

Resource Material for Homestead Food Gardeners

Chapter 4: Handouts (isiZulu)

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- Handout 2 Ukushinshanisa izitshalo engadini (Crop rotation)
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1. Ukutshala izitshalo ezinhlobonhlobo engadini (mixed cropping)

Singathanda ukuthi sibone ezingadini zethu kutshalwe izinhlobonhlobo zezitshalo, uma kungenzeka. Izinhlobonhlobo zezitshalo engadini zenza sibe nesiqiniseko sokuthi izingadi zethu ziqukethe konke okudingekayo ngokwemvelo (natural balance). Lokhu kubandakanya ukwenza umhlabathi wethu ube ngophile kahle, amanzi asebenziseke ngendlela efanele, kwehliseke nezinga lezinambuzane/lezilokazane kanye nezifo ezihlasela izitshalo zethu.

Lokhu kuchaza ukuthi eplothini iyinye sizobona kutshalwe izinhlobonhlobo zezitshalo. Izitshalo zingatshalwa ndawonye eplotini ngesokhathi esisodwa (inter planting), noma kungatshalwa izitshalo ngendlela yokushintshanisa (rotation). Lokhu kuchaza ukuthi izinhlobonhlobo zezitshalo ziyatshalwa lapha ngezikhathi ezahlukene. Ukusebenzisa zombili lezizindlela - ukutshala izitshala ezinhlobonhlobo ndawonye (inter- planting) kanye nokushintshaniswa kwezitshalo olunye uhlobo emuva kolunye (rotation) kungumbono omuhle.

Ukutshala izitshalo ezinhlobonhlobo ndawonye ngesikhathi esisodwa

Uma utshala izinhlobo nhlobo zezitshalo ndawonye kufanele uqikelele lokhu okulandelayo:

- ❖ **Ukusebenziseka komsoco osenhlabathini:** Sixuba ndawonye isitshalo ezinezidingo ezahlukene zezondlo. Ezinye zalezizitshalo zidla kakhulu (heavy feeders), ezinye azidli kakhulu (light feeders) kanti ezinye zazo zondla inhlabathi ngokufaka isikhuthaza (nitrogen) enhlabathini. Isibonelo esikahle salokhu yindlela endala yokutshala ubhontshisi nommbila ndawonye. Ummbila udla kakhulu bese kuthi ubhontshisi ube yisitshalo esingadli kakhulu ubuye futhi wondle umhlabathi ngesikhuthaza
- ❖ **Ukujula kwezimpande:** Tshala lezozitshalo ezinezimpande ezijulile ndawonye nalezozitshalo ezinezimpande ezingajulile ukuze uqinisekise ukuthi azibangisani ngamanzi nangomsoco. Izibonelo esihle kulokhu ukutshala ummbila ndawonye nezintanga. Ummbila ukhula ubheke phezulu kanti futhi unezimpande ezijulile, kanti izintanga izitshalo ezenabayo futhi ezinezimpande ezingajulile. Lezizitshalo azibangisani ngendawo ezikhulela kuyona ngaphansi kanye nangaphezulu
- ❖ **Izitshalo ezixosha izinambuzane:** Kukhona izitshalo ezinephunga elixakayo elingathandwa yizinambuzane, lokhu kwenze izinambuzane zibaleke. Ngokwesibonelo, u-anyanisi unephunga elikhethekile elingathandwa

yizimvemwane. Uma ngabe u-anyanisi utshalwe ndawonye ne khabishi, kungehlisa inkinga yezibungu ezilihlaselayo. Izitshalo ezitshalwa ndawonye ngenhloso ethile ezinjengo-anyanisi kanye ne khabishi zibizwa ngokuthi ngama “*companion plants*”. Loluhlelo lokutshala olubizwa nge “*companion planting*” yilona oluhle kakhulu ekuxosheni izinambuzane nezilokazane engadini.

- ❖ **Ukuqondanisa nesikhathi esithile:** Ezinye izinhlobo zezitshalo ziphila isikhathi eside kunezinye. Kungenzeka ukuthi umuntu atshale isitshalo esishesha sivuthwe phakathi kwezitshalo ezephuzayo ukuvuthwa. Ngalandlela ungakwazi ukuthola isivuno engadini noma ensimini lapho olunye uhlobo lwesilimo lusaqhubeka nokukhula kuleyondawo ovuna kuyona. Izinga lokubangisana kwezilimo ngomsoco namanzi liyehla. Isibonelo ukutshala I “radish”, I “mustard spinach” noma umasihlalisane kanye namazambane ndawonye. I “radish” ishesha ivuthwe kanti ingavunwa emasontweni ayisithupha itshaliwe. Amaqabunga e “mustard spinach” ayaqala ukukhiwa ezinyangeni ezimbili kuya kwezintathu. Lokhu kunciphisa umncintiswano futhi njengoba amazambane esezosala wodwa ensimini, futhi esebonakala ekhulile. Amazambane avunwa emuva kwezinyanga ezintathu nesigamu kuya kwezine. Lokhukutshala ngokuhlanganisa kusiza ekuqikeleleni ukujula kwezimpande, ukusetshenziswa komsoco (nutrient consumption) kanye nasekuxosheni izinambuzane.
- ❖ **Ukumelana nethunzi:** Kubalulekile ukuqikelela lokhu uma engadini kutshalwe izitshalo eziphekeme kanye nalezo eziphila isikhathi eside (perennial plants). Lokhu kubandakanya izihlahla zezithelo. Izitshalo ezifana ne “confrey”, u “lettuce” noma uletisi kanye nama strobhisi (strawberries) ziyakwazi ukumelana nethunzi. Lokhu kuchaza ukuthi zingakwazi ukukhula noma zingaphansi kwezihlahla.

Isithombe sokuqala: Izibonelo zokutshala izitshalo phakathi kwezinye engadini yama veji

Embhedeni

Tshala u-anyanisi ndawonye nokherothi: Ukherothi uvikela u-anyanisi ukuthi ungahlaselwa yimpukane ebizwa ngokuthi yi “Onion fly” kanti u-anyanisi uvikela ukherothi ukuthi ungahlaselwa yimpukane ebizwa ngokuthi yi “carrot fly”. U kherothi unezimpande ezijulajulile kuno-anyanisi kanti ushesha uvunwe kuno-anyanisi, bese unikeza u-anyanisi uma usuvuniwe isikhala esanele sokuthi ukhule kahle uma ususele wodwa.

Tshala ukholiflawa noma ikhabishi, uletisi, I“fennel” (imbozisi) kanye no-anyanisi ndawonye: Lenhlanganisela yokutshala ivikela ngokuphelele izitshalo zakho kwizintwala zekhabishi, nakwi “diamond black moth” (ibhu elikhonjisiwe esithombeni) elihlasela ukholiflawa. Lendlela iyakuqikelela ukusebenziseka komsoco (nutrient consumption), ukujula kwezimpande, ukuxoshwa kwezinambuzane (kwenziwa ngu anyanisi nembozisi),



ukuqondanisa nezikhathi ezithile (timing) kanye nokumelana nethunzi kwezitshalo. *Tshala uTamatisi, u anyanisi noma ugalikhi kanye no kherothi ndawonye:* Lokhu kubandakanya izitshalo ezixosha izinambuzane, indlela izitshalo ezisebenzisa ngayo umsoco (nutrient consumption) ukujula kwezimpande kanye nokulwa nezifo zezitshalo. Utamatisi lapha utshalwa ugqagqane ukuze izitshalo zingathintani. Lokhu kwenza ukuthi umakufika izifo ezifana ne “early blight” noma “late blight” zingalokothi zigijime kalula kuzo zonke izitshalo.

Tshala isipinashi (swiss chard) kanye nobhontshisi ndawonye: Lendlela iqikelela indlela umsoco osetshenziswa ngayo, ukujula kwezimpande, kanye nokulwa nezifo ezihlasela ispinashi. Ukutshala imigqa yespınashi uyigejanise nemigqa kabhontshisi kwehlisa izinga lokuhlaseleka kwespınashi yisifo esibizwa ngokuthi yi “bacterial spot” esihlasela amaqabunga espinach.

Ukutshala inxubevange yezitshalo engadini:



Left: Spinach inter-planted with fennel and garlic chives

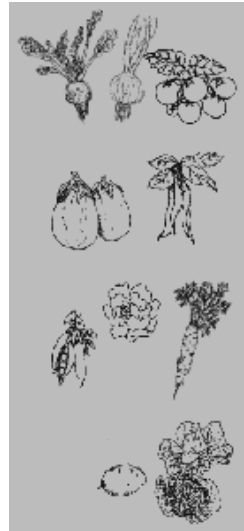


Right: A bed with onions, cabbage, lettuce and spinach planted together.

Kukhona izitshalo ezingenankinga uma zitshalwe ndawonye, kanti ezinye azihlalelani. Uma utshala izithombo embhedeni, sebenzisa lezithombe ezilandelayo ukuze ukwazi ukubona ukuthi yiziphi izitshalo ongazitshala ndawonye futhi ungabinankinga.

Ezinye zezitshalo ongazitshala ndawonye:

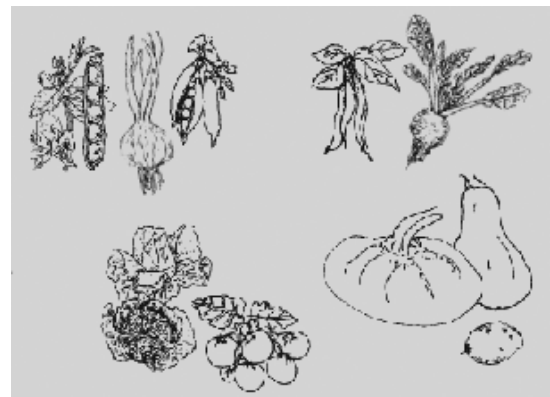
- Ubhithirudi - anyanisi
- Ukherothi - uphizi, uletisi, anyanisi, utamatisi
- Anyanisi - ubhithiruthi, amastrobhisi (strawberries), tamatisi, letisi
- Ubhilingjolo - u bhontshisi
- Ikhhabishi - amazambane, ubhithiruthi, u-anyanisi
- U Green pepper - uzwana nawo onke amaveji
- U Letisi - ukherothi, u "radish", amastrobhisi, ukhukhumba (cucumber)
- Amathanga - ummbila
- Spinashi - amastrobhisi
- Utamatisi - anyanisi, ukherothi
- Ummbila - amantongomane, uphizi, ubhontshisi, ukhukhumba, amathanga, amazambane
- Ujikanelanga - ukhukhumba
- Ubhontshisi - amazambane, ukherothi, ikhabishi, lanye nezinye izinhlobo zamaveji



Izitshalo okungeke kulunge ukuthi zitshalwe ndawonye:

Zikhona ke lezo zitshalo ezingeke ziphilisane kahle uma sitshalwe endaweni eyodwa. Zama ukugwema ukuthi uzibone usuxuba lezizitshalo endaweni. Zihlolele ngokwakho ukuthi ziyaphilisana na lezizitshalo.

- Ubhithiruthi - ubhontshisi obizwa ngokuthi yi "pole beans"
- Anyanisi - uphizi noma ubhontshisi
- Ikhhabishi - amastrobhisi
- Amathanga - amazambane
- UTamatisi - amazambane kanye ne khhabishi
- Ubhontshisi - anyanisi
- Ujikanelanga - amazambane



Ubuhle nobubi bokutshala izitshala ezinhlobonhlobo ndawonye

UBUHLE BAKHO	UBUBI BAKHO
Indawo yokutshala phezulu naphansi isebenziseka ngendlela efanele nangokuphelele	Kubukeka kabi
Yehlisa izinga lezifo nezinambuzane ezitholakala enhlabathini nasezitshalweni, futhi ikunqande lokhu kungandi	Ingenza kube nzinyana ukudayisa umkhiqizo
Yehlisa izinga lokuhlushwa ukhula	Ezinye izitshalo kungenzela ukuthi sezisithekile, ikakhulukazi uma zingagqagqene ngendlela
Kwemboza inhlabathi yonke futhi isebenzise nomsoco ngendlela efanele. Lokhu kuholela ekutheni kwakheke inhlabathi ephilile nenomsoco	Ukuhlakulela kungadla isikhathi esiningi uma usaqala, njengoba izitshalo zisuke zisagqagqene, uma uqhathanisa nanxa kutshalwe kolayini
Izitshalo ziyaxhasana, zondlane futhi zivikelane nasezifeni kanye nasezinambuzaneni. Lokhu kuholele ekutheni izitshalo zikhule ngomfutho omkhulu.	Ungathola ukuthi ezinye isitshalo zingancinsheka amanzi, kuthi ezinye ziwathole mawala, kuye nendlela ezikhula ngayo. Ngokwesibonelo ezinye izitshalo kungenzeka ukuthi seziyaqhakaza sezizosakaza imbewu entsha kanti ezinye yima zisakhula
Amanzi asebenziseka kahle kakhulu	

Isithombe sesibili: Izinguquko esingazenza ngokutshala ngendlela exubile

Ukuze kuhlale kukhona okukhona engadini: Sifuna ukuthi sihlale sinokuthize esingahlala sikuvuna engadini unyaka wonke. (Sidinga ukuthi silinde isikhathi eside ngaphambi kokuthi sikwazi ukuvuna ikhabishi noma isipinashi) Singabandakanya izitshalo ezifana nalezi ezilandelayo:

- ❖ Spring onions/(u-anyanisi oxhantayo) - Garlic chives (ugalikhi)
- ❖ Ishaladi (Leeks) - Parsley
- ❖ Coriander - Fennel (imbozisi)
- ❖ Lettuce (uletisi) - Kale, Broccoli, Cauliflower - Mustard spinach
- ❖ Marrow
- ❖ Sweet potato (ubhatata – kanjalo nalowo obomvana ngaphakathi ngoba unovithamin A)
- ❖ Brinjal (ubhilingjolo)

Ukuze kutholakale amaprotein: Sifuna ukuthi sibe nezitshalo ezizosondla ngamaprotein, ikakhulukazi kubantwana abancane (iminyaka 1 – 5 ubudala). Singabandakanya izitshalo ezifana nalezi ezilandelayo:

- ❖ Turnip green - Sugar beans, jugo beans (izindlumbu)
- ❖ Cowpeas (imbumba) - Peanuts (amantongomane)
- ❖ Peas (uphizi)

Kufanele ukuthi ekulimeni kwethu sibuye sibe nemfuyo efana nezinkukhu, amadada, onogwaja, izimbuzi nezingulube, ngoba nenyama yazo isinikeza amaprotein.

Ukuze kutholakale u-vitamin c no vitamin a: sifuna ukuthi sihlale sidla izithelo eziluhlaza neziphuzi nsuku zonke. Lesisondlo sibaluleke kakhulu kubantwana kanye nakulabo abagulayo. Singabandakanya izitshalo ezifana nalezi ezilandelayo:

- ❖ Tree tomato (*isithombe kwesokudla*)
- ❖ Granadilla, gooseberry (uGqumgqum)
- ❖ Upopo, umango, ubhanana, ukwatapeya
- ❖ Amapetshisi, amabhilikosi, ulamula- Amagwava
- ❖ Ama bhathanathi, nezinhlobo ezahlukene zamathanga



Kufanele ukuthi kube nezinhlabo nhlobo zezithelo ekhaya ukuze kuhlale kudliwa izithelo ekhaya unyaka wonke.

Ukomisa izithelo namaveji

Ukulungisa ukudla ngalendlela kwenza ukuthi kube nesiqinisekiso sokuthi kuhlala kukhona ukudla ekhaya ngaso sonke isikhathi.

Indlela yokusebenzisa amashalofana okomisa (drying racks) ambozwe ngofefe (shade cloth) yiyona ekahle ngempela (*njengoba sibona esithombeni*). Cishe noma yini ungakwazi ukuyomisa!! (Lokhu kwacwaningwa esizindeni zikaHulumeni socwanigo e Dundee – Dundee Agricultural Research Station)



Amaveji omisiwe angagcineka iminyaka emibili nangaphezulu ngaphambi kokuthi asetshenziswe.

Isithombe esingenhla kwesokudla: Kukhonjiswa ishalofu eleneke amaveji nazithelo ezomiswayo ezinjengotamatisi, ubhilinjolo, amanantshi, kanye nabopelepele abaluhlaza, abaliphuzi kanye nababomvu. Lomkhiqizo owomiswayo wembozwa ngenethi ukuze kuqinisekiswa inhlanzeko ngaphambi kokuthi kusetshenziswe.



Isithombe esingezansi kwesokudla: Amabhodlela okufakwe kuwona amaveji omisiwe, kusukela kwesobunxele uphepha, ubhatata, upelepele ogayiwe, kanye nobhilinjolo.