

Isikhokelo sabaqalayo ukulima igadi yokutya:

Ukuziqhelanisa nokutshintsha kwemozulu eMzantsi

Afrika ngobuchule bepermaculture



Rural Action for
Climate Resilience



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The RACR project is a partnership project between Social Change Assistance Trust (SCAT), Southern African Faith Communities' Environment Institute (SAFCEI) and Heinrich Böll Stiftung (HBF). It works with 36 community-based organisations and faith leaders in rural areas across five South African provinces: Eastern Cape, Northern Cape, Western Cape, Free State and Limpopo. The project aims to build resilience to climate change in rural South Africa. The Embassy of Ireland South Africa provided funding for the RACR project beginning in March 2024. A previous phase of the project (2021-2024) was co-funded by the European Union Climate Change Champions programme.

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Uluhlu lwamagama

Eyomileyo: Imozulu eyomileyo enemvula encinci kakhulu, nto leyo eyenza kube nzima kwizityalo ezininzi ukuba zikhule ngaphandle kokunkcenkceshelwa okanye ukuziqhelanisa ngokukodwa.

Ukulima kwiContour: Ukulima ecaleni kweegophe zendalo zomhlaba ukunciphisa ukhukuliseko lomhlaba nokuphucula ukugcinwa kwamanzi.

Amanzi angwevu: Amanzi asetyenzisiweyo asekhaya (umzekelo, ukusuka ekuhlambeni izitya, iishawa) ezisetyenziselwa ukunkcenkceshela.

Izityalo zomthonyama: Izityalo ezifumaneka ngokwendalo kwindawo ethile, eziqhelaniswe kakuhle nemozulu yendawo kunye nomhlaba.

Izinto eziphilayo: Izinto zendalo, ezifana nezityalo ezibolileyo kunye nenkunkuma yezilwanyana, ezityebisa umhlaba.

I-Perennials: Izityalo eziphila iminyaka emininzi, zivelisa ukutya okanye iintyatyambo ngaphandle kokufuna ukuphinda zityalwe minyaka le.

I-Permaculture: Inkqubo yoyilo ezinzileyo elinganisa inkqubo yendalo yendalo ukuze idale ukuzimela, imo eyomelelayo.

I-Pollinators: Izinambuzane, iintaka kunye nezinye izilwanyana ezihambisa umungu phakathi kwezityalo, nto leyo eyenza iziqhamo kunye nembewu zivelise.

Uphambuko lwamanzi emvula: Ubuchule obusetyenziselwa ukwalathisa amanzi agqithileyo emvula ukusuka kwindawo ezinokhukuliseko ukuya kwiinkqubo zokugcina okanye iibhedi zezityalo.

Ukuvunwa kwamanzi emvula: Ukugokelela nokugcina amanzi emvula ukuze ankcenkceshelwe kunye nokusetyenziswa ekhaya.

Ukhukuliseko loMhlaba: Ilahleko yomhlaba ongaphezulu ngenxa yomoya, amanzi, okanye ulawulo olulambathayo lomhlaba.

Ukuchuma Komhlaba: Ukukwazi komhlaba ukuxhasa ukukhula kwesityalo esisempilweni ngokunika izondlo eziyimfuneko, amanzi, kunye nesakhiwo esilungileyo sophuhliso lweengcambu.

i-Swales: Imijelo engekho nzulu okanye imingxuma eyenzelwe ukubamba nokunciphisa amanzi emvula, ukuthintela amanzi kunye nokuphucula ukufuma komhlaba.

i-Terracing: Ukudala amanqanaba anyukayo kumhlaba othambekileyo ukunciphisa ukhukuliseko nokuphucula ukufunxwa kwamanzi.

Ukugawulwa kwamanzi: Xa umhlaba ugcwele kakhulu ngamanzi, oko kuthintela umoya ekufikeni kwiingcambu zezityalo kwaye kukhokelela ekukhuleni kakubi okanye ukubola kweengcambu.

Ukusabela kutshintsho lwemozulu

Ukutshintsha kwemozulu kwenza ukuba ihlobo lethu libeshushu kakhulu, imvula ibe nzima kwaye nezikhukula ziye zenzeke rhoqo. Oku kusongela iinkqubo zokutya ngokonakalisa izityalo, ukunciphisa ukuchuma komhlaba, kwaye nokwandisa ukunqongophala kwamanzi. Imozulu embi kakhulu nayo inokuphazamisa ukulima, imixokelelwane yokubonelela, kunye nokufikelela ekutyeni, okwenza uluntu lwasemaphandleni lube sengozini ngakumbi.

Iindlela kunye nemigaqo yokuhlala ngokwemvelo (Permaculture) zingasivulela indlela yokukhulisa ukutya ngendlela ehlonipha imvelo ngelixa sakha amandla okuphila kwiingxaki zeemozulu ezifana nembalela, kunye nezikhukhula. Le ndlela ibonelela ngenzuzo yezezimali, yokutya kunye nemvelo, yenza ukuba ibe yindlela ebalulekileyo yokukhiqiza ukutya.

Le ncwadana yenzelwe uluntu lwasemaphandleni eMzantsi Afrika olutsha kwi-permaculture. Igxininisa ekudaleni iigadi zokutya kumaziko oluntu, isebenzisa imigaqo ye-permaculture njengesiseko. Ngelixa ukucwangciswa kweendawo kuyinto ebalulekileyo yoyilo lwe-permaculture, ayigqunywana ngokucacileyo kule ncwadana.



Ukuyila igadi yakho ye-permaculture

Ukuqonda imozulu yakho yendawo kunye nokusingqongileyo kubalulekile ekudaleni igadi eyomeleleyo.

Qwalasela le mibuzo ilandelayo

- Yintoni imozulu yakho? Ngaba yinto eyomileyo okanye ethambekele kwizikhukula?
- Ziziphi iindidi zakho zokushisa zonyaka?
- Uyifumana nini imvula?
- Luhlobo luni lomhlaba onalo? Ngaba ludongwe okanye lusanti? Ngaba amanzi awukhupha lula?
- Ngaba amanzi afikeleleka kwaye afumaneka unyaka wonke?

Iimpendulo zakho ziya kuchonga ukuba ufuna ubuchule bokulima igadi obuphendula imba lela okanye obuphendula izikhukula kunye nezityalo.

Ukuchonga iingozi ezinokubakho

Qwalasela le mibuzo ilandelayo ukuze ubone iingozi ezinokubakho:

- WhNgubani onoxanduva lokugcinwa kwegadi yemihla ngemihla (umzekelo, ukunkcenkceshela, ukubeka esweni impilo yezityalo)?
- Kukhuseleke kangakanani ukufikelela kwamanzi akho? Yintoni imithombo yakho yamanzi?
- Ikhuseleke kangakanani igadi yakho kwizisongelo zangaphandle (umzekelo, imfuyo, abantu)?
- Yintoni ithambeka lomhlaba wakho? Amanzi aqukuqela phi? Ngaba ukukhukuliseka komhlaba kuyingxaki?
- Zeziphi iindawo zegadi ezifumana ilanga lasekuseni, ilanga lasemva kwemini, okanye ilanga lwemini yonke?



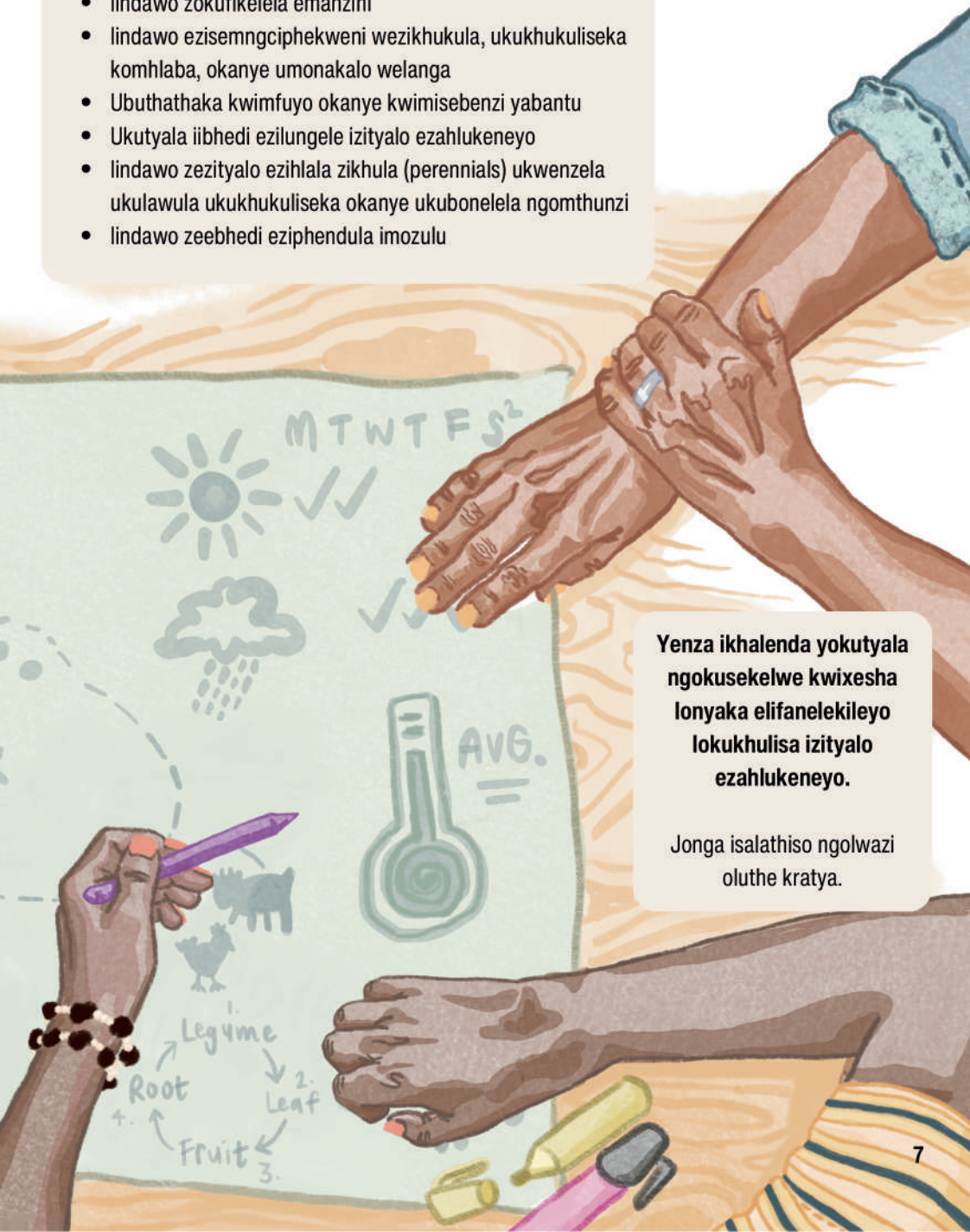
Ukwenza imephu yegadi yakho

Yenza imephu yegadi yakho, uphawule apha:

- lindawo zokufikelela emanzini
- lindawo ezisemngciphekweni wezikhukula, ukukhukuliseka komhlaba, okanye umonakalo welanga
- Ubuthathaka kwimfuyo okanye kwimisebenzi yabantu
- Ukutyala iibhedi ezilungele izityalo ezahlukeneyo
- lindawo zezityalo ezihlala zikhula (perennials) ukwenzela ukulawula ukukhukuliseka okanye ukubonelela ngomthunzi
- lindawo zeebhedi eziphendula imozulu

Yenza ikhalenda yokutyala ngokusekelwe kwixesha lonyaka elifanelekileyo lokukhulisa izityalo ezahlukeneyo.

Jonga isalathiso ngolwazi oluthe kratya.



Impilo yomhlaba

Ukubaluleka kwempilo yomhlaba kunye nokondla umhlaba wakho

Umhlaba osempilweni uvumela umoya namanzi ukuba ahambe ngokukhululekileyo, ekhuthaza ukukhula okunamandla kwezityalo. Umhlaba odibeneyo awuvumeli iingcambu ukuba zande, kwaye izityalo zilwela ukufunxa izondlo.

Ukukhulula umhlaba

Umhlaba odibeneyo awunamoya kwaye uba nzima kakhulu ukufaka amanzi.

Sebenzisa le migaqo ilandelayo:

1. Khulula umhlaba ngefolokhwe yegadi okanye umhlakulo ukujika ngobunono umhlaba.
2. Sukomba nzulu kakhulu - khulula nje i-10-15 cm ephezulu.
3. Yongeza umgquba okanye umgubo (i-mulch) yenzele ukuba ugcine umhlaba uthambile kwaye usempilweni.

Ngoba? Ukukhulula umhlaba kunceda iingcambu zikhule, kugcina amanzi ekuchiben, kwaye kwenza kube lula ukuba iimbungu ziphucule umhlaba.

Ukuvundisa

Umgquba (compost) yindlela yendalo yokurisayikilisha. Iguqula iziqwenga zokutya kunye namagqabi omileyo abe ngumhlaba onezakha mzimba.



Indlela yokwenza umgquba:

1. Xuba amagqabi omileyo, ingca, kunye neziqhamo eziqingqiweyo okanye iziqwenga zemifuno.
2. Gcina imfumba igqunywe kwaye ifumile (njengesiponji esicinezelweyo)
3. Guqula umgquba ngeveki ukongeza umoya.
4. Kwiiveki ezimbini ukuya kwezintathu, umgquba kufuneka ibe mnyama, ikhuphuka, kwaye ilungele ukusetyenziswa.

Ngoba? Umgquba wondla umhlaba, ugcina izityalo zomelele, kwaye unciphisa inkunkuma.

Ukusebenzisa umgquba

Umgquba (inkunkuma yezilwanyana) sisichumiso sendalo, kodwa kufuneka uvundiswe kuqala kwaye usetyenziswe ngononophelo. Ukuvundisa kungabulala naziphi na iintsholongwane ezifana neentshulube ze tapeworm ezisemgqubeni. Ukuvundisa kunciphisa ubumuncu bomgquba, ngoko ke akuwonakalisi i-pH yomhlaba wakho.

Indlela yokusebenzisa umgquba:

1. Sebenzisa umgquba omdala, owomileyo (umgquba omtsha unokutshisa izityalo).
2. Sasaza umaleko obhityileyo phezu komhlaba uze uwuxube kancinci kumaleko ophezulu.
3. Yenza iti yomgquba yokuncenkceshela izityalo.

Ngoba? Umgquba wongeza izondlo emhlabeni, unceda izityalo zikhule kwaye zomelele.

Isilumkiso: Musa ukuwubeka ngqo kumhlaba ophezulu kwaye uphephe ukuwusebenziseni kakhulu. Oku kuya kuzitshisa izityalo zakho.

Isigcina-kufuma

Isigcina-kufumi sigubungela umhlaba ukuwukhusela ekubeni ungomi. Kukho iindidi ezimbini ze-mulch: isigcina-kufuma esomileyo (dry mulch) kunye nesigcina-kufuma esimanzi (wet mulch).

Isigcina-kufuma esomileyo: Sika ingca kunye nezinye izinto zezityalo kwaye uziyeke zome. Xa yomile, yisebenzise ukugquma umhlaba.

Isigcina-kufuma esimanzi: Ikwaziwa ngokuba ngumgquba oluhlaza, sika izityalo ezitsha ezinesondlo esityebileyo nezikhula ebhedini, njenge comfrey uzebenzise ngqo ukugquma umhlaba.



Indlela yokufaka i-mulch::

1. Sasaza amagqabi omileyo, umququ, okanye izicatshulwa zengca zijikeleze izityalo.
2. Gcina isithuba esincinci esijikeleze isikhondo sicacile.
3. Yongeza isigcina-kufuma (mulch) ngaphezulu xa iqala ukhuphuka.

Ngoba? Isigcina-kufuma sigcina umhlaba ufumile, sinqanda ukhula, kwaye sikhusela umhlaba kwiimvula ezinkulu kunye nemozulu embi.

Ukuba akukho enye into oyenzayo, gcina umhlaba!

Ulawulo lwamanzi oluthambekele kwizikhukula

Ukulawula amanzi ngokufanelekileyo kwiindawo ezithandwa zizikhukula kuthintela ukukhukuliseka komhlaba ekunciphiseni umgangatho womhlaba kunye nezondlo. Oku kubandakanya ukwalathisa ukuhamba kwamanzi kunye nokwandisa ukufunxwa komhlaba kusetyenziswa i-swales, iikhonto, kunye neebhedhi eziphakanyisiweyo (imizobo). Ukugquma komhlaba kunqanda ukukhukuliseka komhlaba kwaye kuphulukane nezondlo kunye nomgangatho womhlaba. Ezi ndlela zikhusela umhlaba kwaye zicothisa amanzi aphumayo, ziwavumela ukuba angene emhlabeni ngokuthe ngcembe ngelixa ephepha ukukhukula kwiibhedhi.

Amacebo angundoqo:

- Ukuphucula umgangatho womhlaba: Ukongeza umgquba kunye ne-organic matter ukuphucula ukukhutshwa kwamanzi kunye nokuthintela ukugcwala kwamanzi.
- Ukuphambukiswa kwamanzi emvula: Imingxuma kunye nemijelo ephuphumayo inceda ukuqondisa amanzi agqithisileyo ngokukhuselekileyo kude nezityalo kunye nezakhiwo.
- I-Agroforestry: Imithi, isigqubuthelo semhlabeni kunye namatyholo anceda ukuzinzisa umhlaba, ukunciphisa impembelelo yemvula enkulu.

Qaphela:

- Soloko uhlola uqikelelo lwemozulu. Ukuvuna izityalo kwangaphambili nokukhusela iindawo ezisemngciphekweni phambi kweemvula ezinkulu.
- Ukukhutshwa kwamanzi okungalunganga kunokukhokelela ekugawuleni amanzi, konakalisa iingcambu zezityalo. Qinisekisa ukuba amanzi agqithisileyo anendlela yokukhupha ngokukhuselekileyo.
- Kuphephe ukudibanisa umhlaba, njengoko oku kunokuthintela ukufunxwa kwamanzi kunye nokwandisa amanzi.



Ulawulo lwamanzi oluthambekele kwimbalela

Kwiindawo ezithambekele kwimbalela, ukulima umhlaba owomileyo, i-mulching, kunye nokuvunwa kwamanzi emvula kunceda ukugcina amanzi. Ukuqokelelwa kwamanzi angaphantsi komhlaba kwimijelo kunye nokuvunwa kwamanzi emvula eluphahleni kunokongeza ukunkcenkceshela. Ukugcina imida ephakanyisiweyo ejikeleze iibhedi zegadi kuthintela ukuncipha kwamanzi.

Amacebo angundoqo:

- Izityalo ezingamelana nembalela: Ukulima izityalo ezifana ne-cowpea, i-sorghum kunye neentlobo ezahlukeneyo ze-millet kuphucula ukumelana nemvula ephantsi.
- Umthunzi kunye neizithintelo zomoya: Imithi kunye namatyholoanceda ukunciphisa umphunga kunye nokukhusela izityalo kwimimoya eyomileyo.
- Ukusetyenziswa kwamanzi angwevu: Ukuphinda usebenzise amanzi asekhaya ngokukhuselekileyo ukunkcenkceshela kunokuxhasa izityalo ngexesha elomileyo. Nciphisa ukusetyenziswa kwesepha yakho ukuze amanzi angabi yityhefu kakhulu kwizityalo zakho.
- Isigqubuthelo somhlaba: Izityalo ezifana nomhlonyane zinciphisa ukukhutshwa komphunga ngelixa zibonelela ngeenzuzo ezongezelelweyo (jonga iCandelo 10 kwizityalo zonyango).
 - Ukulima umhlaba owomileyo: Tyala imbewu nembewu emigodini emincinci ukuze amanzi aqokelele ngeenxa zonke.

Qaphela:

- Umhlaba akufunekanga udiyaniwe kakhulu kwaye wome, njengoko oku kunciphisa ukufunxwa kwamanzi. Ukukhulula umhlaba ngamanye amaxesha kuphucula ukungena (jonga icandelo 3.1 kwimpilo yomhlaba).

- Wuyeke umhlaba ongenanto, okhokelela ekukhupheni umphunga ngokukhawuleza kunye nokulahleka kwezondlo.
- Khumbula ukunkcenkceshela ngokugqithiseleyo—amanzi amaninzi ngexesha elinye anokubaleka endaweni yokufunxa, ukuchitha izibonelelo ezixabisekileyo.

Ukulinywa kwezityalo ezahlukeneyo kunye nokujikeleziswa kwezityalo

Zombini i-intercropping kunye nokujikeleza kwezityalo ziindlela zokunyusa imveliso yomhlaba.

Ukulima okuphindaphindiweyo kuholela ekwakhekeni kwezilwanyana ezonakalisayo.

Ukulinywa kwezityalo ezahlukeneyo

Ukulinywa kwezityalo ezahlukeneyo kuthetha ukukhulisa izityalo ezahlukeneyo eziza kuncedana.

Indlela yokudibanisa izityalo:

- Khulisa izityalo ezinde (ezifana nombona) kunye nezo zimfutshane (njengeembotyi).
- Dibanisa izityalo ezigcina izitshabalalisi kude (umz., Ukutyalala amatswele kufuphi ne-carrots).
- Tyala izityalo ezikhula ngokukhawuleza phakathi kwezo zikhula kancinci.

Ngoba? Le ndlela igcina indawo, ikhusela izityalo, kwaye iphucula impilo yomhlaba.

Uguquko lwezityalo

Ukujikeleza kwezityalo kuthetha ukutshintsha apho utyala khona izityalo ngexesha ngalinye ukugcina ukuzala komhlaba kunye nokunciphisa izitshabalalisi kunye nezifo.

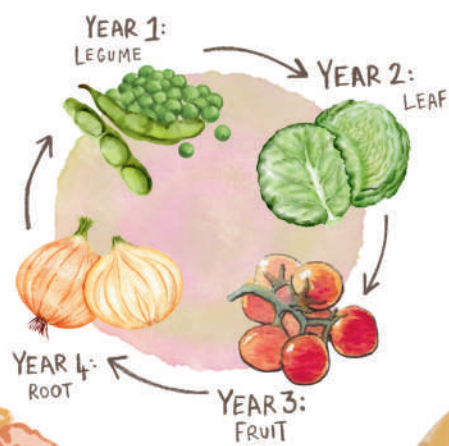
Indlela yokujikeleza izityalo:

1. Yahlula igadi yakho ibe ngamacandelo.
2. Ixesha ngalinye, tyala izityalo ezahlukeneyo kwicandelo ngalinye.
3. Kuphephe ukukhulisa isityalo esinye kwindawo enye amaxesha amabini ngokulandelelana.

Qaphela: Izityalo ezingapheliyo azijikelezisi. Oku kuqinisekisa ukuba unezinye izityalo ezivelisa uyaka wonke. I-Perennials nayo inokukhusela izityalo zakho kwizinto (jonga i23).



Ngoba? Ukujikeleza kwezityalo kuthintela izitshabalalisi nezifo, kugcina umhlaba usempilweni, kwaye kuphucula ukukhula kwezityalo.



Izityalo ezingamaqabane

Ezinye izityalo zixhasa omnye nomnye xa zikhuliswa ndawonye. Izityalo ezihambelanayo zingabamba abapholile, zixhobe iintsholongwane, okanye zibe nezinye iinzuzo.

Imizekelo yokutyala iqabane:

- **Marigolds:** Khusela iingcambu kwi-nematodes kwaye ugxothe izitshabalalisi.
- **limbotyi kunye noMbona:** limbotyi zilungisa i-nitrogen; umbona ubonelela ngenkxaso yokunyuka kweembotyi kunye ne-cowpeas.
- **litumato kunye neBasil:** I-Basil iphucula ukukhula kweetumato kwaye ithintela izitshabalalisi.

Izityalo zeqabane jikelele:



Marigold



Comfrey



Yarrow



Clover



Lucerne



Garlic



Coriander



Geranium

Izityalo ezimbalwa azikhuli kakuhle kunye. Zisenokutsala izitshabalalisi ezifanayo okanye zifuna izondlo ezifanayo.

Eminye imizekelo:

litumato X amazambane okanye ikhaphetshu
okanye umbona,
Ikhaphetshu X iityhukhamba
Amatswele X limbotyi

Imizekelo yokutyala iqabane

	+						
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	+	uninzi lwemifuno					
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Ukugcina imbewu

Ukugcina imbewu kukunceda ukhulise izityalo ezomeleleyo kwaye konga imali!

Zeziphi imbewu okufanele uzigcine:

- Khetha imbewu kwizityalo ezisempilweni, ezomeleleyo.
- Gcina imbewu kwiintlobo ezivulekileyo ze-pollinated okanye zelifa.
- Gwema imbewu engumxube ayizinzile kwaye ivelisa kancinci kwisizukulwana sesibini.

Imizekelo yembewu yokugcina:

- **litumato:** Ookelela imbewu kwiitumato ezipheleleyo. Zikhiphe, zihlambulule, kwaye uzomele iiveki ezi-1-2.
- **Ibhina:** Vumela iibhinzi zome kwi plant, emva koko uthathe iipodi kwaye ugcine imbewu endaweni eyomileyo.
- **likukhamba:** Gcina imbewu kwiikukhamba ezimnandi. Hlanza kwaye uzomele imbewu phambi kokugcinwa.
- **Iintshukumo:** Vumela iintshukumo zome, emva koko ukhiphe kwaye uzomele imbewu.
- **Iipepa:** Khipha imbewu kwiipesi ezipheleleyo, uzomele, kwaye ugcine endaweni epholileyo, eyomileyo.

Indlela Yokugcina Imbewu:

- Ookelela imbewu kwiziqhamo okanye kwimifuno evuthiweyo.
- Imbewu eyomileyo kwindawo epholileyo, enomthunzi kwiiveki ze-1-2.
- Gcina kwisitya esomileyo, esingangeni moya, esibhalwe igama lesityalo kunye nomhla.

Qaphela: Gcina imbewu yomile kwaye ikhuselekile kwizinambuzane ezitshabalalisayo!

Incam yokutshintsha imbewu: Yabelana ngembewu kunye nabahlobo kunye nabamelwane ukwandisa iintlobo kunye nokuqina!

Ukusasaza

Ukukhula kwimbewu

Qala izityalo zakho kwimbewu ngomxube womhlaba olula wesanti yomlambo kunye nomgquba. Lo mxube ubonelela nge-drainage elungileyo kunye nezondlo zokukhula okunempilo. Gcwalisa iitreyi okanye izikhongozeli ngomxube womhlaba, hlwayela imbewu namanzi ngobunono. Zigcine kwindawo efudumeleyo, enelanga. Ukufakelwa kwimbewu kwigadi yakho xa sele yomelele ngokwaneleyo.

Ukukhula ukusuka kwiziqwenga

Ezinye izityalo zinokusasazwa ngokusika. Sika nje isiqu esisempilweni kwisityalo, susa amagqabi asezantsi, uze uwabeke emanzini okanye ngqo kumhlaba ofuleyo de ibe ziingcambu. Xa iingcambu zenza, zifake egadini okanye embizeni enkulu.

Yintoni onokuyenza ngezityalo zakho ezisasaziweyo:

- **Zityale:** Zikhulise egadini yakho ukuze utye okanye ubuhle.
- **Thengisa okanye utshintshe:** Ukuba unayo eyongezelelweyo, cinga ukuzitshintsha kunye nabamelwane okanye ukuzithengisa kwimarike.



Izityalo zemveli njengezityalo ezikwaziyo ukumelana nemozulu

Izityalo zomthonyama ziye zaziqhelanisa neemeko zasekuhlaleni kwaye zihlala zikwazi ukumelana nokugqithisa kwemozulu. Ukukhulisa ukwahluka kwezityalo zomthonyama ezahlukeneyo kunokwenza ukutya kwethu kwendawo kukwazi ukumelana neempembelelo zemozulu, ngelixa sikhusela ulwazi lwemveli kunye neendlela zenkcubeko ezijikeleze ukusebenzisa izityalo.

Imizekelo Yezityalo Zomthonyama:

- I-Legumes: limbotyi zeLablab, iCowpea, iBambara groundnut
- Amagqabi aluhlaza: I-Morogo (iintlobo ze-spinaches zase-Afrika), i-amaranth, i-spekboom
- Iinkozo: I-Pearl millet, i-sorghum, i-amaranth
- Iziquhamo kunye nemithi: umkhiwane omuncu, amaqunube e-numnum, iMarula, i-apile ye-Kei, umnquma wasendle
- Imifuno yokupheka & ukusetyenziswa kwamayeza: I-garlic yasendle, i-Cape snowbush / i-rosemary yasendle, i-Cancer bush, i-Umhlonyane (i-Artemesia afra), i-Wild dagga, i-Wild Mint, i-geranium enevumba, iitapile zase-Afrika, i-Aloe vera, i-Bulbinella

**Izityalo ezingezozomthonyama,
kodwa ezinesondlo, ezingapheliyo
kwaye zilungelelaniswe neemeko
ezishushu nezomileyo**

Moringa, Tree tomato, Chaya
(isipinatshi somthi)



Imifuno kunye nezityalo zonyango

Ukudibanisa nemifuno kunokukhusela igadi yakho kwizinambuzane. Ezi zityalo nazo zinokuba neempawu zonyango ezinokunciphisa iimpawu ezivela kwizigulo ezahlukeneyo. Le yimizekelo ilandelayo. Jonga isalathiso sesityalo ukuze ubone iinkcukacha ezithe vetshe.

Ukungondleki

I-mint, i-lemon verbena, i-lemon balm, i-rosemary, i-wild rosemary (i-Cape Snowbush)

Intloko ebuhlungu

Mint, *Artemisia afra* (umhlonyane), lavender, rosemary

Ukungalali noxinezeleko

i-chamomile, i-lemon balm, i-lavender, i-lemon verbena, i-Cape Snowbush, i-dagga yasendle

Ingqele, ukukhohlela kunye nezifo zokuphefumla

i-Echinaceae, i-mint, i-lemon verbena, i-garlic yasendle, i-umhlonyane, i-thyme, i-Cape Snowbush, i-dagga yasendle

Inkxaso ye-Immune Jikelele

i-Cancer bush, i-umhlonyane, iitapile zase-Afrika, i-Wild dagga, igalikhi, i-rosemary, i-thyme, i-moringa, i-Echinaceae

Ukutshiswa, ukurhashaza kwesikhumba, ukulunywa zizinambuzane, i-acne

Bulbinella, Aloe vera, dagga zasendle

Ukukrala

Moringa, mint, iitapile zase-Afrika, i-lemon verbena, igalikhi yasendle, i-lavender, i-rosemary, i-comfrey, i-Wild dagga.



Ukubeka iliso kwizinambuzane kunye nolawulo

Zininzi iindlela zendalo zokujonga nokulawula izinambuzane ezitshabalalisayo ngaphandle kokusebenzisa imichiza eyingozi.

Ukukhangela izinambuzane

Ukuhlola izinambuzane ezitshabalalisayo linyathelo lokuqala lokulawula izitshabalalisi kwigadi yakho. Qwalasela izityalo zakho rhoqo ngeempawu zomonakalo, njengemingxunya emagqabini, ukubuna, okanye amabala adityanisiweyo. Jonga phantsi kwamagqabi nakwizikhondo apho izitshabalalisi zihlala zizimela khona. Qaphela phantsi iintlobo zezitshabalalisi ozifumanayo, amanani azo, kunye nendawo ezikuyo. Ukufunyaniswa kwangethuba kuvumela isenzo esikhawulezileyo kwaye kuthintele uhlaselo.

Izityalo zokulawula izinambuzane

Ezinye izityalo zinceda ukugcina izitshabalalisi kude ngokwemvelo.

1. **I-Marigolds:** Ivumba labo ligxotha i-nematodes kunye nezinambuzane ezahlukeneyo.
2. **Itswele ne Garlic:** Zombini zinevumba elinamandla elinokunceda izitshabalalisi ezifana ne-aphids, i-beetles, kunye ne-caterpillars.
3. **Chilli:** Gxotha i-aphids, i-spider mites, kunye nezinye izinambuzane.
4. **I-Sweet Basil:** Itsala izinambuzane eziluncedo ezifana ne-ladybugs kwaye inokugxotha iingcongconi kunye neempukane.
5. **I-Sweet Potato:** Isigqubuthelo esixineneyo semhlabeni sinceda ukuvimba amanzi kunye nokunciphisa iindawo zokuhlala zezinambuzane.
6. **I-Vetiver Grass:** Ivumba layo elinamandla linokunceda ukugcina iintubi, iimbovane, kunye nezinye izitshabalalisi kude.

Ukulinywa kwezityalo ezahlukeneyo kulawulo lwezizinambuzane

Ngokutyalala umxube wezityalo zokugxotha izinambuzane ecaleni kwezityalo zakho eziphambili, unokunciphisa imfuneko yezibulali-zinambuzane eziphilayo kwaye ukhuthaze izinambuzane eziluncedo.

Yintoni ongayenzanga (Izibulali-zinambuzane zeKhemikhali)



Ukukhusela igadi yakho kwiimeko

KwiCandelo 2, uchonge iingozi ezinokubakho kwigadi yakho. Ezi zezinye iindlela zokukhusela igadi yakho kule mingcipheko kunye nezinto ezahlukeneyo.

Izakhiwo zomthunzi: Izakhiwo ezomeleleyo zomthunzi (ezenziwe ngelaphu le-xx mm) zikhusela kwilanga elikhulu, imvula enkulu, okanye isichotho kwaye zingasetyenziselwa ukukhulisa imbewu.

I-terracing: Ukuba igadi yakho ikwithambeka, i-terracing inokunceda ukuthintela ukukhukuliseka komhlaba kunye nokuphucula ukufunxwa kwamanzi. Ngokudala amanqanaba anyathelwayo kwinduli, ucothisa ukukhutshwa kwamanzi, uvumela ukufuma okungakumbi ukuba kufunxe emhlabeni.



linduli: Tshatisa imithi ecaleni komphetho wegadi yakho ukuze uyikhusele kwimimoya enamandla kwaye unikeze umthunzi.

lingcingo eziphilayo: Izityalo ze-spiky ezifana ne-aloe vera okanye imithi ye-acacia yemveli etyalwe ecaleni komphetho wegadi yakho inokudala umqobo wendalo ngelixa iphucula ukhuseleko.

Izigqubuthelo zomhlaba ezingapheliyo: Izityalo ezifana ne-mint zinceda ukuzinzisa umhlaba kumathambeka kunye nokuthintela ukukhukuliseka.

Ukugcina irekhodi

Kubalulekile ukulandelela nokugcina irekhodi lezinto ozenzayo egadini yakho.

Yintoni yokurekhoda:

- Izitshabalalisi onazo egadini.
- Imbewu nembewu etyaliweyo kunye nesantya sokusinda kwayo.
- Izityalo ezivuniweyo (ukuze zityiwe, zithengiswe, okanye minikelo).
- Imbewu oyigcinayo kunye nokwabelana ngayo.

Kutheni ugcina iirekhodi:

Ijenali yegadi enikezelweyo ikunceda uqonde ukuba zeziphi izityalo ezikhula kakhule kwigadi yakho kunye nokuba ungavelisa malini ngamaxesha ahlukeneyo enyakeni. Ukuba ufuna ukubonelela ngevenkile yasekuhlaleni, iirekhodi ziya kunceda ekuqikeleleni ukufumaneka kwezityalo.

Ukufunda kumava

Ukulandelela oko kusebenzayo (kunye noko kungasebenziyo) kukunceda ukucoca izenzo zakho zegadi. Ukufunda izifundo kwiimpazamo nempumelelo yakho kukunceda uqhelane uze ube ngumlimi ongcono, oqinileyo.



Isalathiso seZityalo

A

Aloe Vera

Isityalo semveli. Amayeza. Ucingo oluphilayo. Iintyatyambo zitsala abahambisa ipoleni njengeenyosi ezifunwa yigadi yakho.

Amaranth

Ukunyamezela imbalela. Amagqabi ayatyiswa, njengesipinatshi. Imbewu inokuphekwa njengenkoko okanye icolwe ibe ngumgubo.

Aubergine

Eyaziwa njenge. Isityalo seqanda. Isondlo esinzima. Iqabane lesityalo esineembotyi. Musa ukutyalala ecaleni kombona, imelon, okanye naziphi na izityalo kusapho lomngqusho.

B

i-Bambara groundnut

Isityalo semveli saseAfrika. Ukulungisa ininzi. Ukumelana nobushushu. Umthombo onesondlo wecarbohydrates kunye neprotein yezityalo. Inokubiliswa, yosiwe, ifakwe isityu, kwaye icolwe ibe ngumgubo.

Basil

Herb. Ikwabizwa ngokuba yiSweet Basil. Isityalo esingumlingane kunye netumata. Ugxotha izinambuzane ezitshabalalisayo xa ulinyiwe. Yongeza incasa xa isetyenziswa ekuphekeni.

Iimbhotyi

Ixesha eliqhelekileyo. Iimbhotyi zineembewu ezinde kunye nomkhwa wokukhwela. Zizilungisi zenitrogen. Umthombo onomsoco weprotheyini yezityalo. Omnye waba dade bathathu: iqabane lesityalo esinombona kunye nesquash. Ikhula kakuhle kunye nemifuno emininzi. Musa ukutyalala ecaleni kwetswele.

Beetroot

Iqabane lesityalo kunye netswele kunye nekhaphetshu.

C

Ikhaphetshu

Iqabane lityala iitapile, iibeetroots, kunye namatswele. Musa ukutyalala ecaleni kwezinye iikhaphetshu, iitumato, iikomkomere, amaqunube, iipepile, ii-eggplants, okanye iimbhotyi zepole.

Iminqathe

Iqabane lityala iityisi, iileti, itswele, neetumato. Tyala kumhlaba okhululekileyo, onesanti ukukhuthaza ukukhula okukhulu.

Chaya

Ngokusingxina. Iintlobo ngeentlobo zespinatshi zomthi ezikwaziyo ukumelana nembalela. Amagqabi akwada anetyhefu. Kufuneka iphekwe phambi kokuba ityiwe.

Itshilisi

Ugxotha izinambuzane ezitshabalalisayo ngokulima. Xuba ikonofile, ivodka kunye nesepha njengesitshizi sendalo ngokuchasene nezinambuzane. Musa ukutyalala ecaleni kwekhaphetshu okanye ii-eggplants.

Comfrey

Herb. Ukugquma komhlaba okunokuthi uzinzise umhlaba kwaye uwukhusele ekuphelelweni ngamanzi emzimbeni. Amayeza. Isetyenziswa njengesichumiso seti ye-compost yendalo - amagqabi avundiweyo afakwe kwi-container yamanzi kwaye agqunywe iiveki ezi-3. Cinezela kwaye udibanise namalungu alinganayo amanzi ukondla izityalo. Isetyenziswa njengomgquba oluhlaza - amagqabi amatsha asikiwe ayanqunyulwa aze awiswe malunga nezityalo.

i-Coriander

Herb. Ugxotha izinambuzane. Amagqabi asetyenziswa esitsha ekuphekeni. Imbewu yomiswa njengesinongo.

Umbona

Ikwabizwa ngokuba ngumbona. Isondlo esinzima. Omnye woodade abathathu: iqabane lesityalo esineemboty kunye nezikwashi. Ungatyala namandongomane, iertyisi, ukhukhamba, iitapile. Musa ukutyala ecaleni kweetumato okanye isitshalo seqanda.

Cowpea

Ukunyamezela imbalela. Isilungisi senitrogen esikhula ngokukhawuleza. Abomthonyama. Ikwabizwa ngokuba nguMorogo wa dinawa. Iimboty kunye namagqabi ziyatyiwa.

Netyhukhamba

Iqabane lesityalo esinombona kunye nojongilanga. Musa ukutyala ecaleni kwekhaphetshu.

G

Igalikhi

Ukugxotha izinambuzane. Izityalo ezihlukeneyo zokugxotha izinambuzane. Xuba netshilisi, ivodka, kunye nesepha ukwenza isitshizi sendalo sokugxotha izinambuzane. Isityalo esingumhlaba onezityalo ezininzi. Amayeza.

i-Geranium

Umthonyama. Iindidi ezininzi. Igeraniums ezinuka kamnandi zigxotha izinambuzane. Iintyatyambo zitsala i-pollinators. Amayeza.

Ipelepele eluhlaza

Isityalo esingumhlaba onemifuno emininzi. Musa ukutyala ngekhaphetshu, njengoko zombini zisisondlo esinzima.

L

Ilethasi

Isityalo esingumlingane kunye neekherothi, iiradishes, amaqunube, kunye namakhukhamba.

M

Marigold

Isityalo esingumlingane wendalo yonke. Ukugxotha izinambuzane. Izityalo ezihlukeneyo zokugxotha izinambuzane. Iintyatyambo zitsala i-pollinators

Minti

Herb. Ngokusisigxina. Ingasetyenziselwa ukuzinzisa umhlaba. Amayeza.

Moringa

Ukumelana nembalela. Iziquhamo zinokuvunwa kwaye ziphekwe kwisityu. Amagqabi nawo asetyenziswa ngenxa yesondlo kunye nexabiso lawo lamayeza.

Imifuno

Igama elibanzi kwiindidi ezahlukeneyo zesipinatshi saseAfrika. Amaxesha amaninzi ziyakwazi ukumelana nembalela nobushushu kunezinye iindidi zesipinatshi. Jonga iCowpea.

O

Itswele

Ukugxotha izinambuzane. Izityalo ezihlukeneyo zokugxotha izinambuzane. Iqabane lesityalo esinee beetroot, amaqunube, iitumato, kunye ne lettuce. Musa ukutyala ngeemboty.

P

Amazambane

Isityalo esingumlingane kunye ne-coriander, i-marigold, iimboty. Musa ukutyala ecaleni kweetumato okanye isipinatshi.

Ithanga

Isigqubuthelo somhlaba esikhusela umhlaba ekubeni wome. Omnye waba dade bathathu: iqabane lesityalo esineemboty nombona. Amagqabi angaphekwa atyiwe.

S

Ispinatshi

Iqabane lesityalo esineemboty, iityisi, iletisi, kunye namaqunube. Ikhuphisana ngezondlo xa ikhuliswe ecaleni kwetapile.

Izambane eliswiti

Isigqubuthelo somhlaba esikhusela umhlaba ekubeni wome. Iqabane lesityalo kunye netswele, ikonofile, iibeetroots, kunye ne marigolds. Amagqabi angaphekwa atyiwe.

T

Iitumato

Isityalo esingumhlaba kunye ne-basil, i-marigold, iminqathe, kunye netswele. Musa ukutyala ecaleni kweitapile, ikhaphetshu, okanye umbona.

V

Ingca yeVetiver

Ukugxotha izinambuzane. Ingca enevumba elimnandi. Ngokusisigxina. Ingasetyenziselwa ukuzinzisa umhlaba

W

Igalikhi yasendle

Abomthonyama. Ukunyamezela imbalela. Amayeza. Ngokusisigxina. Isetyenziselwa ukunambitha ukupheka. Ukugxotha izinambuzane. Ukulima phakathi kwezinye izityalo.



Contact

Rural Action for
Climate Resilience

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