



UMKHIQIZO WOKUDLA



UMKHIQIZO WOKUDLA

GOKUBAMBISANA SESENZE ISIFUNDAZWE SAKWAZULU-NATALI SABA ESINGCONO UKUPHILA KUSO

Uma unesifiso sokuthola ikhophi yalencwadi xhumana:
nomNyango wezoLimo nezeMvelo kwisakhiwo
sendlu emhlophe
01 Cedara Road, Cedara
Private bag X9059
Pietermaritzburg
3200
Tel: 033 343 8240
Fax: 033 343 8255
www.kzndard.gov.za

OKUPHATHELENE NOKUKHIQIZA



Ukukhiqiza kufaka:



Ukuthatha izinqumo

Ukuhlela umkhiqizo



Ukuthola imali



Ukuthenga okokutshala

OKUPHATHELENE NOKUKHIQIZA (kuyaqhutshwa)



Ukukhiqiza kufaka futhi nalokhu:

Ukukhulisa umkhiqizo nokuvuna izitshalo



Ukudayisa umkhiqizo



Ukukhokha izikweleti



Ukulondoloza imali,
uyilondela ikusasa

DEPARTMENT OF AGRICULTURE AND ANIMAL HUSBANDRY
DEPARTMENT DES DÉVELOPPEMENT RURAL
DEPARTMENT OF AGRICULTURE AND ANIMAL HUSBANDRY
DEPARTMENT OF AGRICULTURE AND ANIMAL HUSBANDRY

A cartoon illustration of a man with brown hair, wearing a green short-sleeved button-down shirt and blue trousers, standing with his hands in his pockets in a vast, flat, brown landscape. The ground is textured with many thin, dark brown lines radiating from the man. In the background, there is a line of green trees and bushes, followed by a range of blue mountains under a bright blue sky filled with large, white, fluffy clouds.

A simple cartoon illustration of a shovel with a wooden handle and a metal blade, stuck vertically into a patch of brown soil. The shovel is positioned in the center of the frame, with its handle extending upwards and its blade buried in the ground. The soil is depicted with some darker brown spots and a simple black outline for the shovel's handle and blade.



UKUKHETHA ISIZA SOKUTSHALA (kuyaqhutshwa)



Imifino idinga amanzi amaningi



Amanzi kufanele abe seduze:

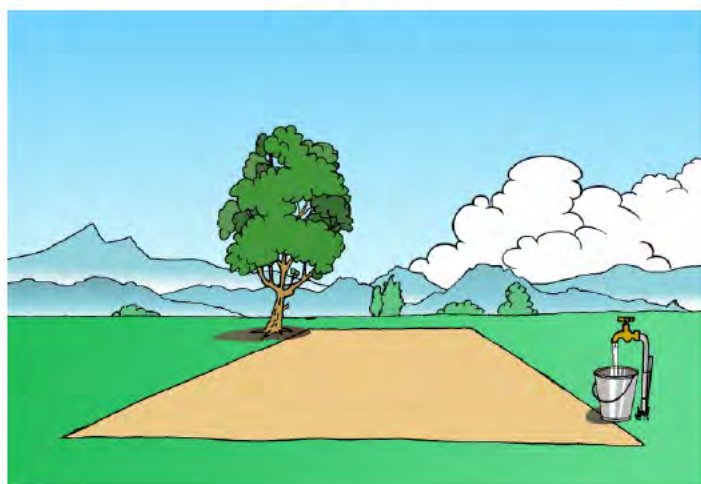
Umfula



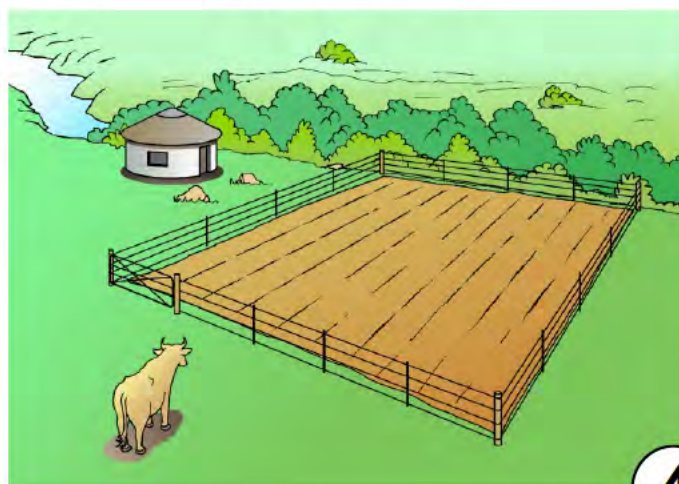
Ithangi lamanzi



Umpompi



Biyela insimu



5 UKUHLOLA UMHLABATHI NOKALIKO WABALIMI



Thatha amasampuli enhlabathi angamashumi amabili nanhlanu ezicaphuno ngensimu - kushone 15 cm



Linda imiphumela yokuhlolwa komhlabathi neziphakamiso zemvundiso / umanyolo

Uma kushiwo, faka ukaliko kusasele inyanga ngaphambi kokuthi utshale



FERTILISER ADVISORY SERVICE
KZN Department of Agriculture and Environmental Affairs
Soil Fertility and Analytical Services, Private Bag X9059, Pietermaritzburg 3200.
Tel: 033-3559455/3559515 Fax: 033-3559454

CLIENT DETAILS:
V Roberts
Soil Science
Cedara

ADVISOR DETAILS:

Phone: (01)

Phone: (01)

SUMMARY OF ANALYTICAL RESULTS: These results may not be used in litigation

Batch: 466 of 2004 Printed: 18 Jun 2004

Your sample ID	Lab. num	Sample density g/ml	P mg/L	K mg/L	Ca mg/L	Mg mg/L	Exch. acidity cmol/L	Total cations cmol/L	Acid sat. %	pH (KCl)	Zn mg/L	Mn mg/L	Cu mg/L	NIRS organic carbon %	NIRS clay %
Santa Fe	D9536	0.91	4	311	315	107	2.32	5.31	64	4.02	0.8	9	2.2	3.7	55

Comments:

- (1) Recommended rates of fertiliser and lime for the relevant crops are reported on the following pages. No recommendation will be given for crops not entered on the submission form.
- (2) Recommendations are not provided for subsoil samples.
- (3) It is assumed that samples submitted for crops and for the establishment of pastures were taken from the top 15 cm of soil. For the maintenance of established pastures, a warning depth not exceeding 10 cm is assumed.
- (4) It is assumed that the lime to be used has a neutralising value equal to 75% of that of pure calcium carbonate. Caustic lime is recommended if soil Mg levels are low, and caustic lime, if soil Mg exceeds 5.0 mg/L and Ca, where Mg is sufficient, but not excessive, either type of lime may be used. If lime is not necessary, but the soil Mg level is suboptimal for the intended crop, this is indicated under the "Lime test" heading with the comment "Low Mg". Consult your adviser for the most cost-effective method of improving Mg status.
- (5) Phosphate recommendations are based on a water-soluble P source.
- (6) The recommendations are based on the assumption that the soil sample is truly representative of the field and that other growth factors are not limiting.
- (7) NIRS measurements should be viewed as reasonably reliable estimates. Actual C, N and S concentrations can be determined (at extra cost) on request.

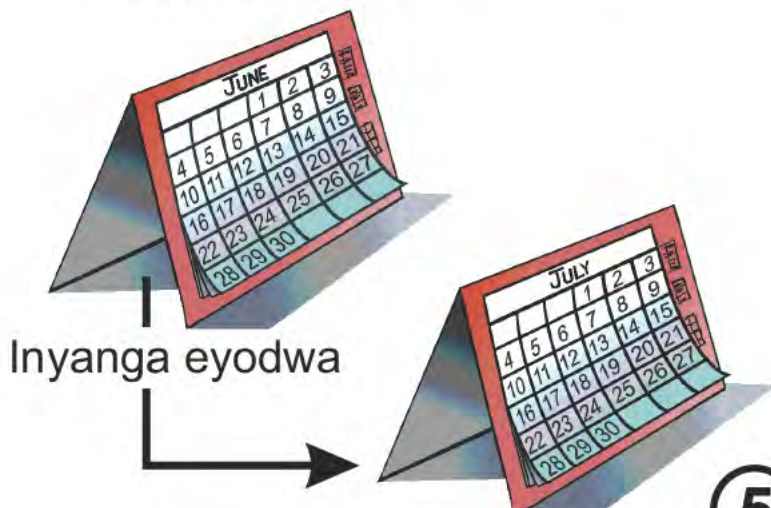
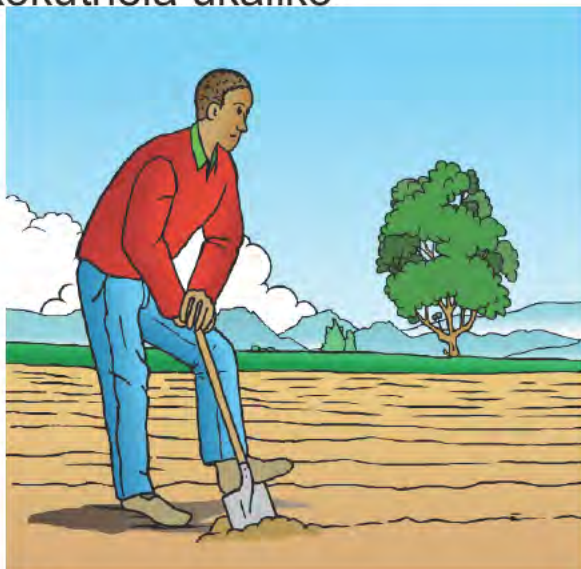
LAB: AG MS

Organic carbon percentage, estimated by near-infrared (NIRS) spectroscopy, is given for most samples. The NIRS analysis is not suitable for soils or for topsoils with high total carbon or high sample density.



Phendula inhlabathi ngemuva kokuthela ukaliko

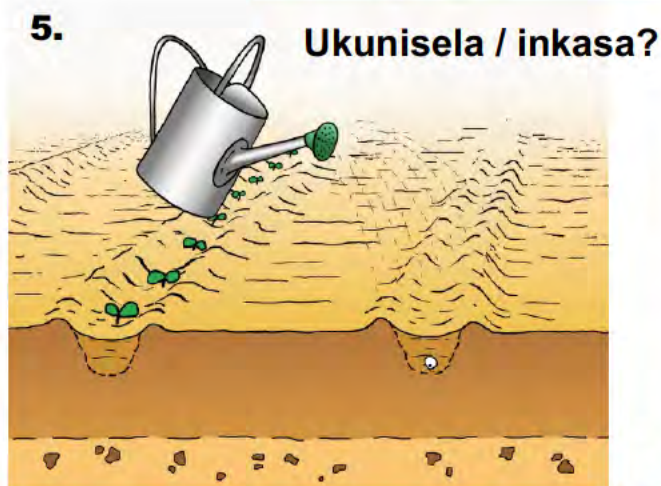
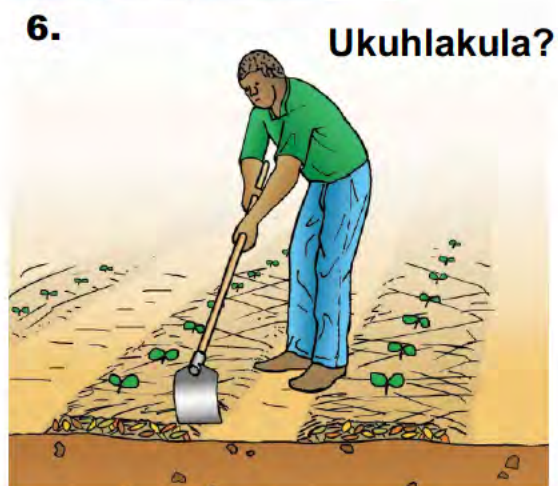
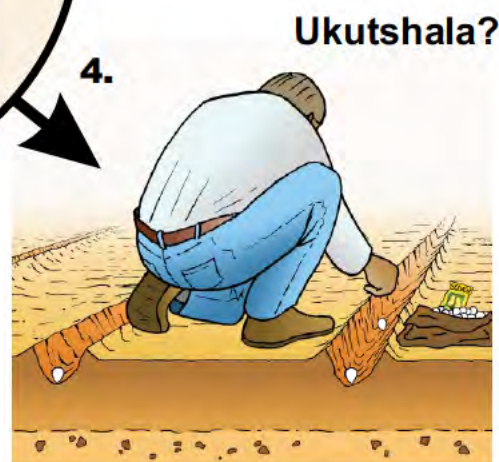
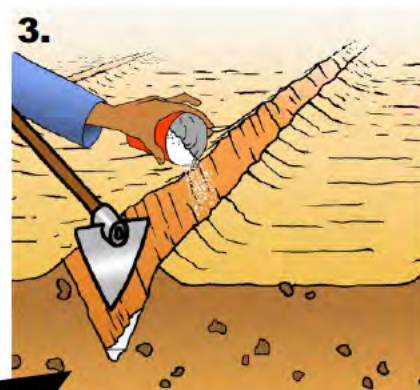
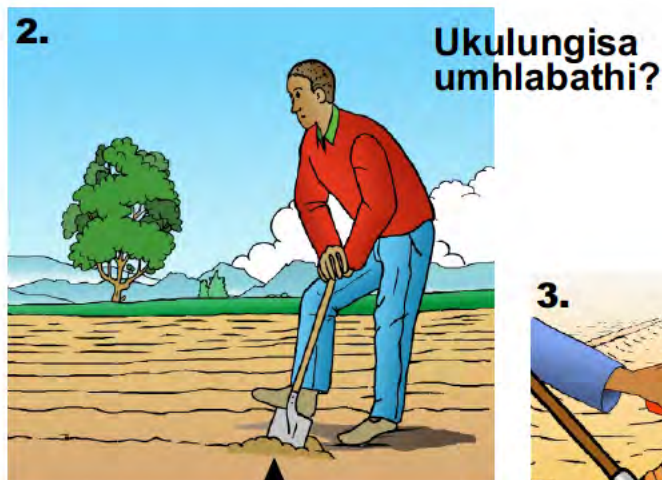
Ukaliko udinga inyanga yonke ukuze usebenze



Inyanga eyodwa

5

6 ISIKHATHI SOKUQALA UMSEBENZI: WENZA INI, NINI?



IZIKHATHI ZOKUKHIQIZA

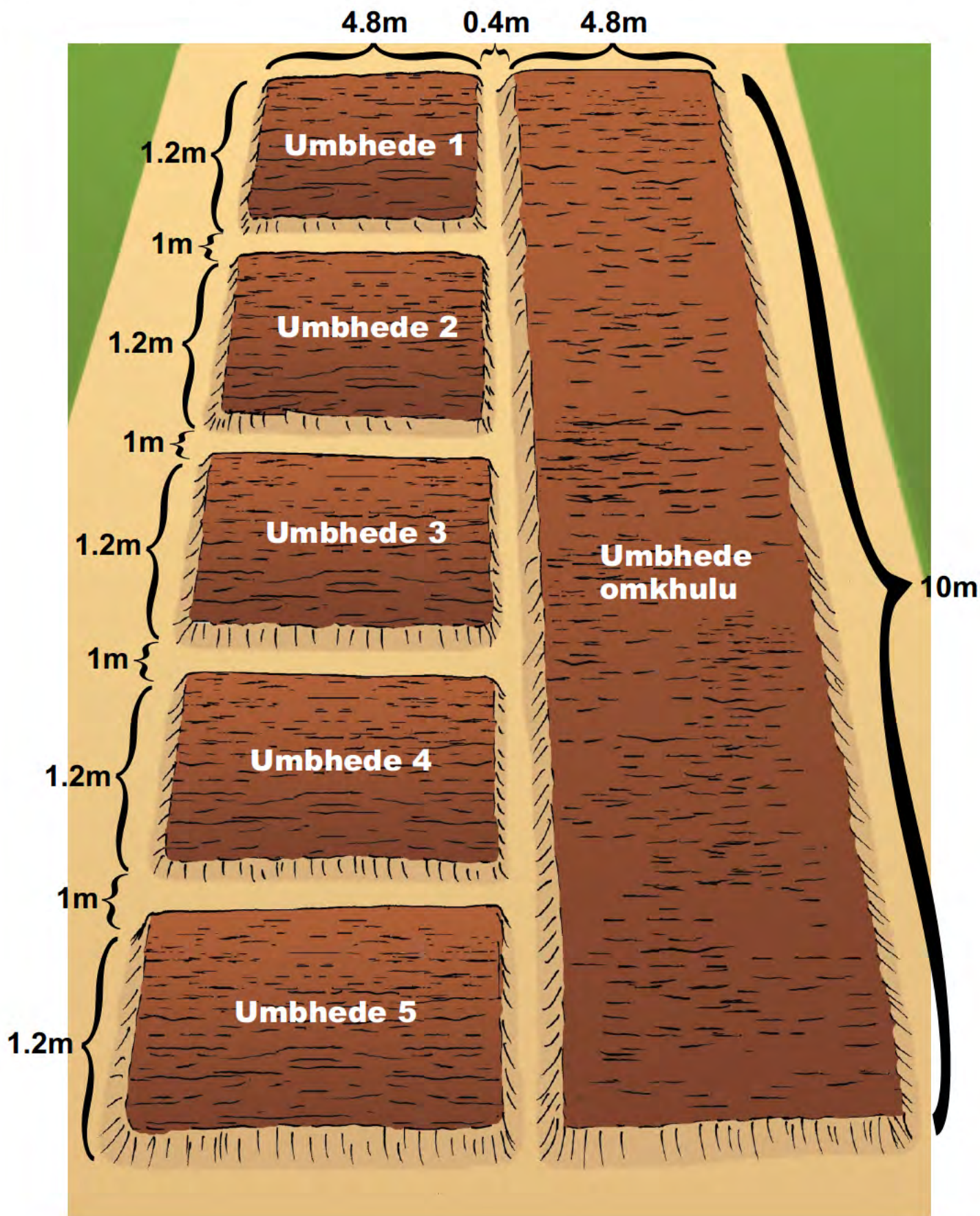


Tshala kancane (hhayi ngobuningi) ngokulandelana ukuze uhlale unemifino emisha.

Isithalo	Indawo	July	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	June
Isipinashi	Epholile		Tshala										
	Efudumele		Vuna										
Izanqathi	Epholile		Tshala										
	Efudumele		Vuna										
Ubhithiludi	Epholile		Tshala										
	Efudumele		Vuna										
Osolozu	Epholile		Tshala										
	Efudumele		Vuna										
Ubontshisi oluhlaza	Epholile		Tshala										
	Efudumele		Vuna										
Ikhabishi	Epholile		Tshala										
	Efudumele		Vuna										
Umbila	Epholile		Tshala										
	Efudumele		Vuna										
Ubontshisi	Izindawo zonke												
	Izindawo zonke												
u-Anyanisi	Izindawo zonke												
	Izindawo zonke												

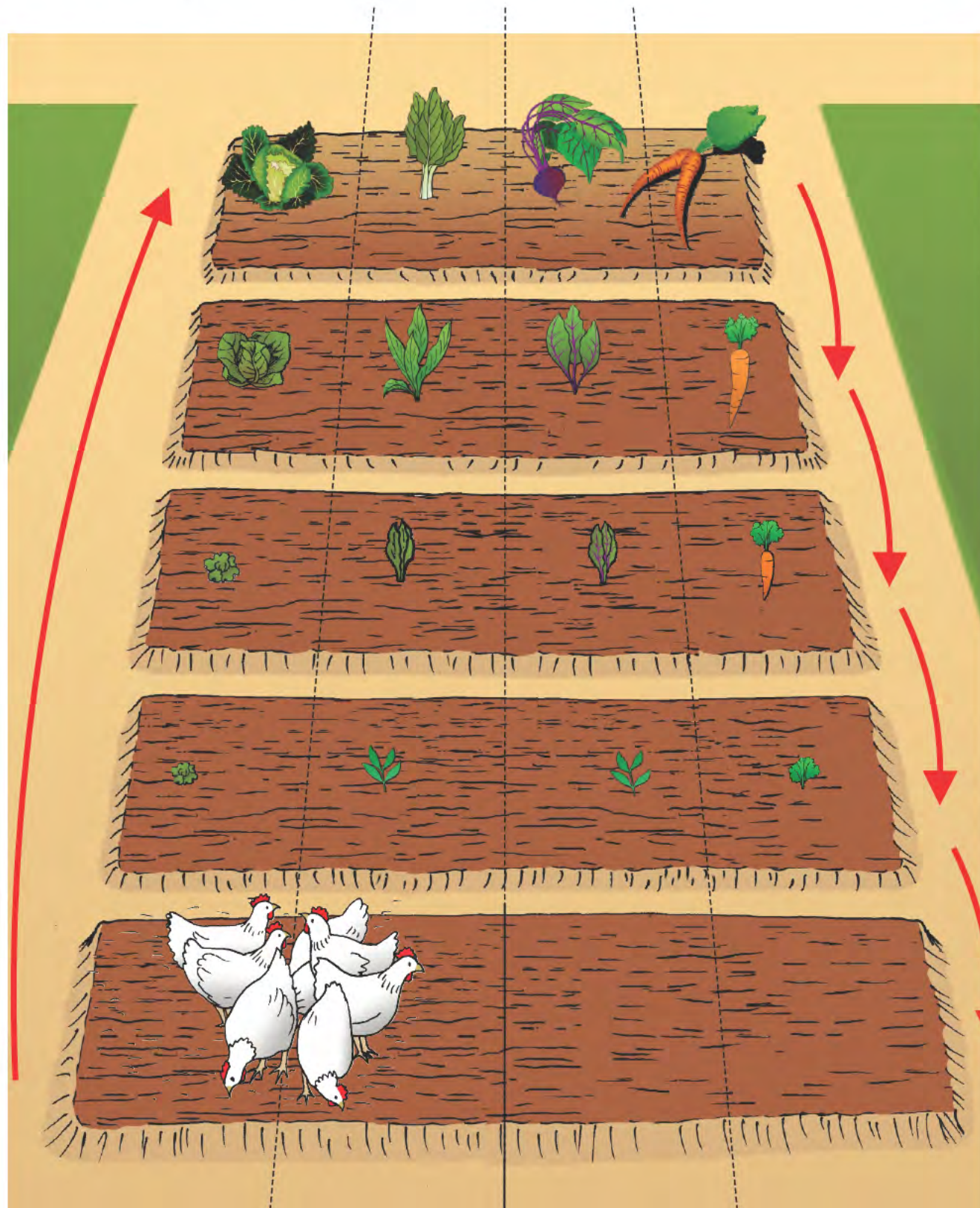
8 UKUHLELEKA KWESIVANDE

(10m x 10m = 100m²)



UHLELO LOKUTSHALA EMBHEDENI

Tshala nyangazonke ukuze uhlale unomkhiqizo



Izinkukhu (uma uthanda) noma Ungalimi (silale)

10 UHLELO LOKUTSHALA INAWO UMBHEDE OMKHULU



Ukutshala umkanye kwezinhlobonhlobo zezitshalo

Umbila



Ubhontshisi



Ubhatata



U-Anyanisi



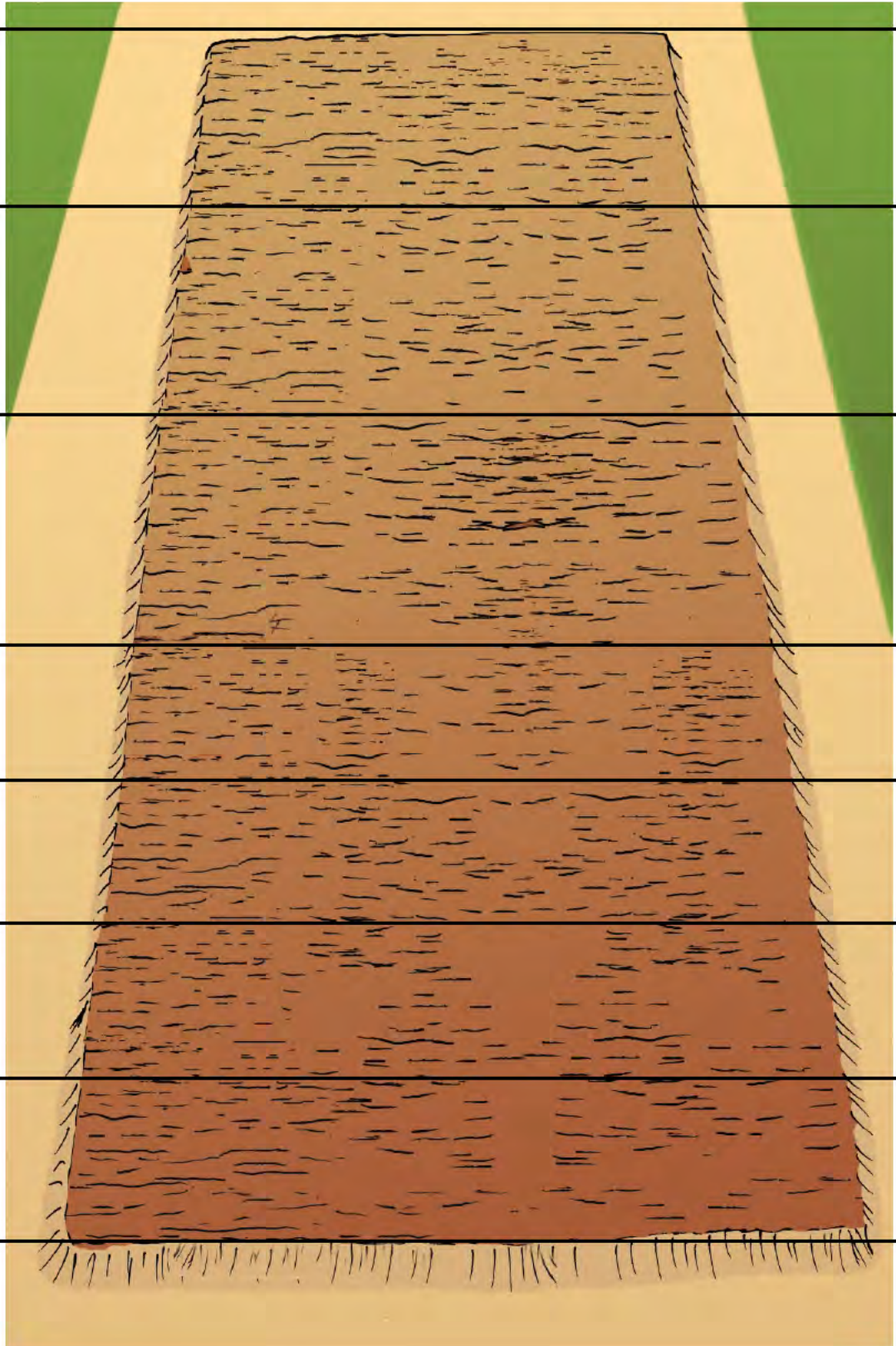
U-Brinjal

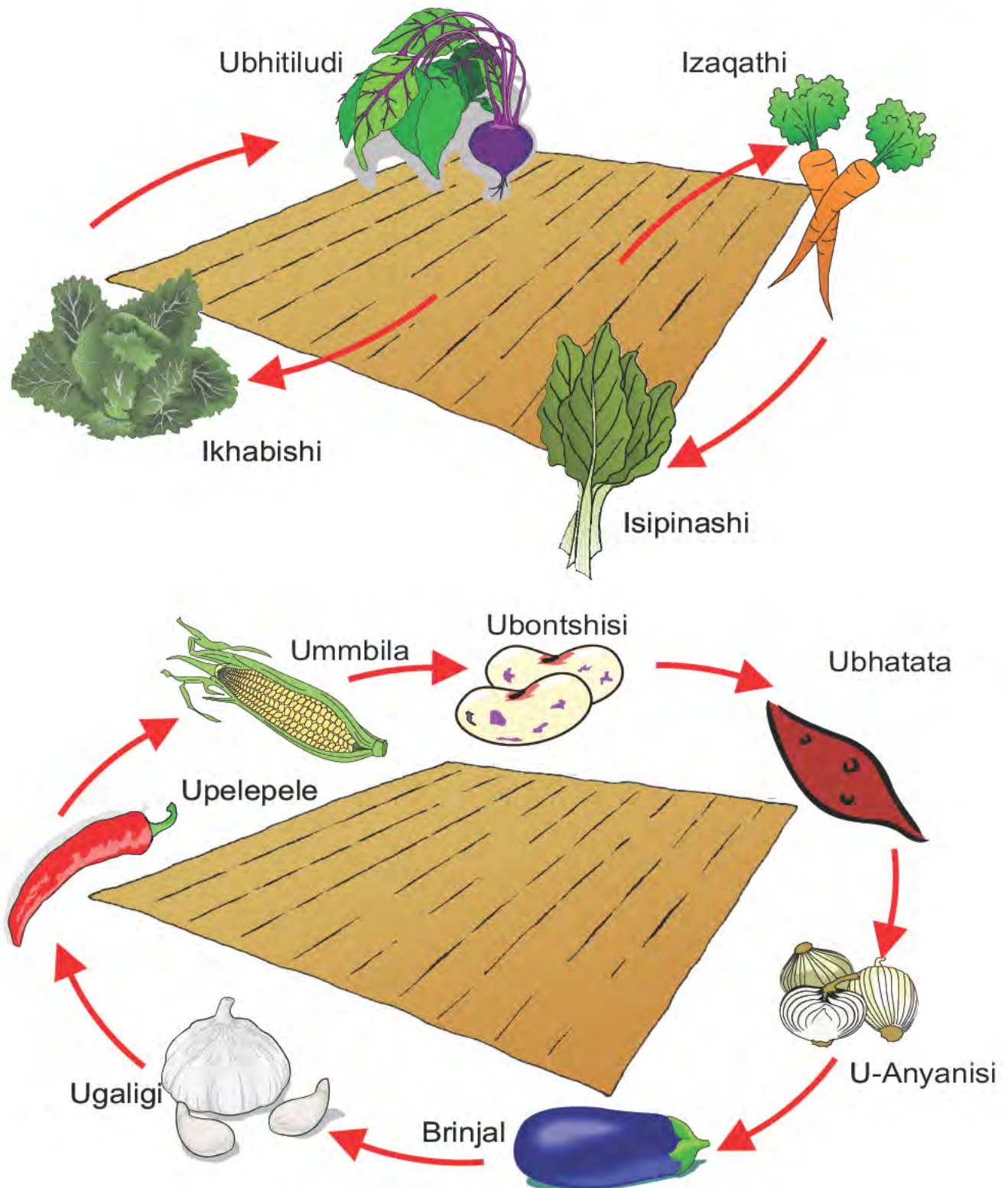


Ugaligi



Upelepele





Ungalothi uphinde isitshalo noma uhlobo olusondelene naso ngesikhathi esilandelayo sokutshala.

Ukushintsha:

- * Kwehlisa izinambuzane nezinkinga zezifo
- * Kwelekelela ukuthi umkhiqizo uqhubeke



Faka umanyolo ngokomphumela
wokuhlolwa kwenhlabathi.
Faza bese uphendula umhlabathi.

Ingxenye yesaka (10kg) lomquba **noma** ingxenye yesaka lemvundiso
ngombhede (6m²)



Ingxenye
yesaka
(10kg)
lomquba

noma



Ingxenye
yesaka
lemvundiso



Hlanganisa
umanyolo noma umquba
nomhlabathi
ngemfologo.

UKUTSHALA IMBEWU NOMA IZITHOMBO

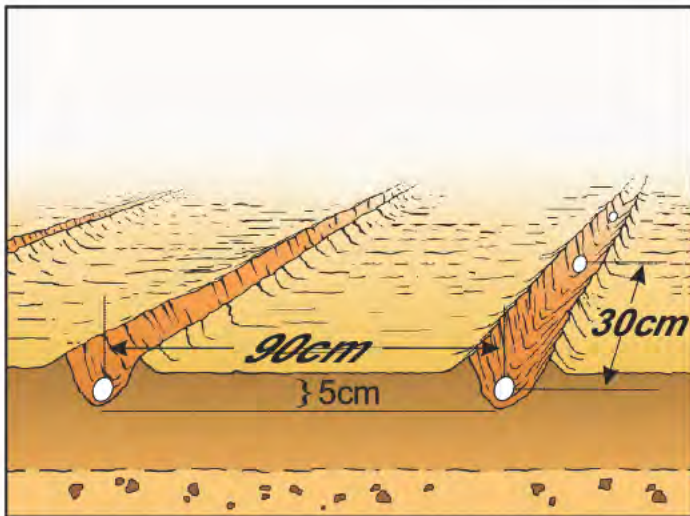


Fundisisa imiyalo
yokutshala yemifino
ofuna ukuyitshala.



Bese utshala
imbewu noma
izithombo
ngokwemiyalo.

UKUQHELELANA KWEMBEWU



Ummbila



Tshala ngo:

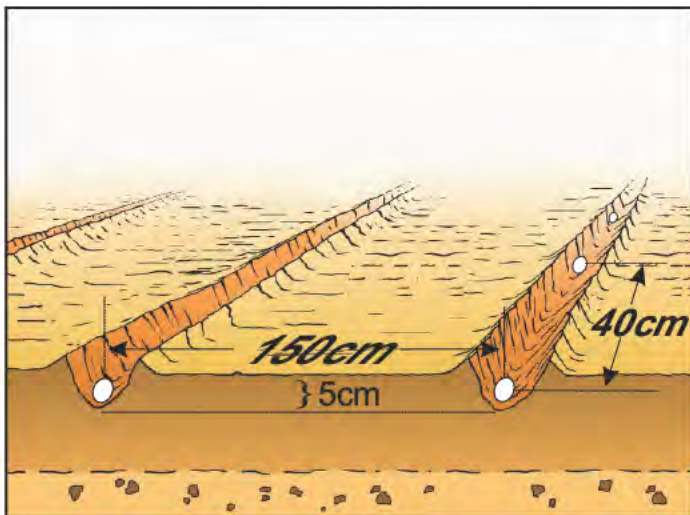
Sept kuya ku Nov

Isikhathi sokuvuna:

60 kuya ku 90 wezinsuku

Ukuqhelelana:

90cm ngo 30cm



Usolozi



Tshala ngo:

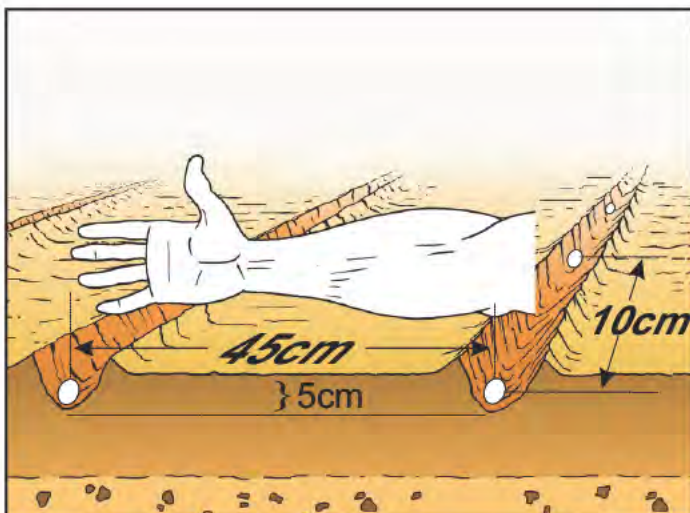
Sept kuya ku Nov

Isikhathi sokuvuna:

90 kuya ku 100 wezinsuku

Ukuqhelelana:

150cm ngo 40cm



Ubhontshisi oluhlaza (utshale nommbila)



Tshala ngo:

Epholile: Sept kuya ku Jan

Efudumele: Aug kuya ku March

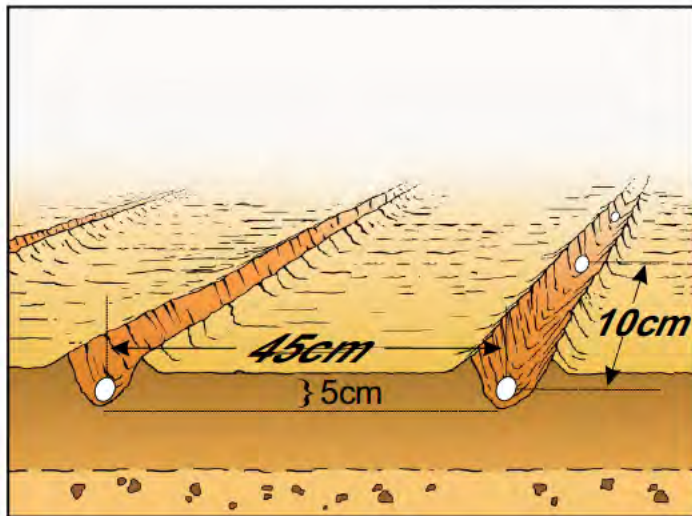
Vuna kusuka ku:

50 kuya ku 60 wezinsuku

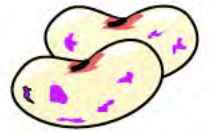
Ukuqhelelana:

45cm ngo 10cm

UKUQHELELANA KWEMBEWU (kuyaqhutshwa)



Ubhontshisi



Tshala ngo:

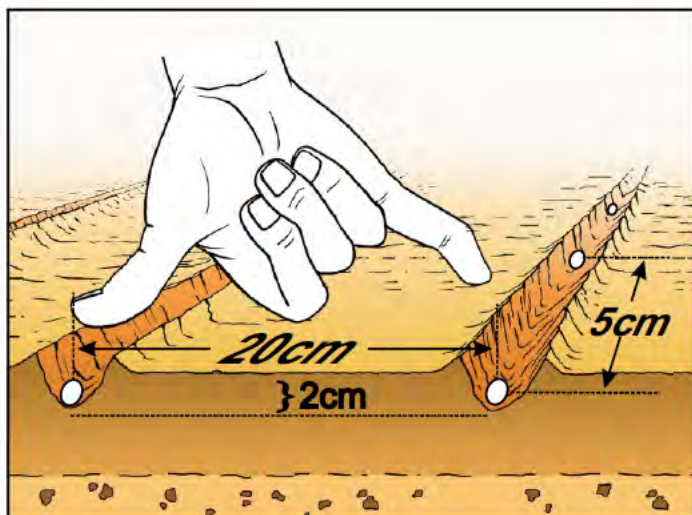
Nov kuya phakathi no Jan

Vuna emuva kwezinsuku ezingu:

90 kuya kwezingu 120

Ukuqhelelana:

45cm ngo 10cm



Izaqathi



Tshala ngo:

Epholile: Aug kuya ku March

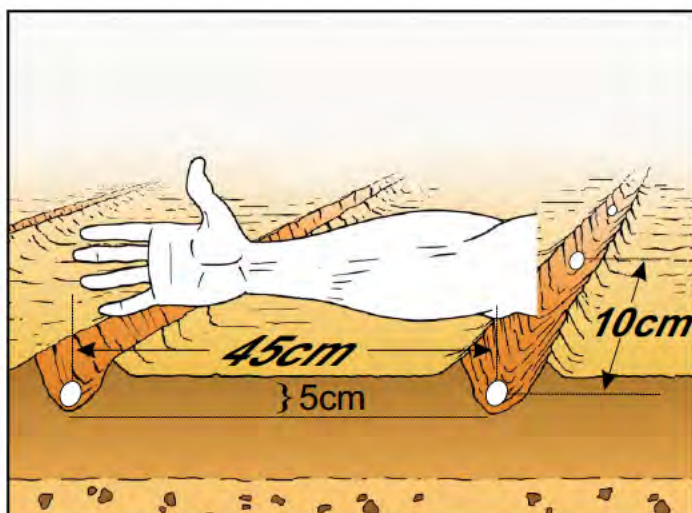
Efudumele: Jan kuya ku Nov

Vuna emuva kwezinsuku ezingu:

90 kuya kwezingu 120

Ukuqhelelana:

20cm ngo 5cm (gudlula izitshalo emgqeni ziqhelelane ngo 5cm)



Uphizi oluhlaza



Tshala ngo:

Epholile: June kuya ku July

Efudumele: May kuya ku June

Vuna emuva kwezinsuku ezingu:

60 kuya kwezingu 70

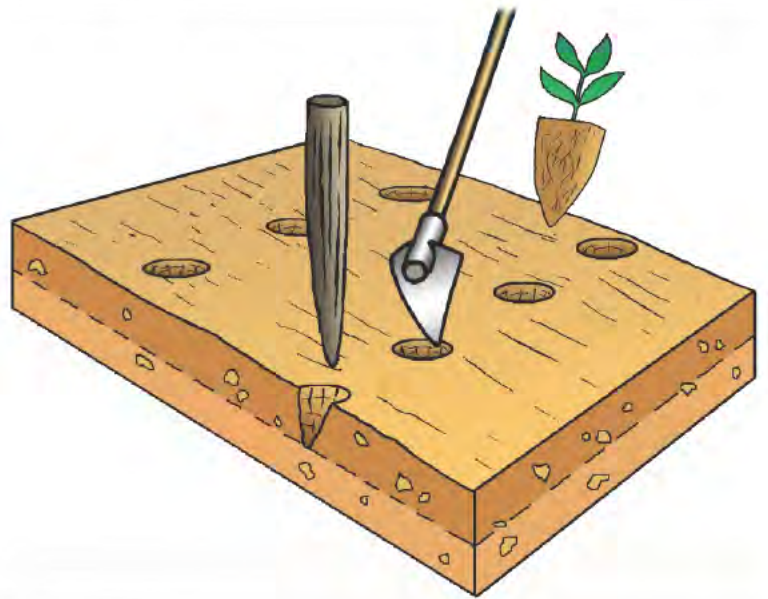
Ukuqhelelana:

45cm ngo 10cm

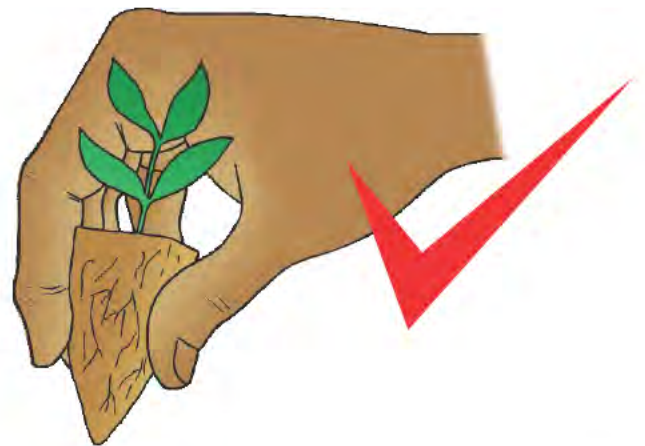
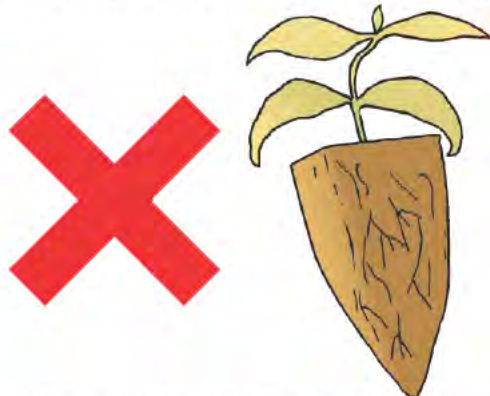
UKUTSHALA IZITHOMBO



Sebenzisa ugodo olucijile noma igeja elingu nxantathu ukuvula umgodi enhlabathini. Ukujula kube amasentimitha ayishumi.



Tshala izithombo eziphilile kuphela.



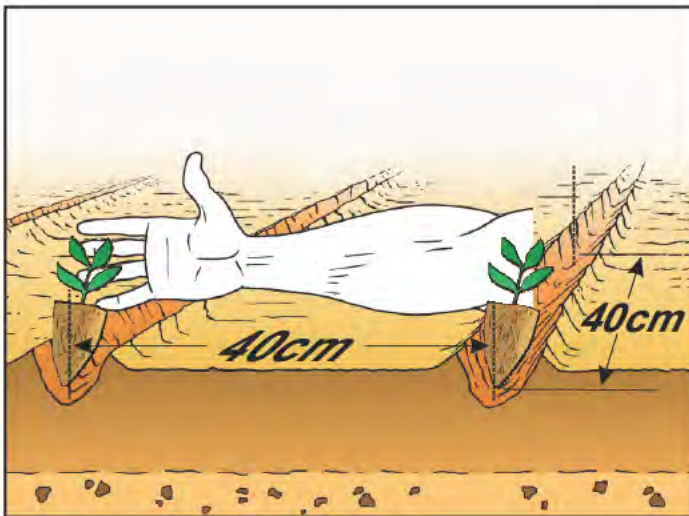
Izikhathi ezilungele ukutshala:

- Izinsuku eziguqubele, ezipholile
- Ekuseni kakhulu noma ntambama.

**Ukuqhelelana
kwezitshalo**



Dlulanisa ukuze kutholakale ukukhanya, ukudla namanzi ngobuningi.



Zekhabishi (izithombo)



Tshala ngo:

Epholile: Sept kuya ku Feb

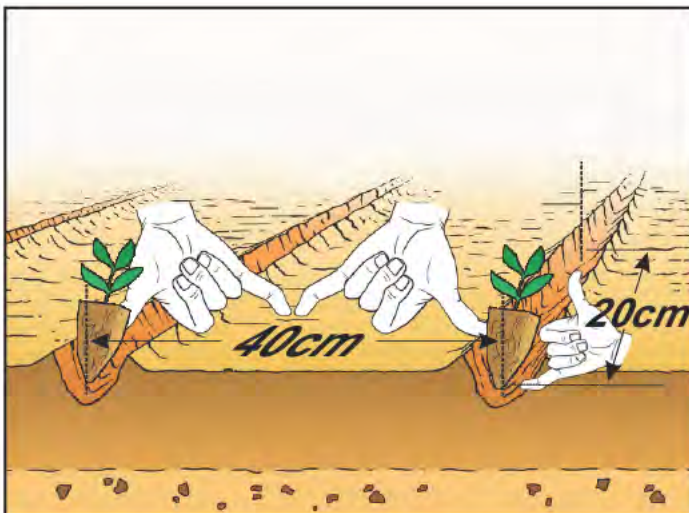
Efudumele: Unyaka wonke

Isikhathi sokuvuna:

100 kuya ku 130 wezinsuku

Ukuqhelelana:

40cm ngo 40cm



Isipinashi (izithombo)



Tshala ngo:

Epholile : Aug kuya ku Feb

Efudumele: Jan kuya ku April

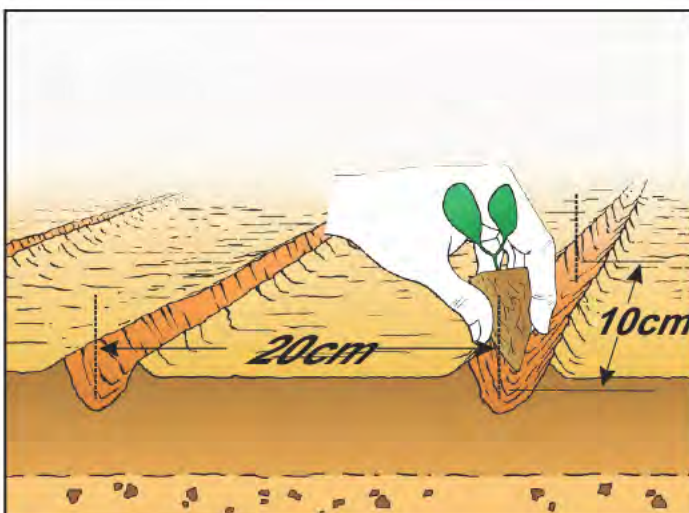
July kuya ku Sept

Isikhathi sokuvuna:

60 kuya ku 70 wezinsuku

Ukuqhelelana:

40cm ngo 20cm



Bhithiludi (izithombo)



Tshala ngo:

Epholile : Aug kuya ku Mar

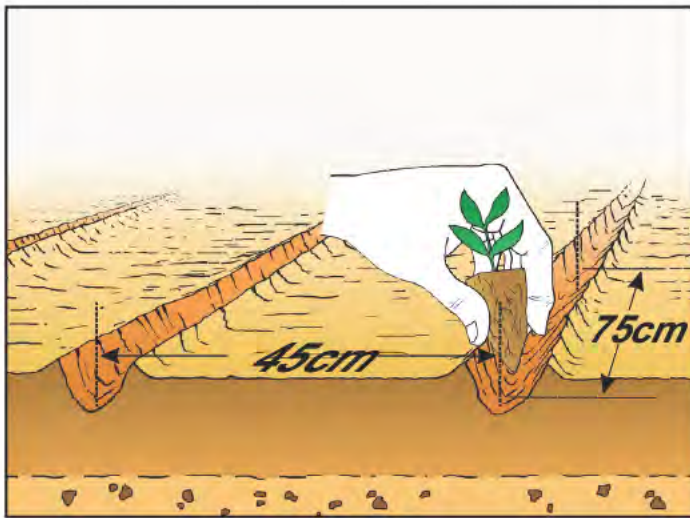
Efudumele: Unyaka wonke

Isikhathi sokuvuna:

75 kuya ku 100 wezinsuku

Ukuqhelelana:

20cm ngo 10cm



Upelepele (izithombo)



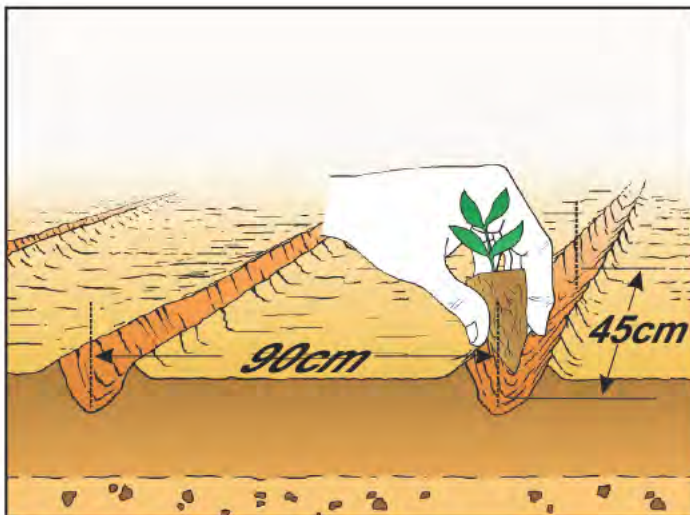
Tshala ngo:

Epholile: Sept kuya ku Oct

Efudumele: Aug kuya ku Oct

Ukuqhelelana:

45cm ngo 75cm



Brinjal (izithombo)



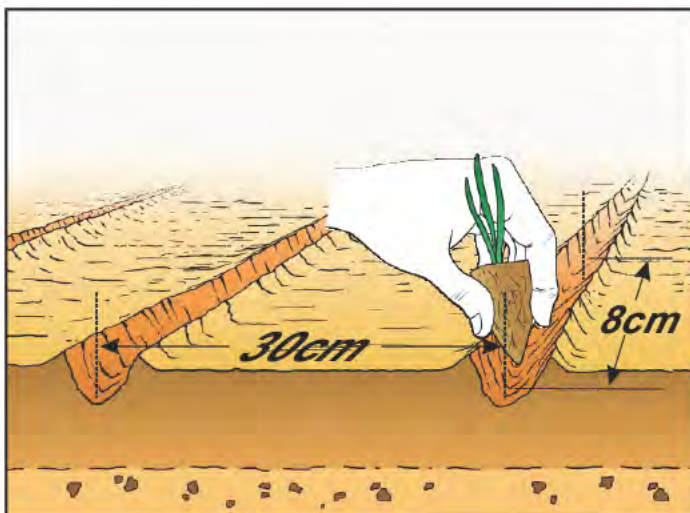
Tshala ngo:

Epholile: Sept kuya ku Nov

Efudumele: Aug kuya ku Dec

Ukuqhelelana:

90cm ngo 45cm



U-Anyanisi (izithombo)



Tshala ngo:

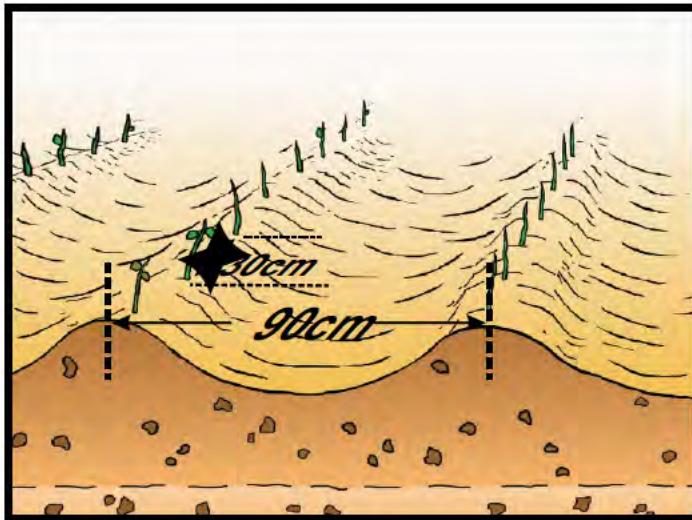
Jan kuya ku April

Isikhathi sokuvuna:

180 kuya ku 230 wezinsuku

Ukuqhelelana:

30cm ngo 8cm



Ubhatata
(izithombo / izintambo)

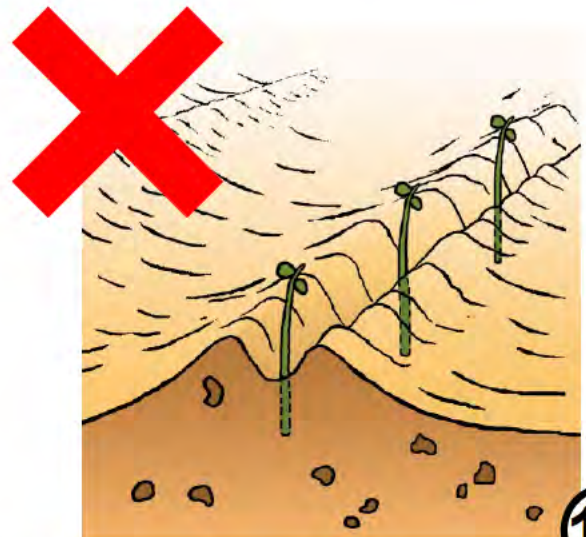
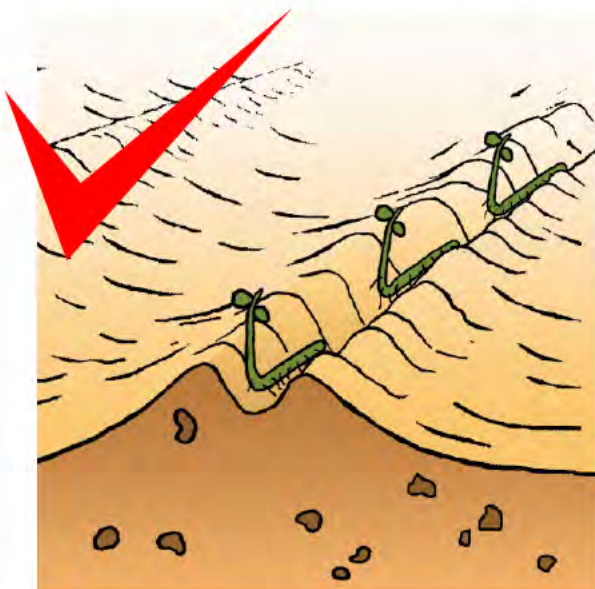
Tshala ngo:
Epholile: Nov
Efudumele: Nov kuya ku Jan

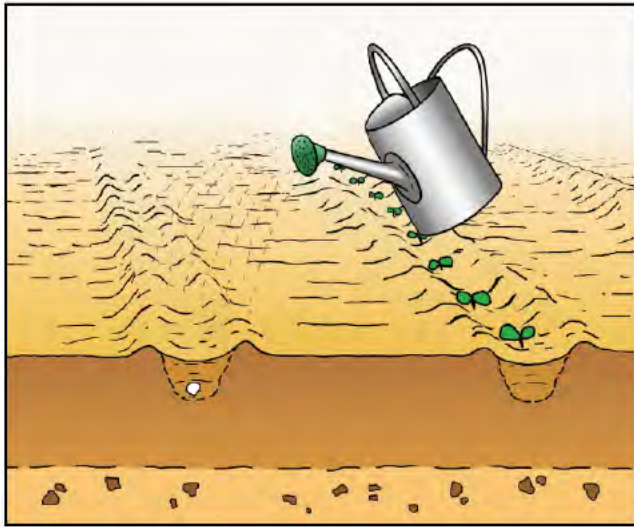
Ukuqhelelana:
30cm ngo 90cm



Tshala izintambo / amakhasi phezu komngongoma.

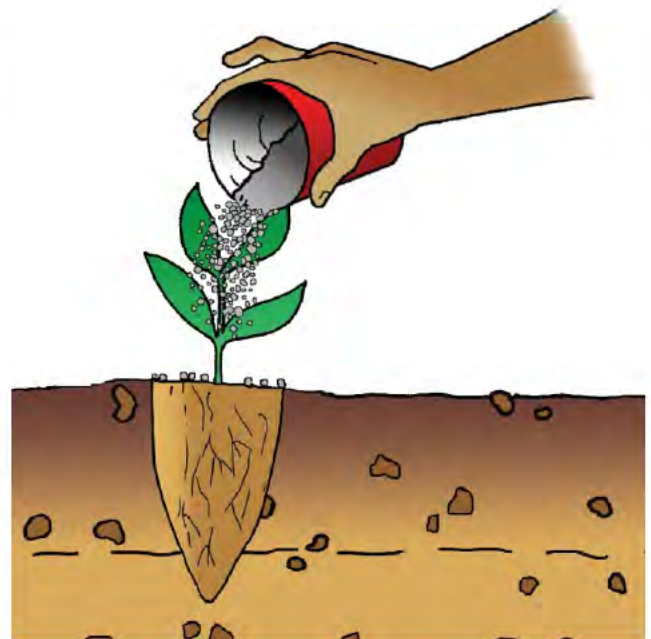
- Vula umsele ongajulile phezu komngongoma.
- Lalisa izintambo emseleni.
- Amaqhuzu amabili okugcina avele phezu komngongoma.
- Gqiba umsele ucindezele, wemboze intambo ngamasentimitha amathathu Kuya kwamahlanu (3-5cm).
- Tshala kuqhelelane ngo-30cm.





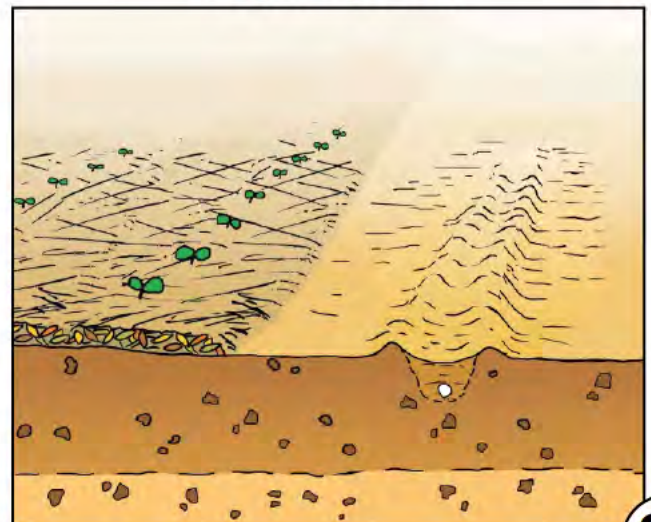
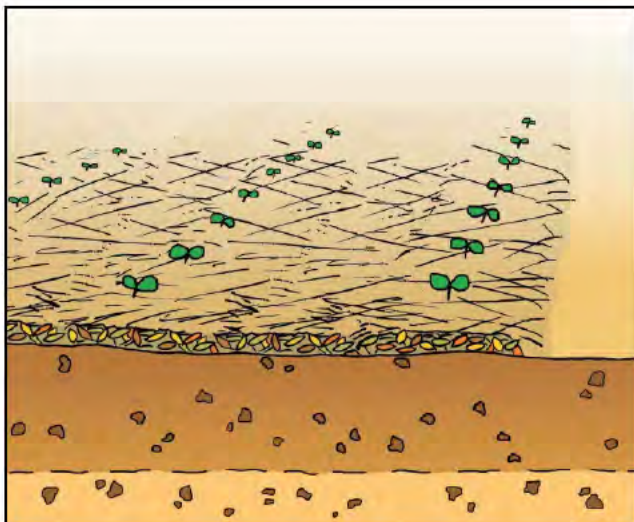
Uma kunesidingo faka
umuthi womswenya
ngemuva kokutshala

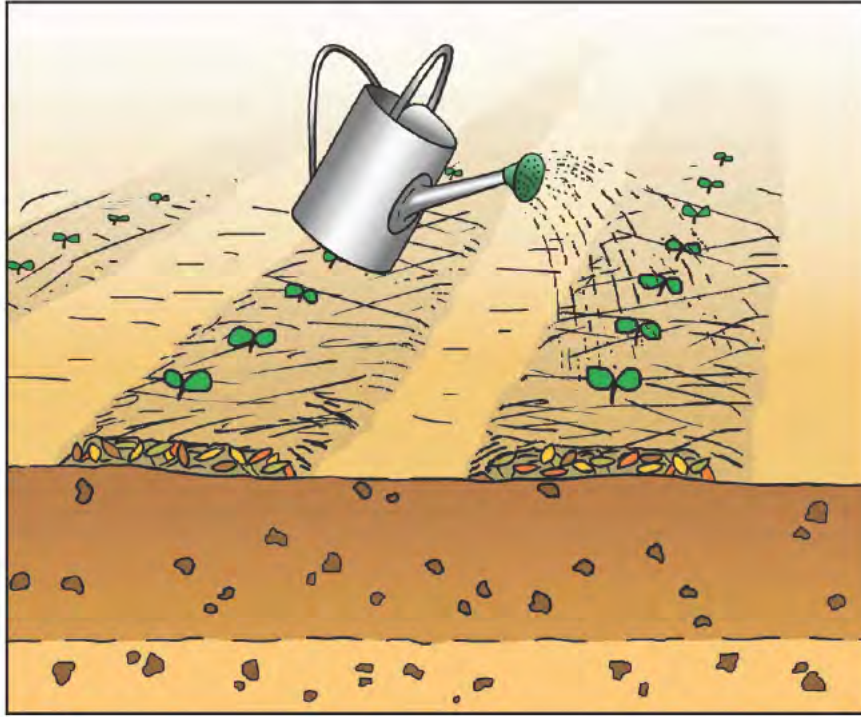
Nisela kahle
ngemuva kokutshala.



Yemboza imigqa ngotshani obomile, amacembe noma izitshalo
ezomile uzungeze okutshaliweyo.

Ungambozi izithombo
zingakaqhumi.

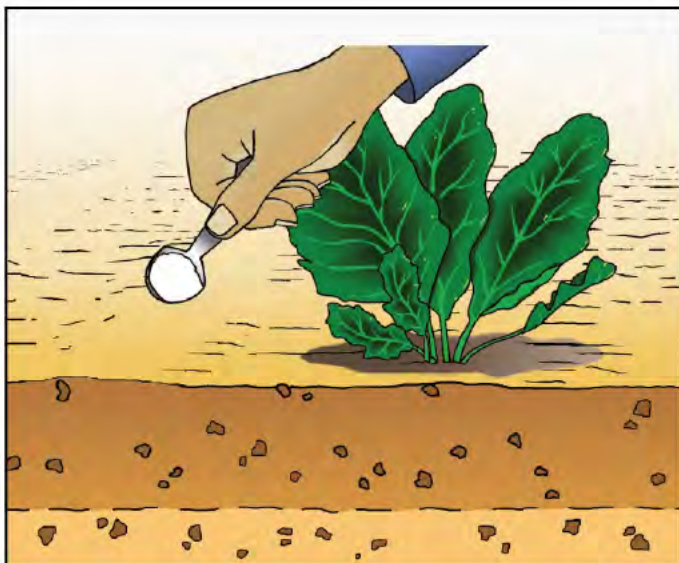




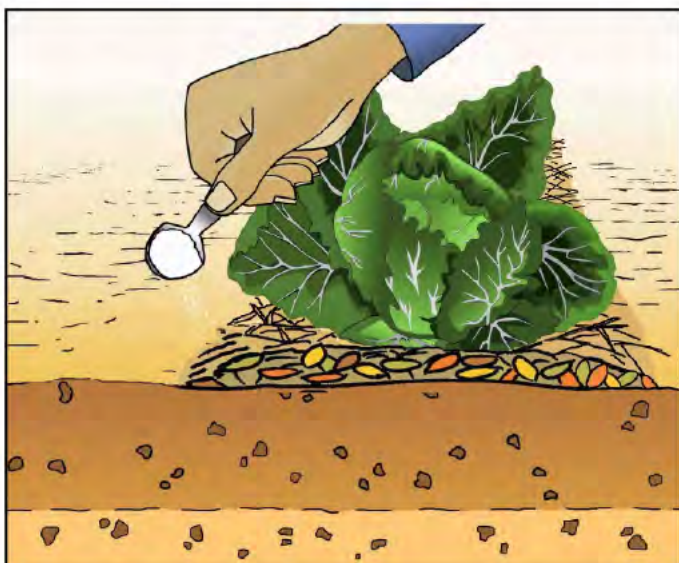
Nisela njalo
ezinsukwini
ezimbili kuya
kwezinthathu uma
izitshalo zisencane.



Hlakula okungenani
kanye ngeviki.

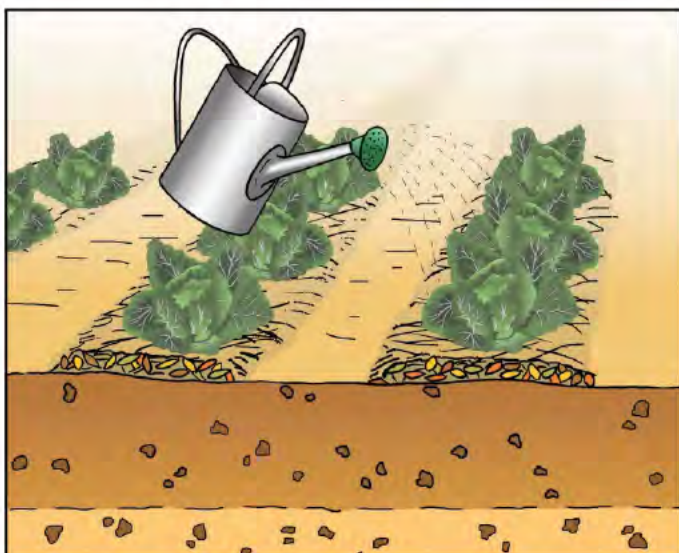


Thela ukhezwana lwesikhulisakhaba emavikini amathathu noma amane emva kokutshala.



Ikhabishi

Thela ukhezwana lwesikhulisakhaba emavikini amane kuya kwayisithupha emuva kokutshala.



Nisela izitshalo ngemuva kokuthela umanyolo.

UKUNQANDA IZINUMBUZANE NEZIFO



Ukhula namacembe
afile noma anezifo
kususe engadini
ukushise.

Xhumana nomeluleki ngaphambi kokusebenzisa imithi yezinambuzane neyezifo.



Futha ngemithi yezinambuzane
nezifo egunyaziwe kuphela.

ISEXWAYISO!



Imbewu nemithi kunoshevu!

UNGA KUDLI

KUGCINE ENDAWENI EVIKELEKILE



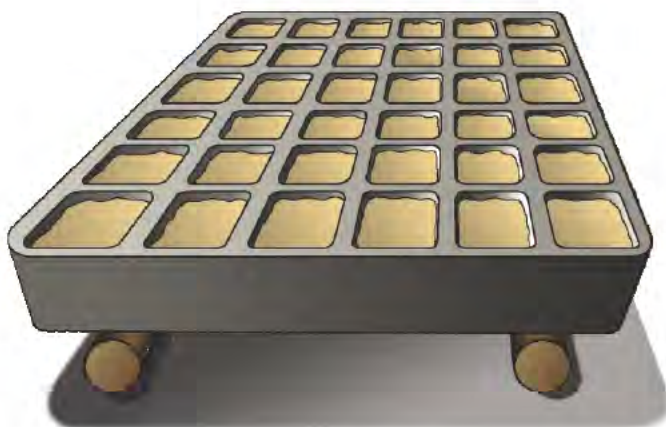
UKUKHIQIZA IZITHOMBO



Faka ingxube yokukhulisela izithombo esitsheni esivulekile. Yenza imbotshana kuleyo naleyo mbobo, bese ufaka imbewu wemboze ngengxube.



Niselisisa bese wemboza isitsha izinsuku ezimbili kuya kwezintathu ukuze sihlale siswakeme.

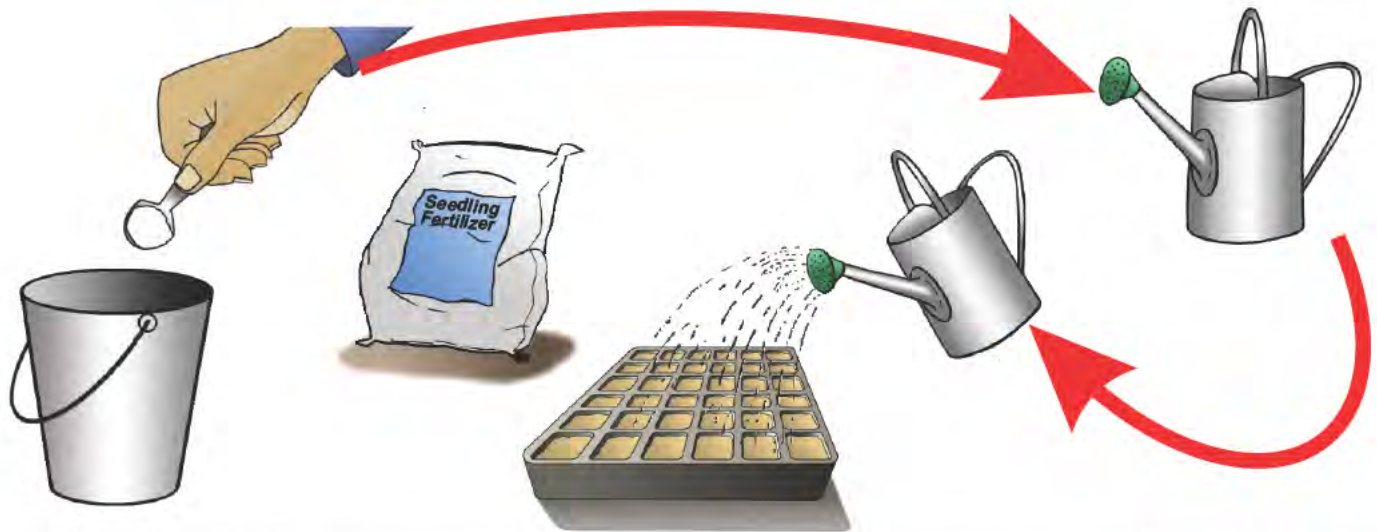


Ngemuva kwezinsuku ezimbili kuya kwezintathu beka izitsha zisondelane bese uziseka zingathinti umhlabathi ukuze izimpande zingaqhubeki nokukhula.

UKUKHIQIZA IZITHOMBO (kuyaqhutshwa)

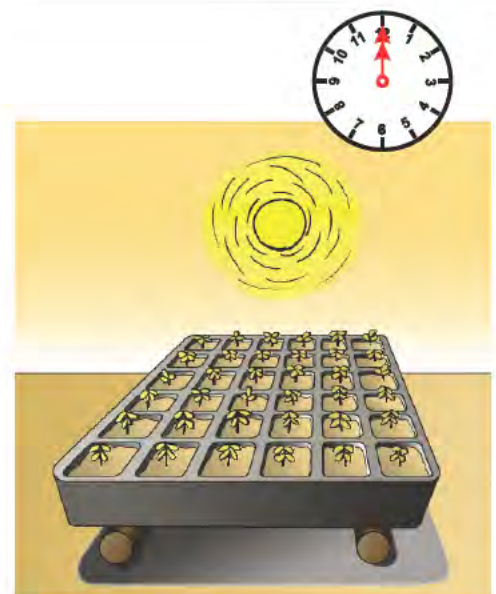


Hlanganisa ukhezwana lukamanyolo wezithombo namalitha amahlanu amanzi.



Nisela njalo
ekuseni
ngamanyolo
wezithombo.

Uma kushisa
kakhulu
nisela emini.



Tshala izithombo
emavikini ayisithupha
kuya kwayisikhombisa.



Khetha indawo ezinzile
bese ukala amgxathu
amabili ngamathathu.



Utshani



Amacembe



Izingamu zotshani



Udodi wasekhishini

Udodi wasekhishini = amakhasi emifino
nezithelo, izinkompoco zamaqanda
namaphepa imbala.

Yenza indunduma
ngalokhu okulandelayo:

- 1) Imfucuza yezitshalo / yezimila
- 2) Umquba
- 3) Inhlabathi.

4

3

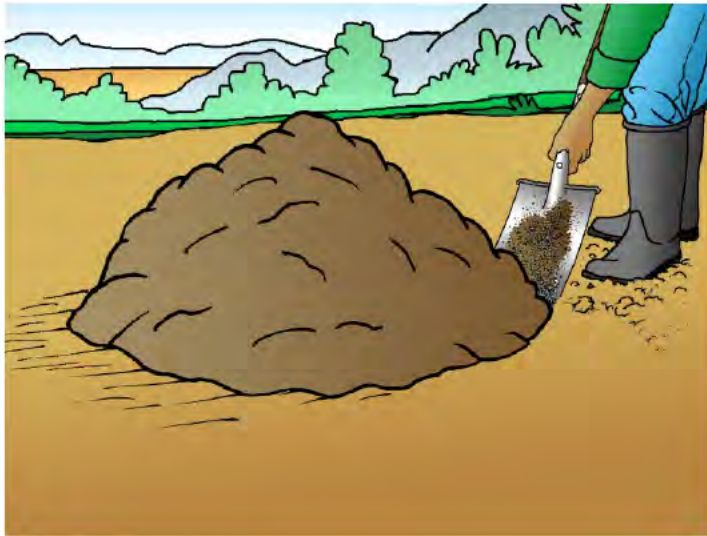
2

1



Phinda phinda kathathu
ubeke ulandelanise
ukuze indunduma
iphakame.

UKWENZA IMVUNDO (kuyaqhutshwa)



Linda ukuba imvundo
ishise ngaphakathi ibuye
iphole futhi bese uphendula
indunduma uyinisele
ngamanzi.



Ngemuva kwezinyanga
ezintathu iyobe ingasanuli.
Manje isilungele
ukusetshenziswa.
Yendlala amalitha amahlanu
emvundo, kube yigxathu
ubude, igxathu ububanzi
lapho ufuna ukutshala khona.



Limela ngokuphelele imvundo
emhlabathini.

Uphihlize amagabade.

Isifundazwe esise Ningizimu

Ucingo:(033) 343 8300

Isikhahlamezi:(033) 343 4396

Ikheli

Private Bag X6005

Hilton

3245

4 Pin Oak Ave

Quarry Centre

Hilton

Isifundazwe esise Nyakatho

Ihhovisi elise Richard's Bay:

Ucingo: (035) 780 6700

Isikhahlamezi:(035) 789 0366

Ihhovisi lomphathi:

Ucingo: (035) 780 6719

Isikhahlamezi: (035) 789 0660

Ikheli

Private Bag X1049

Richards bay

3900

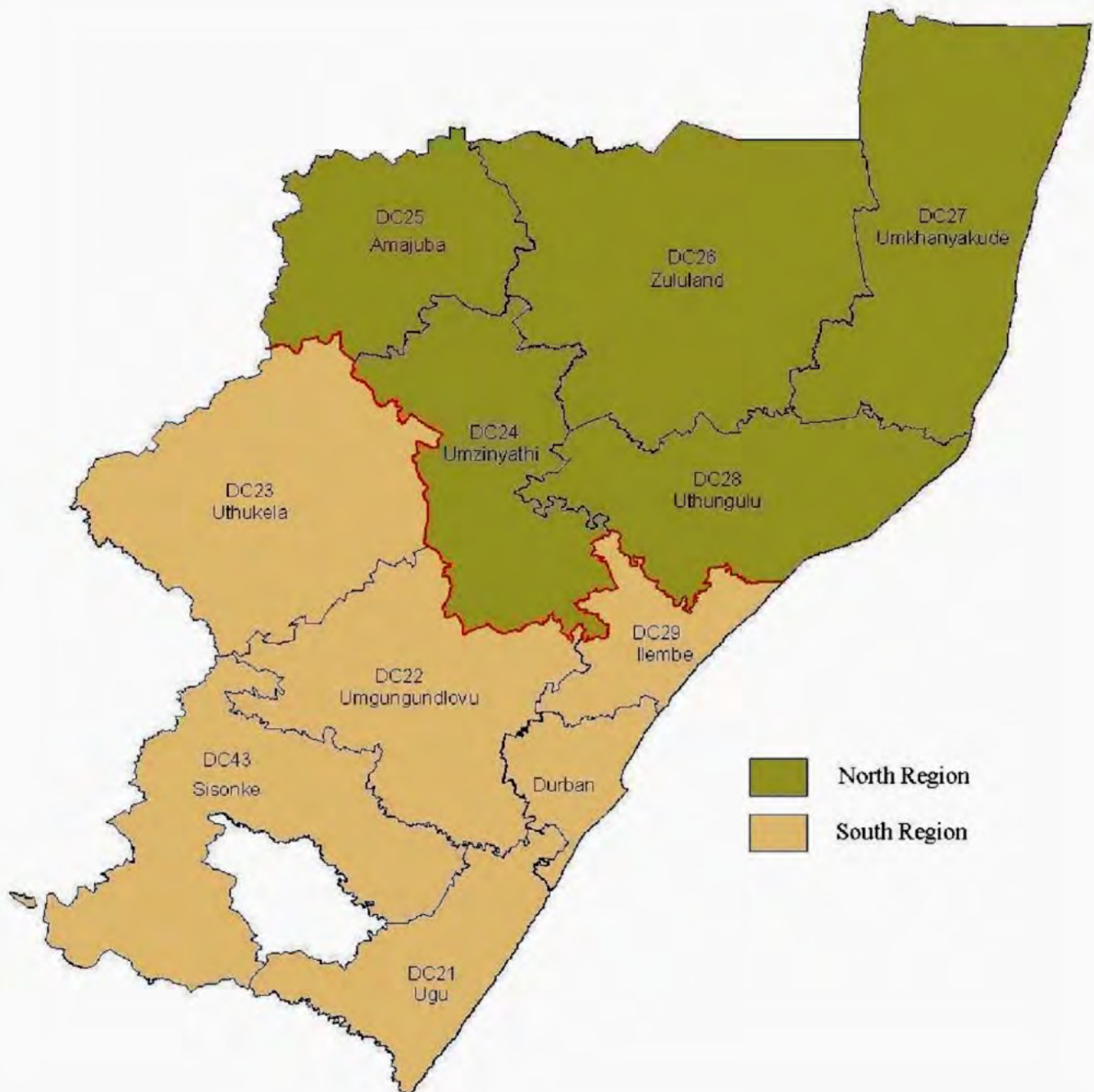
4th floor ABSA building

Penny lane

Richards Bay

(Kubhekene ne Boardwalk Shopping Complex)

MAP OF KWAZULU-NATAL





DEPARTMENT OF AGRICULTURE AND ENVIRONMENTAL AFFAIRS
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LAND-EN BOERELAND VERWAGTING
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