

Instruction Manual for Agricultural Technologies

1.11 Okra Production



1. Land Preparation and Sowing

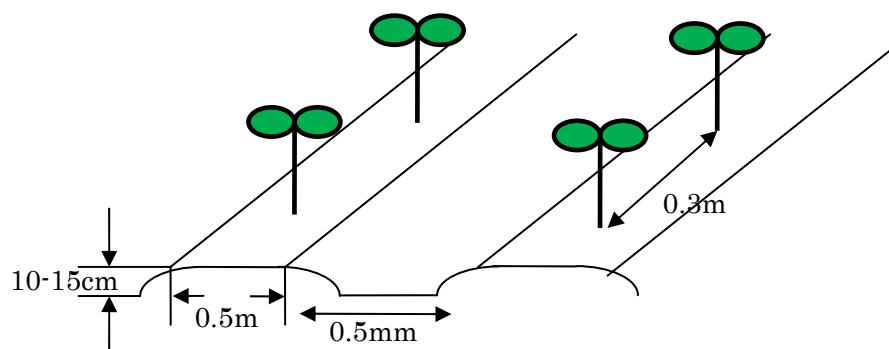
a) Weeding and leveling

Okra seeds can be sown on the flat beds. The field must be well leveled after weeding and plowing by hoe. If there is danger of animal intruding into the field, fencing surrounding the field is required.



b) Sowing

Sow 2 to 3 seeds for each sowing spot about 2 to 3cm deep keeping interval of 30cm and 1m between intra-row spacing. Cover the seeds with the soil around.



2. Crop Management

a) Fertilizer application

Apply fertilizer around the plants or along the planting rows 1 week after germination.

Apply 20g or a pinch of NPK: 15-15-15 for each plant, then cover with the soil around.



b) Thinning

Remove surplus of plants when their first true leaf is fully opens.

Leave one plant for each hill.



c) Ridging

Ridge up the soil along the planting rows from both sides to be 5 to 10cm high after fertilizer application.

Weeding should be done at the same time.



d) Control of insect and disease

To prevent from disease and insect, spray chemical on the entire plants once a week.

Any commercial insecticides available can be used by diluting into 1000 to 2000 times with water.

Any disease seldom occurs on okra.

Spraying fungicide is not very necessary if no symptom is observed on the plants.



e) Top dressing

Apply additional fertilizer as top dressing in the same dose as the initial application when the first flower is fully open.

Just drop a pinch of NPK:15-15-15 beside each plant and cover it with soil.



3. Harvesting

a) Time of harvesting

Harvest fruits of okra when their pods grow up to 8–10cm in the length.

Okra is fast growing crop.

Harvesting time should not be missed, otherwise the pods become hard with fiber formation.

For your standard, the only optimum harvesting time is just 3 to 4 days after flowering.



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1.12 Melon Production



1. Nursing

a) Preparation of nursery soil

Find a sunny and flat place for location of nursery, and sieve top soil and mix certain amount of fertilizer in the soil.

Fertilizer dose;

200g (3 hand grip or 3 tomato tins) of NPK 15-15-15 for 20L (1 bucket) of soil.



b) Putting soil into pots

Put the prepared nursery soil into the pots and place them uniformly on the flat bed.

Water plentifully and wait until water is drained.

Caution;

Cucurbit crops like melon are very sensitive for transplanting shock.

Unless using pots for nursing, they will be completely damaged by the shock during transplanting.



c) Sowing

Prepare seeds and sow 1 seed in each pot.

Softly push the soil with fingers about 1 to 2cm deep and put a seed.

Cover the seed with fine soil.



d) Covering

After watering gently, cover the pots with any dry grass to keep moisture in the nursery soil.



e) Removal of cover

Remove the cover immediately when the seeds start sprouting up.

Watering is preferred to be done every morning.



f) Control of insect and disease

To prevent from pest and disease, spray any commercial insecticide available by diluting with 1000-2000 times of water, that is equivalent to one and a half (1.5) caps of “Voltic Water” for 16 liters knapsack sprayer filled with water.

Hand sprayer is compact and convenient.



g) Optimum time for transplanting

Check out the optimal time for transplanting.

When the seedlings have 2-3 true leaves, it is the time for transplanting.

In normal, 2 weeks after sowing.



2. Land Preparation

a) Weeding and ridging

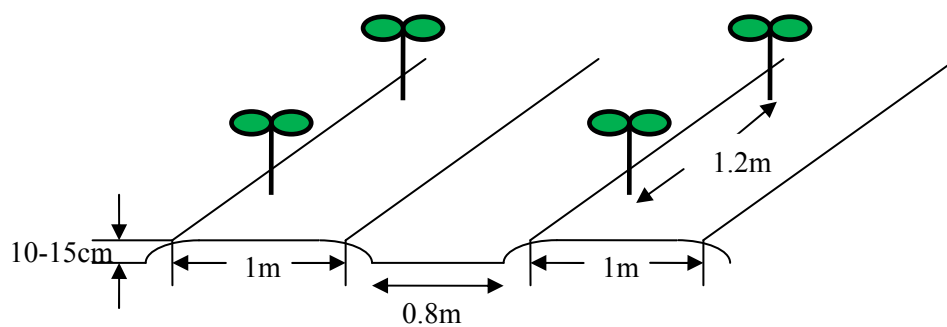
Make ridges about 10 to 15cm high and more than 1m wide by hoe.

Keep the space open between ridges wide enough to walk.



b) Making planting holes

Make planting holes in 1 row on one side of the beds keeping distance between planting holes to be 1.2m.



3. Transplanting

a) Uprooting

Take out seedlings carefully with the soil block and the complete root system by turning the pot upside down.



b) Transplanting

Put seedling with the soil block in the planting hole after sufficiently watering.

Push the adjacent area of soil and the root ball softly by hand.



c) Fertilizer application

In 3-5 days after transplanting, apply fertilizer 33Kg/10a or a hand grip per plant of NPK 15-15-15 around the plants.

Then cover with the soil around.



4. Crop Management

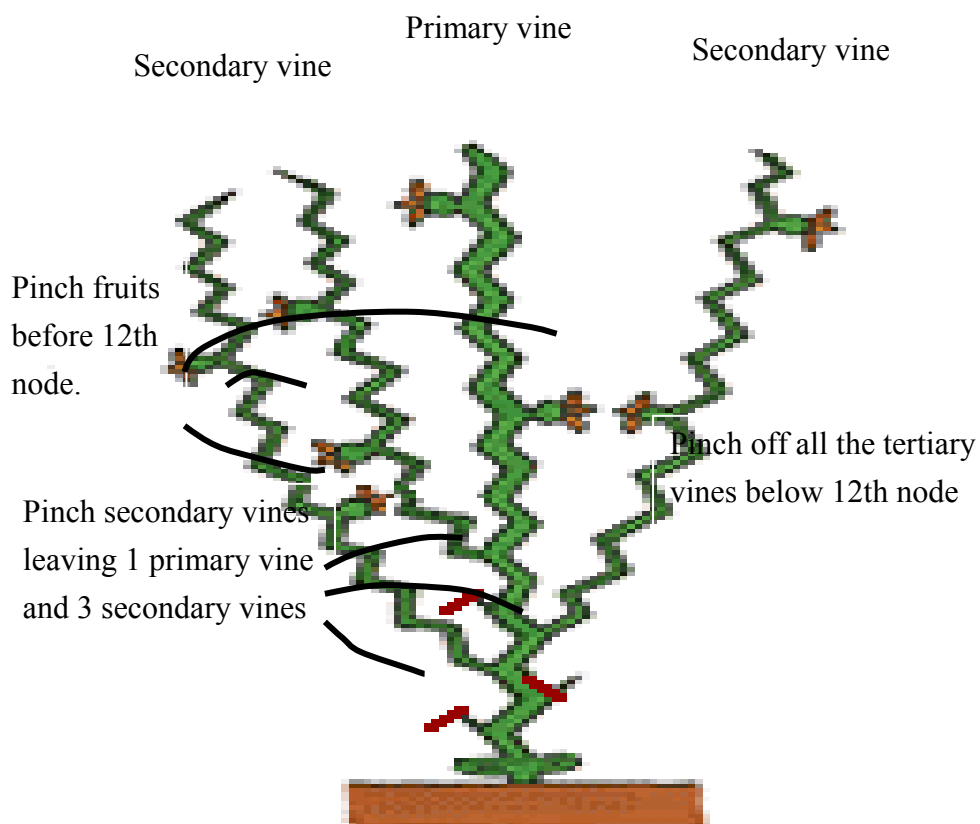
a) Pruning vines

Select the best 4 vigorous vines including 1 primary vine and 3 secondary vines.
Pinch off all the tertiary vines below the 12th node.



b) Removal of fruits

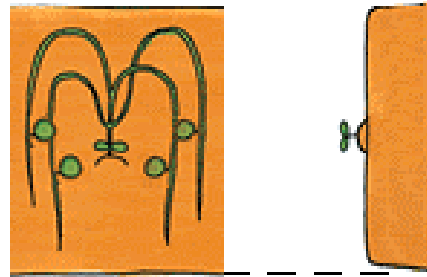
Remove all female flowers or fruits below the 12th node.
Set fruits after the 12th node on each vine.
Total number of fruits on each plant should be limited to 3 to 4 fruits only.



c) Training vines

Train vines to the same direction.

When vines grow up to the edge of ridge, draw back vines not to intrude to furrow.



d) Fruit set

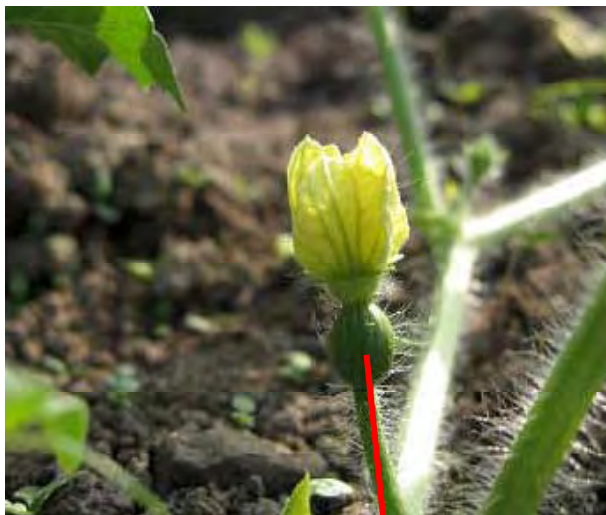
Fruits are produced only on female flowers.

Fruits to be set are on female flowers above the 12th node.

In case of melon, female flowers come at the 1st node on tertiary vines.

When the vines grow up to the 12th node, stop pinching tertiary vines for fruit set.

Female flowers can be identified as shown on the photos below.



Female flower

Oval



Male flower

e) Topdressing

Apply additional NPK 15-15-15 in the amount of 33kg/10a at maximum when the first fruits set is observed.

Make ring ditches around the plants and put one hand grip of fertilizer there and cover it with the soil around.

f) Control of insect and disease

To prevent from disease and insect, spray chemical on the entire plants once a week.

Any commercial insecticides available can be used by diluting into 1000 to 2000 times with water.

Topsin, Thiophanate-methyl, is the most effective fungicide for melon to control especially “Stem Gummy Bright”, the most serious disease on melon.



g) Control of fruit fly

Fruit fly is the most destructive insect for cucurbit crops especially melon as well as watermelon.

Once larva intrudes into fruits, there is no way to control.

It must be controlled thoroughly before larva's intrusion by spreading solution of “Furadan” dissolved with soapy water on the surface of each fruit using a painting brush.



5. Harvesting

a) Time of harvesting

Harvest when the fruits matured.

Fruit is fully matured almost 45 to 55 days after flowering or 10 to 14 days after net is formed on the fruit surface in case of net type of melon.



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1.13 Mango Transplanting



1. Digging Planting Hole

a) Dimension of hole

Dimension of planting hole is 60cm x 60cm wide and 60cm deep.

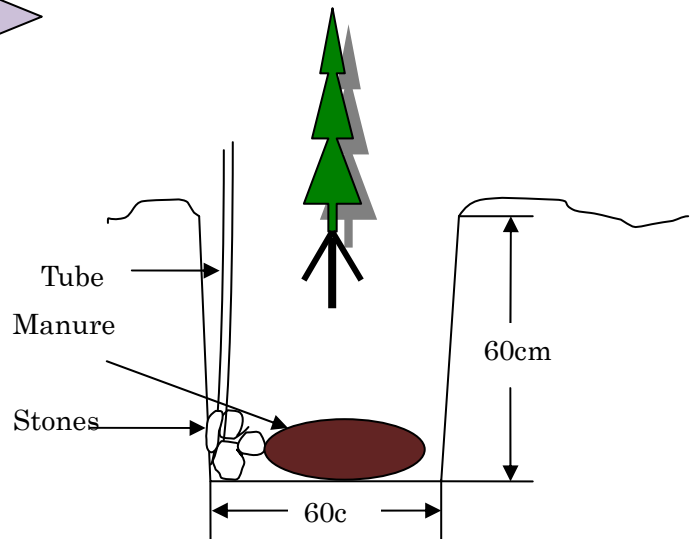


b) Compost application & tube setting

Apply well-decomposed compost, a half of head-pan, on the bottom of the hole.

A plastic tube cut into 80cm long is to be set up in the hole for irrigation to the deep part.

The tube should be raised on some stones placed on the bottom of the hole and a piece of tube is to be raised on them to avoid blockage at the tip of the tube.



2. Transplanting

a) Transplanting

Place a whole seedling in the hole with a polythene bag and cut off the bag with a knife. Check the level of the seedlings so that the grafted part must be above the ground level.



b) Filling hole

Fill back the hole with the soil dug out to be leveled.



c) Watering

Put water into the tube.

Water is supposed to reach the bottom of the hole.

Watering must be repeated until the seedling starts budding on top.



d) Protection

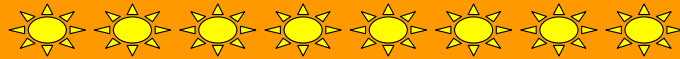
The seedling should be protected from animal attack if it is threatened.

Surround the seedling with fence.



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1.14 Drying and Storing the Harvests



1. Why Is It Important to Dry the Harvests?

Most grains contain about 20-25% of water at the harvests.
 The water content easily develops fungal and is attacked by insects and weevils if they are stored directly.
 Grains have to be dried to the level of 10 to 12% moisture content before storing.



2. Drying Methods

Before threshing, moisture contents of grains must be reduced to 13-15% under the sunlight.
 Drying on the concrete floor or tarpaulin is recommended for uniform drying and to avoid contamination with foreign objects as well.
 One sunny day may be enough to dry them.



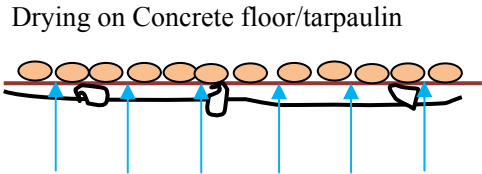
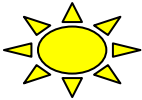
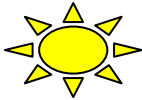
Concrete floor



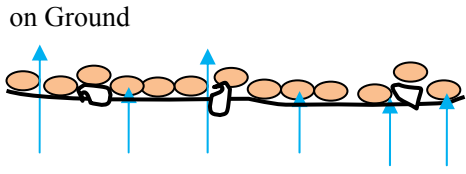
Tarpaulin



Ground



Evaporation



Grains absorb a part of evaporation

- : Grain
- : Concrete slab/tarpaulin

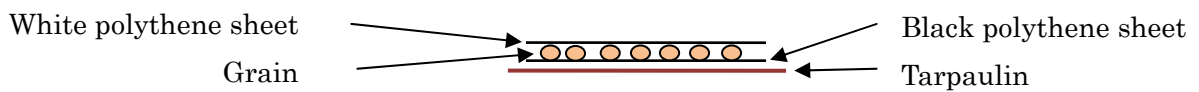
- : Stone/foreign object
- : Ground surface

3. Pretreatment of Dried Grains before Packing and Storing

The grains have to be dried again till 10-12% moisture content, that is to crush a grain in pieces separately when you bite it by teeth.

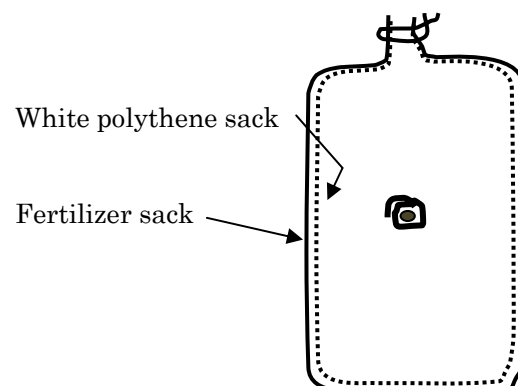
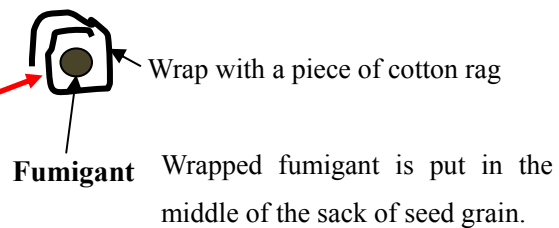
a) For food

The grains used for food are to be sterilized under the direct sunlight for 30-60 minutes, covered with a plastic sheet on top.



b) For seed

The grains for seed stock can be fumigated by using chemical such as “Phostoxin”



c) Storing

Filled sacks have to be stored in the existing granaries.



4. Tip on Grain Storing

Summary of Grain Storing in various conditions at $\leq 70\%$ of relative humidity

T. ↓ M. →	10%	15	20	25
40°C	Insects attack	Fungus/Insects attack	Fungus/Insects attack Fall in germination	Fungus/Insects attack Fall in germination
30		Insects attack		
20	Safe		Fall in germination	
10			Fall in germination	

T.: Temperature **M.:** Moisture content

Source: East African Agriculture (summarized)

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1.15 Compost Making

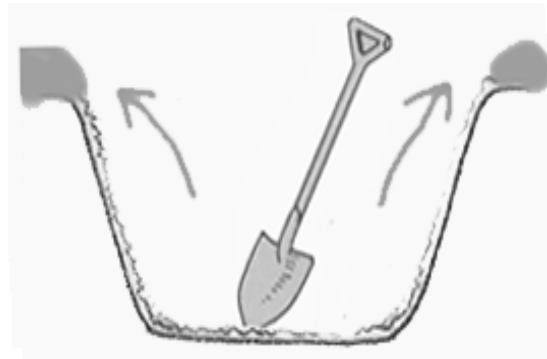


1. Digging Compost Pits

a) Dimension

Dimension of a pit is 3m x 3m wide and 1m deep.

Shallower pits tend to dry the materials easily.



b) Volume of compost

This dimension of a pit can be filled with 4 tons of organic materials that turn into 2.8 tons of compost.

The amount of compost is enough for applying to 1500m², 50m x 30m, of field.

It is recommended to dig 3 pits in the same size for re-piling the materials.

The pits are re-usable.



2. Piling Materials in the Pit

a) Piling

Organic materials: leaf litter, dead grass, harvest remnants, animal dung, crushed animal bones, oven ash, scraps, straws, rice husks, etc.

Large/long materials have to be cut into 30cm or less.

Proportion of “animal dung” should be 25-30% of materials.



b) Stamping

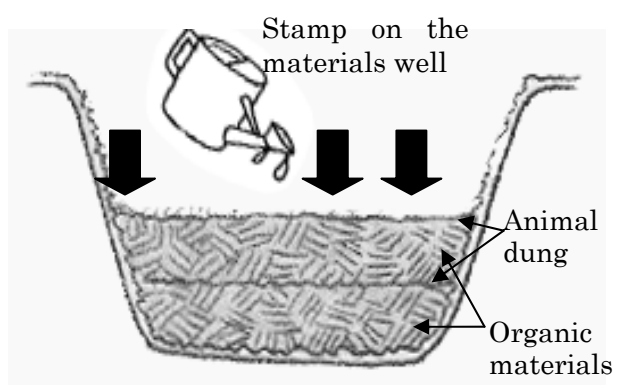
Stamp on the materials while adding well some water.

Proportion of “animal dung” should be 25-30% of materials.



c) Repeating alternately

Repeat the above processes alternately until the pit is filled.



d) Fertilizer application

Urea is to be added little by little on each layer to make 1.8kg in total for one pit in the dimension of 3m x 3m wide and 1m deep.

At the same time, ash is recommended to add for PH amendment.



e) Covering surface

After filling up the pit with the materials, cover the surface firmly to keep moist inside for smooth decomposition.

Cover the surface with a vinyl sheet, grass, leaves, soil, etc.



3. Re-piling Compost

Re-piling compost

Re-pile the compost by turning over twice to 2nd & 3rd pits with an interval of 30-45 days each.



4. Compost Application

a) Effects of compost

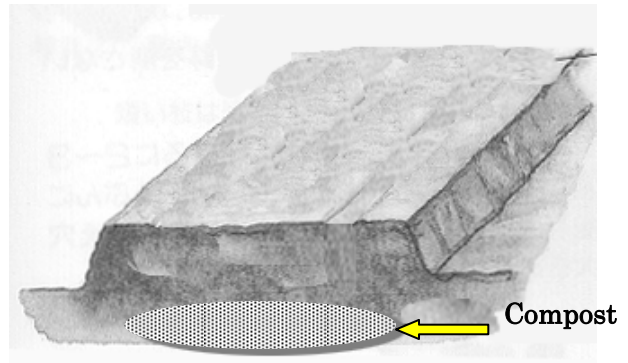
- To improve the farm soil structure.
→ Need to apply continuously.
- To provide nourishment for crops, especially minor elements.
- To apply before planting/seeding as below.



b) Compost application

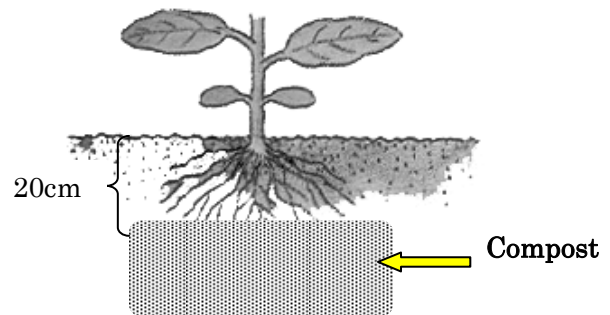
Apply only well-decomposed compost because un-rotten one may harm the crops.

Compost is to be applied in 20cm deep under the ground level.



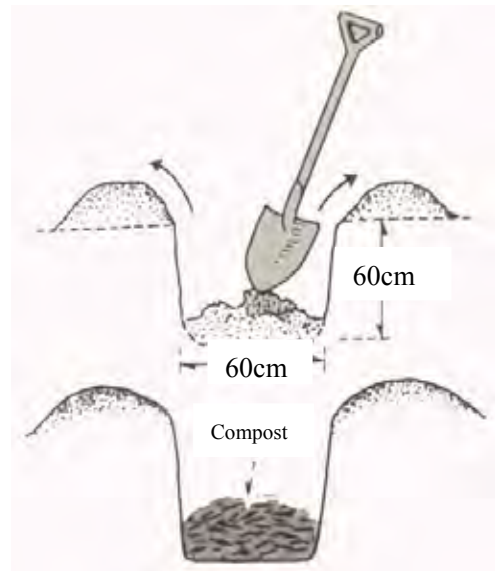
c) Dose to be applied

In general, a dose of compost of almost $2\text{kg}/1\text{m}^2$ (20t/ha) is to be applied.



d) Application to mango trees

Compost is to be applied in the planting hole prior to transplanting the seedling, and covered with topsoil after the seedling is placed on the compost in the planting hole.



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1.16 Erosion Check



1. What is Soil Erosion?

a) Soil erosion

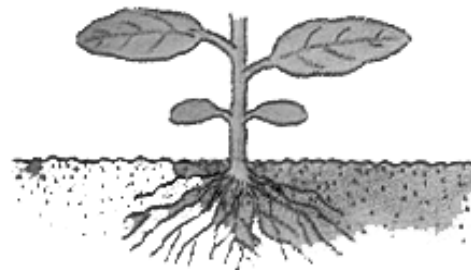
Soil erosion is that topsoil of fields is washed away mainly by rainwater or blown off by wind.

An eroded field remained with shallow or no topsoil causes poor farming practice because the most soil nutrients are contained in the topsoil.



b) Normal soil

The topsoil is fertile and good textural soil for plants, and most of crops grow with nutrients there.



c) Eroded soil

A heavy rain erodes the topsoil gradually, and thus the crops do not grow well because of lost nutrients.

The soil erosion is one of common constraints of crop production in the area.

It is said that disappearance of woods, over-cultivation and over-grazing tends to increase the soil erosion.



2. Erosion Check

a) Terracing

Terracing is to make terraced fields on the slanted land by laying stones or planting live plants along the contour lines.

The terraces make a slow runoff and thus prevent the soil erosion.

Stoning suits rather in stony steep slopes while planting live plants may be easier in gradual areas.

Formulation of flat terraces will take several years.

The pictures below show examples for each.



Terrace fields by stoning



Close view of terraces



Stoning in gentle slope fields

b) Alley cropping

Alley cropping is one of the means of terracing by planting live plants.

The cultivated crops are protected from any factors causing erosion by planting in between live plants such as cajanus.



Inter cropping of sorghum in between cajanus



Model of live plants planting along the contour lines

Possible plants:

Vetiver grass, Napier grass, Cajanus, etc.

Chapter 2

Animal Production



Instruction Manual for Agricultural Technologies

2.1 Pig Rearing



1. Construction of Pigpen

a) Structure

Pigpen is to be constructed for intensive rearing with mud bricks and roofed with wooden poles and mud or thatch.

The floor and walls would be strengthened with cement mortar.



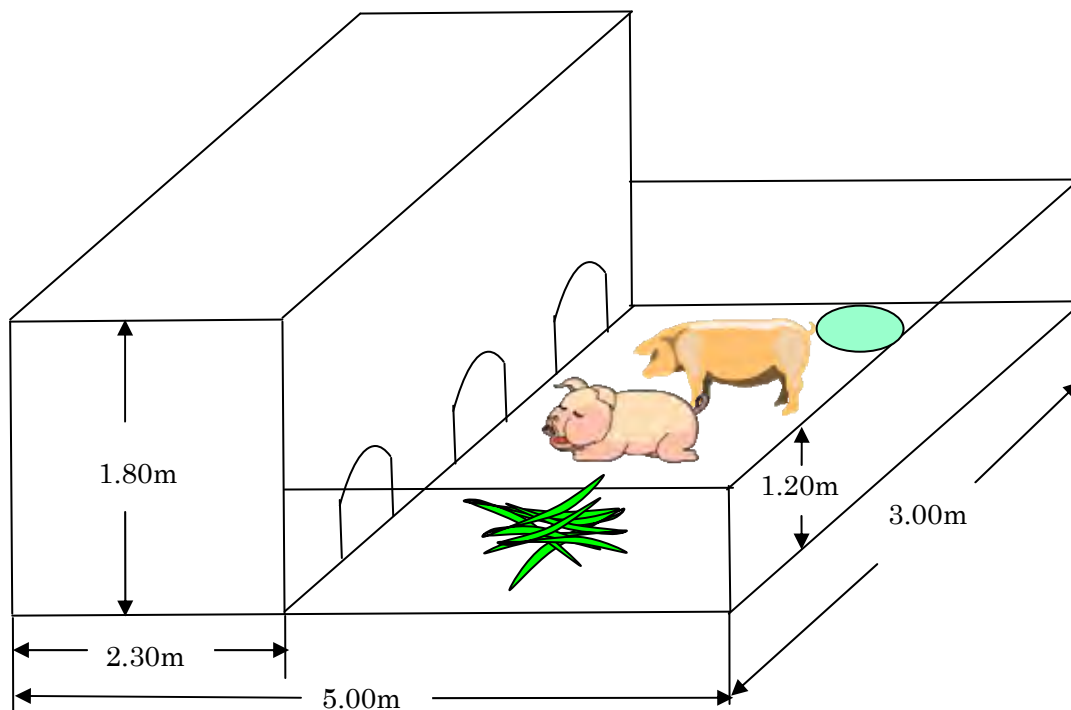
b) Dimension and materials of pigpen

Dimension of pigpen is as shown in the picture below.

This is a basic unit for 2 sows and 1 boar in normal combination.

The pen can be modified for farrowing with fitting a protection crate.

Assuming that any local materials such as mud bricks and thatches for roofing are provided by stakeholders themselves, 7 bags of cement are the only materials that must be purchased from outside the communities.





2. Feeding

a) Ingredient and feeding cost

Prepare self-supported feed cans by using local materials available within the communities and local market.

The formula and the cost involved are as follows.



Cost of Mixing 100kg of Feed (as of December 2009)

Ingredient	Quantity (kg or %)	Price per kg (GHS)	Cost (GHS)
Millet bran	10	0.26	2.6
Millet waste	45	0.2	9.0
Pito mash	35	0.34	11.9
Fish meal	2.6	1.8	4.68
Soybean meal	6.4	1.2	7.68
Oyster shell	0.5	0.12	0.06
Salt	0.5	0.28	0.14
Total cost			36.06
Unit cost per kg			0.36

b) Total feeding cost

In case of 2 sows and 1 boar as a minimum unit for fattening on the assumption that they get matured for sale in 180 days (6 months), each of them is expected to consume 0.5kg of feed everyday on average, which costs;

$0.5\text{kg} \times 3 \text{ heads} \times 180 \text{ days} \times \text{GHS } 0.36 = \text{GHS } 97.20$ (as of February 2010).



3. Shipping

a) Shipping

Pigs are expected to be ready for shipping in 6 to 7 months by applying intensive ways of rearing when they grow at almost 30 to 40kg in the weight.

Pigs are still growing even after this period, but it is recommended to ship before the feed efficiency becomes lower on daily gains.



4. Health Care

a) Health care in pig rearing

The emphasis is on prevention since prevention is better than care.

The farmers will have to strictly adhere to the following measures.



b) Sanitation

The pig house should be cleaned daily together with the immediate surroundings.

A dip of a strong disinfectant should be provided at the entrance of the piggery to prevent attendance and visitors from carrying diseases causing organisms into the piggery.



Dipping shoes in disinfectant

c) Management of piglets

- 1) Protect the piglets from chilling by providing the pregnant sow with straw before it farrows.
- 2) Keep the farrowing house warm by covering the windows of the farrowing house with Zana mats or any appropriate materials during cold weather.
- 3) Provide iron injection within the first three days after farrowing to prevent piglet anemia.
Alternatively, iron rich red soil could be put in the pen daily where available.
- 4) Provide creep feed as the piglets grow to supplement the breast milk.

d) Vigilance

Watch out for the following signs of illness and report to the Agricultural Extension Agent (AEA) immediately.

- 1) Loss of appetite
- 2) Diarrhea
- 3) Difficulty in breathing
- 4) Coughing
- 5) Sore on any part of the body
- 6) Loss of hair
- 7) Scratching against the walls
- 8) Groaning
- 9) Abortion
- 10) Still birth
- 11) Difficult and lengthy parturition
- 12) Any abnormal behavior



Diarrhea



High fever



Abnormal spots



Stomachache (Standing on tiptoe)

e) Quarantine sty

A separate pig sty should be built away from the main pig house where sick pigs should be kept in isolation from the rest of the stock for treatment and to prevent the spread of diseases.

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2.2 Guinea Fowl Rearing



1. Housing

- Dimension for 1-20 days-old keets: 20 keets/m²
- Raised and well drained floor
- Switched wall but plastered inside
- Leak-free roof (thatched, mud or iron sheets)
- Hard /firm floor for easily cleaning
- Provide sufficient ventilation but not too much light
- Protect them from hash weather and predators



2. Rearing System

Semi-intensive is ideal with the guinea fowls being housed at night, fed and given water in the morning and forage for their food in the grasses freely.



3. Feeds & Feedings

a) Feeding habits

Feeding habits:

Scavenging (grains, herbs, worm, insects, etc.) and therefore have a competitive advantage over other birds due to feeding habit.

An adult guinea fowl has to be fed about 50g of grain per day.



b) Available feeds

Available feeds:

- Various greens
- Cereals and legumes
- Pito mash (partially dried)
- Herbal plants
- Kitchen waste
- Spillovers from grinding mills
- Commercially prepared feeds (maize bran, soya meal, groundnut cake, concentrates, etc.)



c) Classification

Energy feeds (Carbohydrates):

Green weeds and herbs, cereal grains, tubers, rice bran, etc.

Protein feeds (legumes):

Cowpeas, soya meal, groundnut cake, moringa, leucaena, fish meal, etc.

Vitamin /minerals:

Vegetables, commercially prepared premixes, etc.

NB:

Feed with ample amount of water to breeders and layers on free range for high production.



4. Laying & Incubation

Starts laying at ages of 26-32 weeks with most laying occurring during the wet season when feed is abundance.

Incubation takes between 26-28 days.

Do not store eggs for more than 14 days before incubating and ideal is 1-10 days for higher hatchability.



5. Breeding of Keets

Brooder hens are most ideal.

Brood on rough platform to prevent straddling of legs (this can cripple them).

Brood for 4-6weeks before releasing them to improve survival rate and start vigorous growth.

Feed with high energy and protein diets.



6. Management Practice

- Gender balance of 1 male to at most 3 females, but ideal is 1:1 ratio.
- Feeding of surrogate hens/turkeys with high energy and protein diets and ample water supply
- Provide supplementary feed (grains and commercial feeds)
- Proper storage of eggs before hatching/incubation. (not more than 14 days in store)
- Follow eggs incubation practices;
 - ✓ Control of external parasites (use of powdery acaricides)
 - ✓ Cushioning the eggs (old clothing, cotton and spread dry grasses)
 - ✓ Candling at week 1 and week 3 after incubation
- Avoid smooth platforms
- Provision of high protein and carbohydrates diets
- Appropriate housing (Follow hygienic practices and constructions)
- Cleanliness

7. Health Care

The emphasis is on prevention since prevention is better than treatment.

Sanitary conditions in housing and appropriate feeding are the basic way to prevent diseases and pests.

Common diseases/pests of guinea fowls are:

- Coccidiosis
- Newcastle disease
- Fowl pox
- Infectious bursal disease/Gumboro
- Lice & mites; external parasites



In all cases, always consult your Agricultural Extension Agent (AEA) or District Agricultural Officer - Veterinary (DAO-vet).

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2.3 Rabbit Rearing



1. General Characteristics

Rabbits grow fast with a feed around the houses and can breed all year round.

Rabbit meat, therefore, could provide an alternate source of cheap protein for the family and side incomes by sales of them.



2. Housing

House for rabbits need not be expensive, but must be dry, clean, airy and safe from predators.

A hutch as shown in the photo, for example, measures 1.0 x 0.6 x 0.4m in minimum for a doe with her litters or a buck.

The hutch should be netted three sides and be closed on back side.

The hutch is divided into an exercise and feeding yard and a sleeping space with a wooden floor.

In addition, a nesting box, 40 x 25 x 20(H) cm, with bedding is provided while nursing litters.

The bedding materials have to be soft and clean such as used clothes, dry grass, torn paper, etc.

If the colony is large and the space is limited, any other alternative housing providing the mentioned criteria can be used.

A vacant room of barn is an example as shown in the cover photo.



3. Lifetime of Rabbits

Week

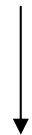
00 Birth (3-10 rabbits in a litter):
A delivered rabbit gets nervous.
Accordingly, keep her quiet several days.

01 Five days after birth, the hutch should be cleaned and fresh bedding should be provided.

02.5 Remain feeding on mother's milk and stay in nesting box.

03 Begin to leave the nest. Feed solid food such as cabbage leaves and carrots.

08 Weaning and leave the mother.



(Feeding refers to "5. Feeding" below.)

21-26 Matured and able to breed or ready for slaughter.



4. Breeding

Week

00 Mating

04 They give birth approximately 31 days after mating. Provide a nesting box, as mentioned in "2. Housing", with bedding before birth.



Nursing a litter as above.

12 They can be re-mated (8 weeks after the birth).

(1) Bucks and does are kept separately but realize each other, for example, by making a partition of wire net in the housing.

(3) A matured doe can deliver 5-6 times per year, however, keeping in three times is recommended. The doe can breed 2 to 3 years to the maximum.



(2) A particular doe has to be moved into buck's shed for mating, and after completion of mating the doe is moved back to the original house.

(4) To avoid excessive inbreeding, a buck should be changed once his daughters are introduced into the breeding flock.

5. Feeding

Rabbits are fairly omnivorous and be fed on grain like maize/sorghum roughly milled as well as greens.

An adult rabbit has to be given 50g of grain per day in addition to be enough greens, approximately three times of the grain.

While a young rabbit needs grain 30g/day during 3 months from the weaning.

They should also be constantly given water and a pinch of salt.



6. Health Care

Disease/pest prevention is much better than treatment.

Sanitary conditions in housing and appropriate feeding are the basic way to prevent diseases and/or pests.

Common diseases/pests of rabbit are:

- Conjunctivitis (weepy eye): caused by bacterial/viral infection, allergy to smoke, dust, strong light, etc.
- Snuffles and cold: caused by bacteria *Pasteurella multocida*
- Ear mites: an external parasite
- Heat prostration: rabbit is rather sensitive to heat
- Sore hocks: defective housing and wire tip/rough floor causes the hocks

In all cases, always consult your Agricultural Extension Agent (AEA) or District Agricultural Officer - Veterinary (DAO-vet).

Chapter 3

Processing



3.1 Shea Soap

1. Introduction

In this section, preparation of different kinds of Shea soap is explained.

It is prerequisite to know about preparation of quality Shea kernel and Shea butter as it is not explained here.

For this, the following manuals issued under a JICA's project in Northern Region would be good references:

- i) "Manual One (1), Best Practices for Quality Shea Kernel Production", 2007
- ii) "Manual Two (2), Best Practices for Quality Shea Butter Production By Small Scale Processors", 2007.

The followings are vessels used for the preparation of Shea soaps:



Fig-1. Large tin of tomato
(2200ml)



Fig-2. Small Plastic Bowl
(1250ml; Half of Koko Bowl)



Fig-3. Paint container
(about 5.0 liter)



Fig-4. Cup
(about 0.75 liter)

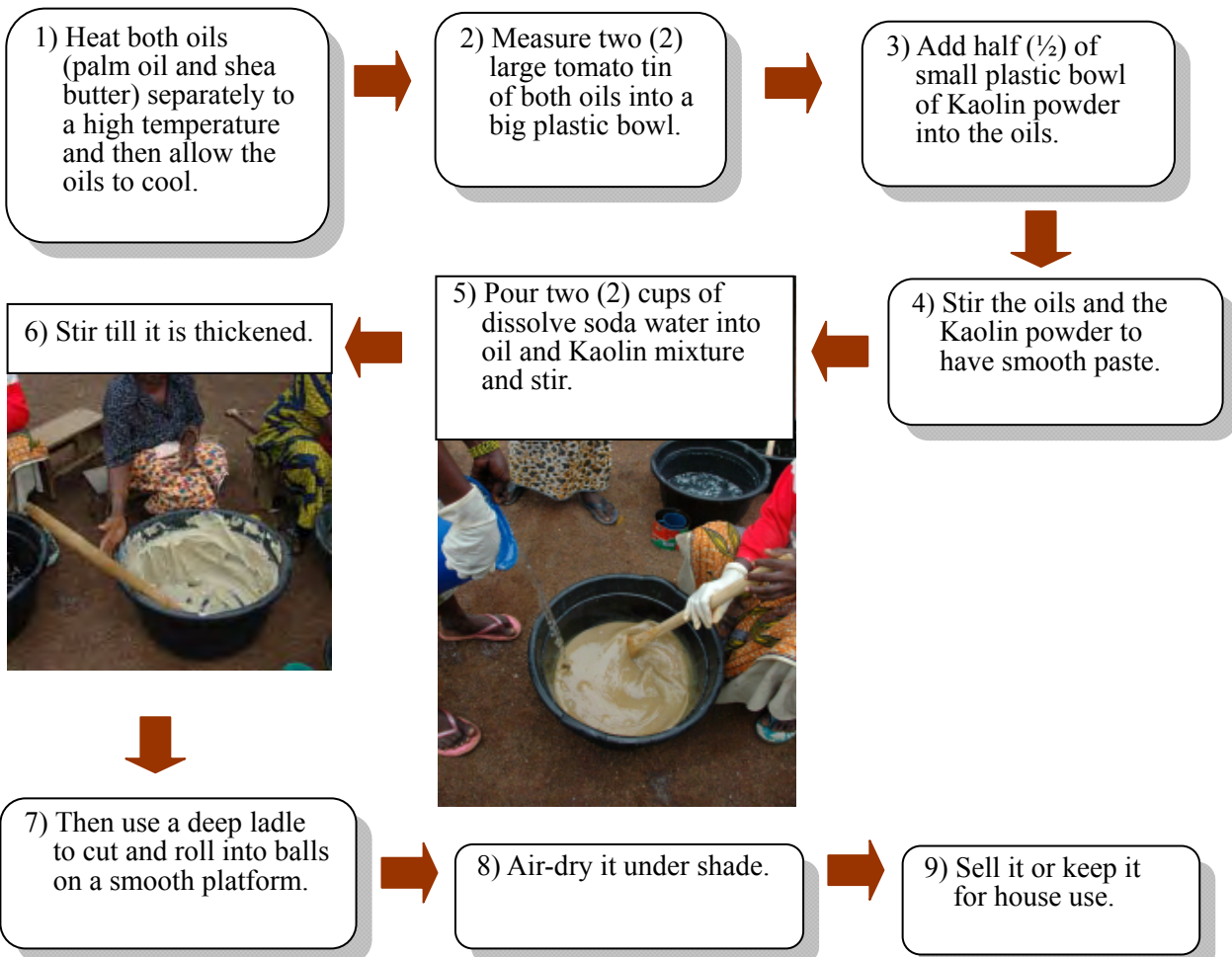
2. Round Soap

a) Items Needed

For making about one hundred (100) round soaps:

Items	Quantity
Palm oil	Four (4) tomato tins
Shea butter	Four (4) tomato tins
Kaolin powder	One (1) small plastic bowl
Caustic soda	Nine (9) cups
Water	Six (6) paint containers
Gloves	As much as needed
Empty large tin of tomato	One (1) (see Fig-1)
Big plastic bowl	One (1) (see the picture under the step 5)
Small plastic bowl	One (1) (see Fig-2)
Plastic cup	One (1) (see Fig-4)

b) Methods



3. Key Soap

a) Items Needed

For making about 10 bars of key soaps:

Items	Quantity
Caustic soda	Five (5) cups
Palm kernel oil	One (1) tin
Shea butter oil	Five (5) cups
Water	Five (5) paint containers
Red colour and Perfume	1/2 tea spoon full
Paint container	One (1) (see Fig-3)
Big plastic bowl	One (1) (see the picture under the step 3)
Empty large size tin tomato	One (1) (see Fig-1)
Plastic cup	One (1) (see Fig-4)

b) Methods



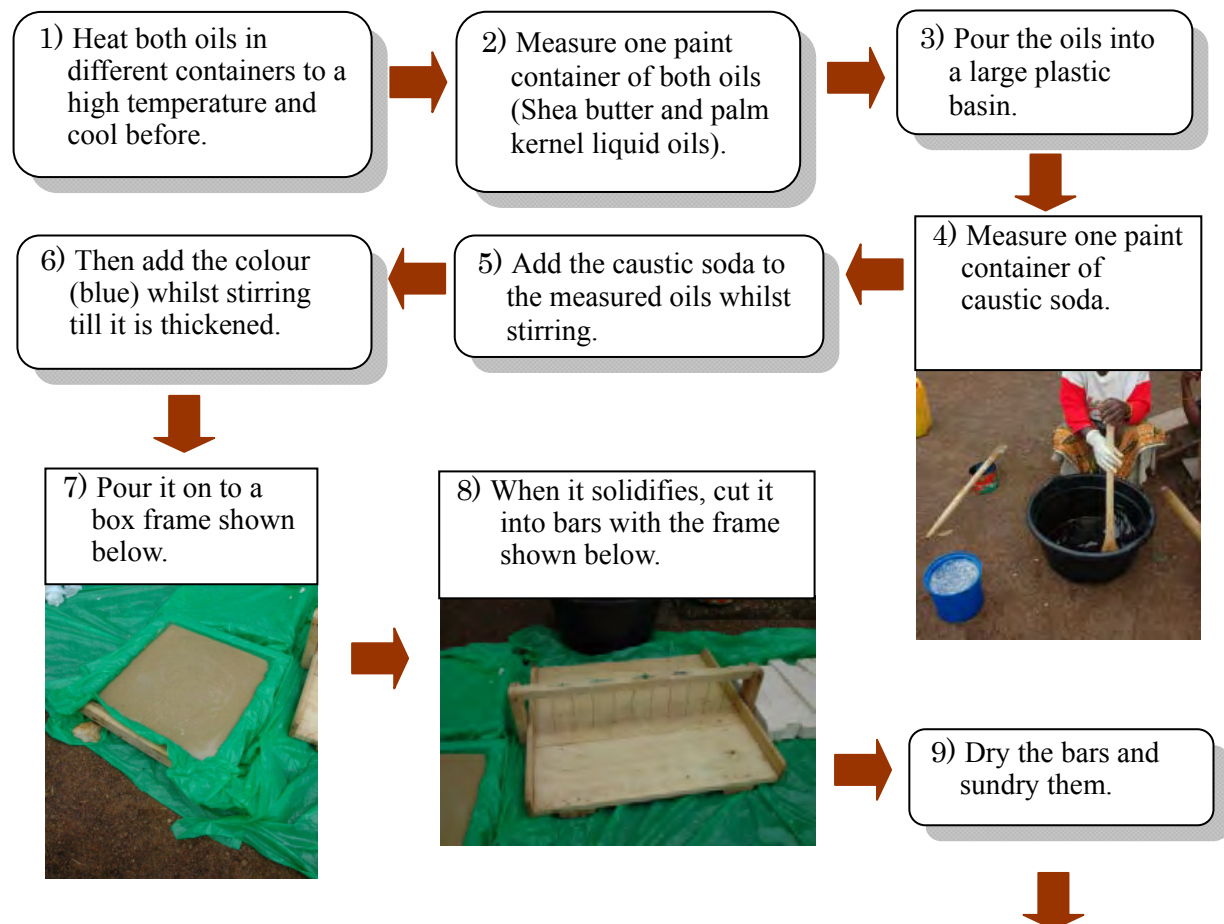
4. OMO Soap

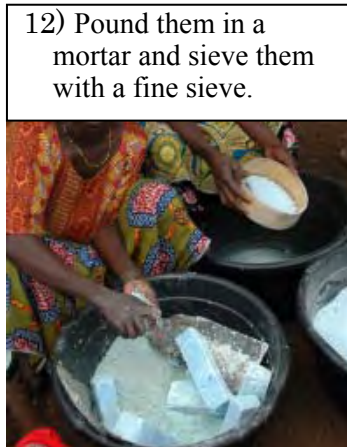
a) Items Needed

For making of OMO soaps (for large preparations):

Items	Quantity
Caustic soda	Nine (9) cups
Palm kernel oil	One (1) tin
Water	Six (6) paint containers
Liquid Shea butter	One (1) tin
Colour (blue)	1/2 tea spoon full
Paint container	One (1) (see Fig-3)
Empty large size tin tomato	One (1) (see Fig-1)
Large plastic basin	One (1) (see the picture under the step 4)
Plastic cup	One (1) (see Fig-4)
Mortar and sieve	As much as needed

b) Methods





10) Then crate the blue bars.

11) Sundry the crated soaps for the second time.

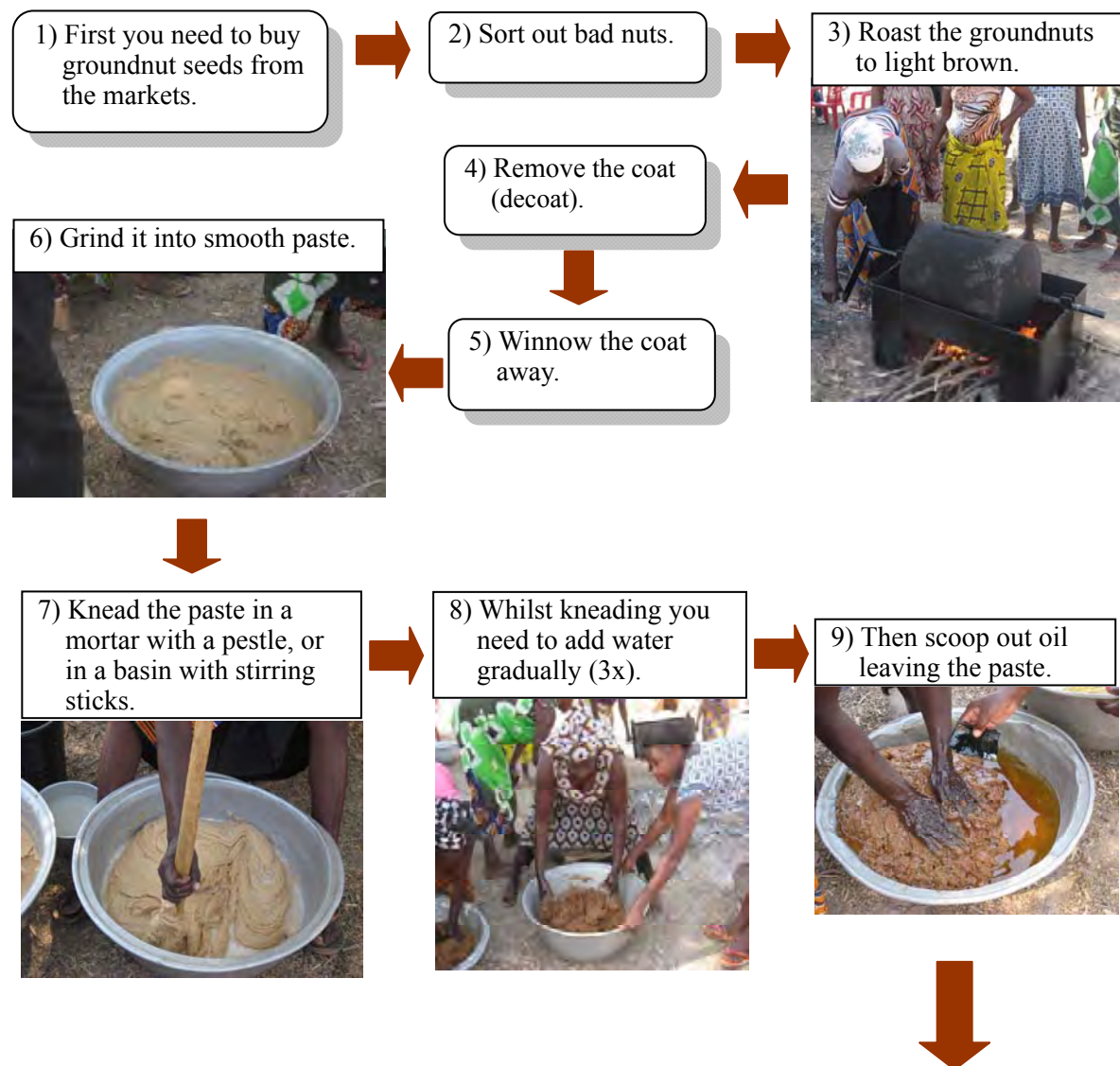
3.2 Groundnut Oil

1. Introduction

When you prepare groundnut oil, in order to get maximum benefits at the beginning of harvest, you need to use *Manipita* variety and *Chinese* variety separately.

And as time goes on, you can then have mixture of these two. In fact, the taste of *Kurikuri* becomes better if you use *Chinese* variety.

2. How to Prepare Groundnut Oil



3. How to Prepare *Kurikuri*

(*continued from the previous section)

13) Cook the balls till it turns golden brown



14) Remove from fire and air-dry them.



12) Then use the scoop oil to fry the smooth balls to extract more oil from the ball and get cook for eating.

10) Cut the paste into smaller balls.
11) Roll the balls into smooth balls on a rolling board.



15) Cool them and package them for sale.

(END)