFE.
- ② **AGROECOLOGY:** EXCLUSIVELY USE AGROECOLOGIC PROCESS TO PRODUCE THE SEEDS.
- ③ **GERMINATION:** PERCENTAGE OF ADEQUATE GERMINATION, ACCORDING TO THE SPECIES.
- ④ **PROTOCOLS:** CULTIVATION ACCORDING TO THE SPECIFIC PROTOCOLS FOR SUCH SPECIES, BASED ON TRADITIONAL TECHNIQUES, TO ENSURE QUALITY AND GENETIC DIVERSITY.
- ⑤ **SELECTION:** SEEDS CHOSEN FOR SIZE AND SHAPE ACCORDING TO THE SPECIES, FREE FROM DEBRIS AND PLAGUES.
- ⑥ **STORAGE:** USE OF ECOLOGIC PRODUCTS AND ADEQUATE CONDITIONS FOR STORAGE, CHEMICAL FREE.
- ⑦ **DEFINED VARIETY:** THE SEED CORRESPONDS TO THE CHARACTERISTICS DEFINED FOR THE VARIETY.
- ⑧ **SOCIAL EQUITY:** FAIR TREATMENT OF ALL PEOPLE INVOLVED IN THE PRODUCTION PROCESS, PRACTICING RECIPROCITY AND COMPLEMENTARITY.

IF YOU HAVE NEVER SAVED SEEDS UNTIL NOW, YOU ARE AT THE BEGINNING OF A LONG AND WONDROUS TRIP.

THE SEED IS THE ESSENCE OF LIFE ITSELF. TO TAKE CARE OF IT IS AN ACT OF COURAGE AND DEFIANCE TO A SYSTEM THAT TRIES TO SUPPRESS DIVERSITY AND AUTONOMY. BUT ABOVE ALL, IT IS AN ACT OF LOVE AND REVERENCE TOWARDS NATURE AND TOWARDS ALL THE PEOPLE THAT HAVE SUSTAINED THE SEED FOR CENTURIES.



IF YOU ALREADY TAKE CARE OF SEEDS, REMEMBER THAT YOU ARE NOT ALONE. IN EACH CORNER OF THE WORLD AUTONOMOUS GROUPS OF PEOPLE HAVE EMERGED, DEDICATED TO RESCUING OUR AGRICULTURAL AND FOOD HERITAGE.

IF YOU ARE IN **ECUADOR OR LATIN AMERICA**, WE INVITE YOU TO CONTACT US THROUGH WWW.REDSEMILLAS.ORG, THE OLDEST NETWORK OF SEED GUARDIANS IN THE REGION.

THE FUTURE OF FOOD IS IN YOUR HANDS.

RIGHT TO THE SEEDS

ALL PEOPLE HAVE THE RIGHT TO CREATE, SAVE, MULTIPLY, SHARE, EXCHANGE, SELL AND FREELY DISTRIBUTE SEEDS. NO LAW, PUBLIC POLICY, MARKET STRATEGY OR PRIVATE APPROPRIATION MAY INFRINGE UPON THIS BASIC RIGHT.

RIGHTS OF SEEDS

- RIGHT TO KEEP THE GENETIC AND CULTURAL INHERITANCE THEY CONTAIN, THROUGH THE PRESERVATION OF THE INHERITED VARIETIES
- RIGHT TO EVOLVE IN LOCAL CONDITIONS AND IN THE HANDS OF THE POPULATION, IN A DECENTRALIZED MANNER.
- RIGHT TO FREE CIRCULATION, WITHOUT BORDERS, SINCE SUCH MOVEMENT REVITALIZES THE SEED ALLOWING ITS EVOLUTION AND ADAPTATION.
- RIGHT TO BE PROTECTED FROM TRANSGENIC CONTAMINATION, FROM AGROCHEMICALS, AND FROM ALL LAW, PRACTICE, COMMERCIAL INTEREST OR PRIVATE APPROPRIATION THAT ATTEMPTS AGAINST THE PREVIOUS RIGHTS.

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