



# Tshabalalisa ukhula ukuze ulondoloze ukufuma komhlaba

I-glyphosate kwimbotsi zesoya emva kokuhluma.

**UMZANTSİ AFRIKA UPHANTSE WALILIZWE ELIB-HARHILEYO NELINEENDLELA EZALUKA-HLUKILEYO ZOKUNA KWEMVULA EZIBONAKALA KWIINDAWO ZEM-VELISO YEZITYALO ZEHLLOBO NEZASEBUSIKA KWIINDAWO EZIPHEZULU KUNYAKA NGAMNYE. IMVULA KULE MIMANDLA YAHLUKA UKUSUKA KU-400 MM UKUYA KU-900 MM NGONYAKA NGAMNYE. UMMANDLA WEMVELISO YESITYALO SASEHLOTYENI ONGASE-MPUMALANGA KUMDA WEMVULA YE-400 MM WAZIWA NJENGOMDA OKHOYO WEMVELISO YESITYALO WOMMANDLA OWOMILEYO WEMVELISO YESITYALO.**

Imveliso yengqolowa yasebusika kulo mmandla wemveliso yesiqhelo yasehlotyeni yasuka yaxabiseka kakhulu ngokwasemalini ukususela ekupheleni koo-1950 ukuya koo-1980. Emva koo-1980 abalimi bakholise ukulima izityalo zasehlotyeni ngokuthe kratyat ezipana nombona, amazimba, oojongilanga, ethubeni bafakela neembotsi zesoya ngokwenkubo ecwangciselweyo yokujikelezisa izityalo, oku kwenzeke ngenxa yozinzo oluphantsi nomngcipeko ophezulu ngokwasemalini onxulumene nemveliso yengqolowa kwimimandla yemvula yasehlotyeni.

Imveliso yengqolowa yasebusika ngoko ke yacutheka baza abalimi abarinzi basebenzisa inkubo elungeleleneyo yokulima izityalo zasebusika nezasehlotyeni ngokunjalo imihlaba yesakhono esiphantsi bayibuyisela emadlelwani ukuze imfuyo ixhamle kwiimveliso ezilinyiweyo.

Omnye wemibandela esentloko eyayidale imveliso yengqolowa yasebusika ngoko

"wawungummangaliso omtsha wolondolozo lokufuma negethuba lefusi lasehlotyeni" kwaye waba sisenzzo esakhuthaza ukulondoloze ka kokufuma komhlaba okuvela kwimvula zehlobo okuninzi kangangoko kunkwenzeka.

Oku kuqale kwaphunyeza ngokutshabalalisa ukhula ngoomatshini nangezandla kwaye kuhuthaze ukufunxeka kwemvula kumphezulu womhlaba nokunenelela kwako emhlabeni.

Ulondolozo lokufuma olufumanekileyo lunokubonwa njengobutyebi obubaluleke kakhulu noluyimfuneko kwimveliso yesityalo esilandelayo kwaye maluqaliswe kwangoko xa kuvunwa isityalo sasebusika okanye sasehlotyeni. Ngokuphathelele kwimveliso yengqolowa yasebusika esi sitalo silinywe kwimeko engenazimvula kwaphela kwiinyanya zasebusika.

## Imveliso yezityalo zasehlotyeni

Kwayona imithetho-siseko esetyenziselwa ulondolozo lokufuma ukwenzela isityalo sasebusika ngokugcina ukufuma isenokuxabiseka ngokufanayo kwaye isetyenziselwe ukulondoloza ukufuma emva kokuvuna izityalo zehlobo ukususela ngoMatshi ukuya kuJulayi kwelithuba kude kube ngo-Oktobha ngonyaka ngamnye ngokuphathelele kwizityalo zehlobo ukuya kwithuba lefusi lemveliso yesityalo sasehlotyeni.

Ngokusebenzisa izixhobo ezinamazinyo nezikr-zuli, kwinkqubo yokuhlakula nglondolozo, ngenjongo yokuqhezeza nawuphi umaleko ogangathekileyo emhlabeni nokusebenza umhlaba ekupheleni kukaju-

Immagazini yakwa Grain SA  
yophuhliso lwabavelisi

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## Tshabalalisa ukhula ukuze ulondoloze ukufuma komhlaba



### Nkgono Jane says...

**N**gokufunda eli nqaku nje kuphela, uya kuba ugqibile ukutyalala, ukutshiza nokulima onke amasimi akho, kwaye siya kuba sesijonge phambili ekuvuneni umvuzo wokusebenza nzima kwixesha lasehlotyen! Kuya kubakho iindawo ezithile apho izityalo zincombe ka kakhulu khona, kodwa kubekho ezinye iindawo ezitsala nzima kuba bezinemvula eninzi kakhulu okanye encinane kakhulu – oko ngumsebenzi wokuFama!

Ngawo onke amaxesha onyaka, kufuneka sikhumbule ukuba thina njengabali, enyanisweni sikwishishini kwaye kufuneka sikwazi ukulawula umba ngamnye weshishini lokufama. Kubalulekile ukuyilawula kakuhle imali yakho, oomatshini, ukuthengisa, imfuyo nazo zonke izinto ezisetyenziswayo okwaziyo ukuzifumana. Akukho nto inokuyekelelwa ukuba mayizenzekele ngokwayo kwishishini lakho kuba kufuneka wenze izicwangciso, uziphumeze ezo zicwangciso, uhlalutye ifuthe laso uphinde wenze isicwangciso kwakhona – ngumjikelo ongapheliyo-nanini.

Sijonge kubusika obusondelayo kwaye kufuneka sicinge ngokuqaphela okukhulu ngemfuyo yethu namalungiselelo esivenzele isondlo sibusika obulandelayo. Khumbula ukuba kwiindawo apho zifike kade khona iimvula zasehlotyen, ayizi kuba ninzi ingca esemadlelweni ese kwyeshala lasebusika. Izilwanyana ziphantsi kokhathalelo lwethu kwaye kufuneka sizilungiselele. Ukuba akukazenzeli amalungiselelo awaneleyo, kubhetele kakhulu ukuba uthengise ezimbalwa kunokuba zife yindlala okanye lunxano.

Sinethemba kwaye sikholelwu ekubeni amaxabiso ezityalo aya kuncomeka ukuze nivuzwe ngokwaneleyo ngegalelo lenu elingummangaliso enilenzileyo ningamafama kulkhuselko lokuty kwasizwe, ekutshatalisweni kwentswelo nokudalwa kwamathuba emisebenzi. Nanga ningasikelelwa kumalinge enu okondla nokunxibisa isizwe sethu.

layi okanye kwiiveki zokuqala ezimbalwa zika-Agasti ukufuma okukhoyo kanye nayo nayiphi imvula efumanekileyo kuya kugcinwa emhlabeni ngokubanzi.

Umsebenzi wokuhlakula ngendlela efa-nelekleyle unokuqinisekisa, kwiziganeko ezili-qela ukuba ukuhlwayela ekuqualiswa ngako ngokwenkubo yesicwangciso sezityalo zasehlotyen uya kuphunyeza ithuba liselihihle ngokwenza njalo kuthintelwe isidingo sokulinda imvula yasekuqaleni kukaNovemba okanye ezifika emva koko kweminye iminyaka.

Ukubambezela ukuhlwayela nokunciphisa umngcipheko wokungakwazi kulima izityalo zehlobo ezicwangciselweyo ngexesha elilelona lifanelekileyo lokuhlwayela kunokuthintelwa ngokusebenzia inkqubo yokuhlakula kwan-goko nokutshabalalisa ukhula.

#### Iimpawu zomhlaba ezichaphazela ukulondoloze ka komhlaba

Kuluncedo ukuphengulula iimpawu zomhlaba ezichaphazela isakhono somhlaba sokuggina ukufuma. Kubalulekile oko xa kunokucingwa ngokutshabalalisa ukhula njengomba obalu-lekileyo wolawulo nangeentlobu zemihlaba ngakumbi uhlobo lomhlaba ongaphezulu onawo emasimini ezityalo zefama yakho.

Imihlaba yenzive ngemidibano eyahluka-hlukeneyo yeenxenyen ezingasentla kwaye ihlelwa ngokwesixa sesanti, yentenga yomhlaba okanye yodongwe.

Isixa sesiqulatho samanzi kububanzi bomhlaba buphelele naso sixhomekeke kwiinxenyen esanti, kwintenga yomhlaba okanye kudongwe olufumaneka kwiimaleko ezahluka-hlukeleyo ezi-nokufikelela kuyo iingcambu zesityalo okanye izityalo ezilukhula kwixesha lonyaka elithile.

Xa isiqulatho samanzi asemhlabeni sesi-lungelelene emva kokuna kwemvula, amanzi anokufunxa sisityalo aziwa ngokuba ngamanzi anokufunyanwa sisityalo. Njengommiselo jik-elele, la manzi esi sityalo abonwa njengesiqingatha sesakhono esipeleleyo somhlaba othile sokuqlatha amanzi.

Amanzi anokufunyanwa sisityalo nanokulondoloze ka emhlabeni oyisanti amalunga ne-40 mm ngemitha nganye, kuvunduvunu amalunga ne-80 mm ngemitha ngenye ukuze emhlabeni oluvunduvunu onentenga yodongwe yi-150 mm ngemitha nganye yembonakalo yomhlaba.

Imbonakalo yomhlaba eqhelekileyo yemitha enye, nethathwe kubunzulu obuqhelekileyo ezino-kukhula kubo iingcambu ngexesha lonyaka elithile, naxa kuthathwa kwiimaleko ezahluka-hlukeleyo eziponakala zinokugcina kude kube yi-135 mm nangaphezulu bamanzi anokufunyanwa sisityalo. Xa kuthelekiswa nemvula yonyaka engange-650 mm amanzi agciniweyo aya kufikelela kwi-20% ukuya kwi-25% kwayo oko kunokwalatha umahluko phakathi kwesityalo esikhula ngempumelelo okanye intsilero epheleleyo

yonyaka wembalela kanti oko kuxhomekeke kwimikhwa yemvula kunyaka othile. Eli qula lamanzi linako ukuphilisa isityalo ide iphinde ine imvula kwixesha elizayo. Koku kufuma abafanele ukulangazelela kakhulu abalimi ukuze bakulondoloze.

#### Ulawulo lokutshatalisawa

#### kokhula ukuze kulondoloze ukufuma

Ukutshatalisawa kokhula kwimisebenzi eyahluka-hlukeleyo yokulima izityalo ngomnye wemibandela ebalulekileyo kwisicwangciso esi manyanisiweyo solondolozo lokufuma.

Ukhula lunokuchazwa njengaso nasiphi isityalo esinganqwenelekyo kwinkqubo yemveliso yesityalo esithile. Umzekelo, oojongilanga abasemasimini ombona banokubonwa njen-gokhula kanye nazo naziphi izityalo ezifumane-ka ngokwendalo.

Ukhula njengezinye izityalo zisebenzia okanye zikhuphela ngaphandle emoyeni izixa ezikhulu zokufuma komhlaba kumjikelo wazo wokuhula kanti zinako ukunciphisa izivuno zezityalo kakhulu kangange-50% ngeminyaka yembalela.

Olunye ukhula oluqheleke ngonyaka ngamnye olukhula nezityalo lunokusebenzia amanzi amaninzi kangangokuphinda-phindwa kathathu, isiphumo kukufumana isityalo esomileyo nesinciphe ngokweekhilogram. Umzekelo, iintlobo zembuya (i-rooimisbredie okanye i-amaranthus) zinako ukusebenzia malunga neelitha eziyi-630 kanti iintlobo ze-goosefoot emhlophe (i-withonde-bossie okanye i-chenopodium) zide zifikelele kwi-ilitha eziyi-1 700 zamanzi eziwafunxa ekufumeni komhlaba ukuze kubekho isiphumo sezityalo ezome ngekhilogram e-1 ngaphezu komhlaba.

Xa kuthelekiswa iilitha zamanzi ezifunekayo ukuze kufumanekie ikhilogram e-1 yesityalo esingaphezu komhlaba kunganikwa amanani alandelayo: amazimba zillitha eziyi-670, umbona zillitha eziyi-770, ingqolowa zillitha eziyi-1 160, oojongilanga zillitha eziyi-1 400, i-owuthsi zillitha eziyi-1300 neembotizesoyangeelithaeziyi-1400.

Ezi zixa zokusetyenziswa kwamanzi zithe-tha ukuba iilitha zezigidi eziyi-2,3 zamanzi anokufunyanwa sisityalo ngehektare nganye aphumela ngaphandle kuze kufumanekie inx-ene ye-sityalo esingumbona seetonii ezintathu.

Ngoko ke, kubaluleke kakhulu ukukwazi ukugcina nawaphi amanzi emvula ena ukusuela kuMatshi ukuya ku-Oktobha ukuze kuqinisekiswe ukuba siyafumaneka noko isixa esisesona sincinane semvula phambi koku-talya esidingelwa ukuhlwayela kwangethuba.

Kweli xesa lonyaka kwenzekile ukuba kwezinye iindawo abalimi abatyise impahla kwintsalela yezytalo kwithuba elide okanye ababengenzanga msebenzi wokuhlakula okanye wokukrazula umhlaba besenzela ukuze umhlaba ukhululeke kwaye ungene umoya kuselithuba, abakwazanga kulima kuselithuba. Oku kubaluleke ngakumbi, umzekelo, kwim-



I-glyphosate efakwa ngokwe-1,5 yeelitha/ngehektare nganye phambi kokutyalia iimbotyi zesoya.

veliso yeembotyi zesoya apha imihlanganisela ethile ifuna ukutyalwa ngo-Oktobha nango-Novemba kwimimandla yemveliso yeendawo ezithande ukuchopha phezulu.

Inkitha yokhula ekuqaleni kwehlobo ukususela ku-Agasti, xa umoya uvuthuza ngamandla, ukuya ku-Oktobha, onokuba yinyanga eshushu, amanzi akhutshelwa ngaphandle lukhula ewonke entsimini aphakathi kwe-5 mm ne-15 mm ngemini. Konke ukufuma okugcinwe emhlabeni, ke ngoko kunokusetyenziswa kwiintsuku eziyi-27 ukuya kwezili-9.

Olu khutshiwano lokufuma lwenzeka kwibanga lokuqala lokukhula kwestyalo apha izityalo nokhula zikhuphisana khona ngokufuma kanti okubaluleke kakhulu lukhutshiwano ngezondlo ezisemhlabeni.

Ngoko ke, ukhula lukholisa ukusicutha kanobom isivuno ekuggibeleni kwiiveki zokuqala ezimbini ukuya kwezintathu zokukhula kwestyalo.

## Ulawulo ngomatshini nangezandla

Ingxoxo engasentla ibonisa ukubaluleka kokutshabalala ukuze kulondolozeke ukufuma okusemhlabeni. Kokutshabalala ukuze ngendlela encomekayo kunokwenzeka mhlawumbi ngokusebenzia iindlala zesiqhezo zokuhlakula okanye ngokulutshabalala ngemichiza.

Kufunyaniswe ukuba ukuhlakula okuncitshisiweyo okanye iinkqubo zokuhlakula ngolondolozo zinokusetyenziselwa ukutshabalala ukuze nokomeleza umphezulu womhlaba ukuze iinjongo ezingamawele zokutshatyalalisa kokhula nolondolozo lokufuma komhlaba zibe nako ukuphunyeza.

Isicwangciso sokuhlakula ngolondolozo sinokuphunyeza ngokudibanisa isixhobo esinamazinyo sezikhondwana zesigcina-kufuma nezokutshayela okanye umdibaniro wokuhlakula okuncitshisiweyo nokutshatyalalisa kokhula ngemichiza.

Sibalulekile isicwangciso sexesha semisebenzi yokuhlakula nesokutshatyalalisa kokhula ngemichiza ngethuba lefusi. Ukuhlakula okunzulu, nokuba kungesixhobo samazinyo ezikhondwana sesigcina-kufuma se-200 mm ukuya kwi-250 mm okanye ukukrazula okunzulu kwizityalo zasehlotyeni kufuneka kuqalise ngoJulayi xa kwensiwe emva kwethuba kodwa phambi kwexesha elizayo lonyaka lemveliso. Esi sicwangciso sexesha sinokuqhelanisa nokuhlakulwa kwamasimi kajongilanga neembotyi zesoya msinyane kangangoko emva kokuvuna ngaphandle kokuba iintsalela zesityalo zifanele ukusetyenziswa kwithuba elithile. Amasimi ombona akholisa ukuvunwa mva ukuze umsebenzi wokuhlakala wenzeke mva.

Khumbula ukuba imfuyo inako ngenene ukuba nefuthe kwimbonakalo yomhlaba kwiinyanga ezisekuqaleni kobusika ukuba iintsalela zesityalo zisetyenziswa xa umanzi umhlaba. Kaninzi kubakho imvula eluncedo ephakathi kwe-25 mm ne-50 mm enokufumaneka ngenyanga kajJulayi kwimimandla ethile. Ukuba umhlaba ugangatheke kakhulu kungalindeleka ukupengqepleka okuthile kwamanzi.

Kufunyaniswe ukuba umsebenzi wokutshweza unokubangela ukulahleka kokufuma kwe-12,5 mm nomsebenzi wokutshayela kubunzulu be-4 mm ukusuka kwimbonakalo engaphezulu yomhlaba. Kubalulekile ukuphanda ngokuba zeziphi izixhobo ezinokudingeka emsebenzini wakho nezinokukuvumela ukuba uqalise ukuhlakulangolondolozo kwayengaxeshanye utshabalala ukhulangempumelelo. Kwakhona kubalulekile ukugcina iintsalela eninzi kangangoko kunokwenzeka kumphezulu womhlaba kanti nokukhumbula ukuba nokuba kwensiwe umsebenzi wokutshweza ngeencam ezie tye, ama-25% entsalela engaphezulu abandakanywa kumsele ngamnye odlula entsimini. Izixhobo



Iziphumo zibonisa ukutshatyalalisa kokhula ngendlela encomekayo yokudityaniswa kwe-sulcotrine ne-atrazine eziyimichiza esisiseko emva kokutyalala. Kwakwenzewiye umsebenzi omnye kuphela wokususa izikhondwana kwisigcina kufuma ngenyanga ka-Agasti phambi kokutyalala.

zekhuba lezikotile ezimisewle kwi-150 mm zinako ukuhlanganisela intsalela yezityalo yama-90% uze ushiye umphezulu womhlaba uthylekile nosesichengeni sokugangatheka kune nokhukuliseko olwenziwa ngamanzi ngomoya. Isigcina-kufuma sentsalela kumphezulu womhlaba ngokunjalo sigcina umhlaba upholile, sinciphisa ukuqhuma kokufuma, ukuqengqepleka kwemvula nokuntshula kokhula.

Ukuze kuphunyeze ukusetyenziswa kwezixhobo zamazinyo lulovo olulungileyo ukucela umbhambathiswa wokuvuna ukuba aquke isixhobo sokusika intsalela kwihsixhobo sokuvuna nokubhula ukuze isityalo sinquqwe sibe ziziqwengana ezifutshane. Kwakhona oku kuyanceda emsebenzini wokutyalala xa kukho intsalela esele kwisityalo esithile ukuya kwezelandelayo.

Imijikeleziso yezityalo ecwangciselwe kakuhle nayo ingakunqanda ukuelva kwezigidi zembewu yokhula ukuze zitshabalale iintloblo ezahlukahluhileyo zokhula kuwo omabini amathuba efusi lasehlotyeni nelasebusisa.

## Ukutshabalala ngemichiza

Mininji imixube yemichiza enokusetyenziswa neenkqubo ezipheleleyo okanye ezincitshisiweyo zokuhlakula ngethuba lefusi njengomsebenzi wethuba eliphambi kokutyalala, ngethuba lokutyalala nasemva kokutyalala. Indawo nganye yokufama nomlimi ngamnye unendlela yakhe eyahluke kancinane nefanele imozulu kune neemecko aqhuba umsebenzi wokufama kuzo.

Yiba soloko uzidibanisa nommeli othembekileyo wemichiza phambi kokwenza nawuphi umsebenzi wokuyisebenzisa.

Ukusetyenziswa kwihsixhobo se-glyphosate (i-Roundup) kunokulondoloza imali eninzi xa kuditianiswa neentloblo zombona neembotyi zesoya eziqhelaniswe ngokofuzo oluxwesisiweyo njengendlela yokutshabalala ukuze phambi kokuhlwayela isityalo emva komsebenzi wesixhobo samazinyo kaJulayi xa ubushushu bomhlaba nobomoya bukhuthaze ukukhula kokhula ngakumbi ngo-Oktobha. Xa kulinywe iintloblo zezityalo eziqhelaniswe ngokofuzo kungenzeka ukuba kufuneka ukufakwa kwenye i-glyphosate emva kokutyalala ukuze kutshabalala ukuze olukhula emva kokutyalala.

Eminye imichiza enokusetyenziselwa ukutshabalala ukuze ngethuba lefusi yi-Gramoxone ne-Paraquat. Le yimichiza engasekwanga kwi-glyphosate. Okusetyenziswe ngokwenene kuboniswe kwiifoto ezikweli nqaku.

Imvula efuyenwe emva kokuvunwa kweembotyi zesoya ibiyi-30 mm phambi nasemva kwihsigcina-kufuma sezikhondwana ukuze ifikelele ku-20 mm kwithuba lokutyalala nasemva kwalo kanti kuphinde kwafumaneka ne-16 mm kwizityalo ezihlwayelweyo.

Ukuafaka kwe-glyphosate ngokweelitha ezi-1,5 ngehektare nganye kuxabisa malunga ne-R70 ngemichiza yodwa kanti umxube wemichiza engasekwanga kwi-glyphosate wokutshabalala ukuze apha kulinywe umbona khona kuxabisa malunga ne-R320 ngehektare nganye.

Njengoko kubonakele kwiimbotyi zesoya, ukuditianiswa kokugcina kwenye intsalela engaphezulu nokutshatyalalisa kokhula ngempumelelo nangexabiso elincomkayo ngokunjalo nokulondolozwa okulungileyo kokufuma kuphunyeziwe.

Iziphumo eziboniswe kwiifoto zalatha ukutshatyalalisa kokhula ngempumelelo ngokudityaniswa nemichiza esekwe kwi-sulcotrine ne-atrazine emva kokutyalala. Kwenzewiye umsebenzi omnye kuphela wamazinyo ezikhondwana zesigcina-kufuma ngoAgasti phambi kokutyalala.





# Sazi isityalo sakho sombona – amabanga okukhula (Inxenye yesi-2)

**KwiPULA/IMVULA KA JANYUWARI KU-2013 SIHLOLE AMABANGA OKUKHULA NGOKUZIPHINDA-PHINDA KWESITYALO SOMBONA. KWINXENYE YESI-2 SIZA KUHLOLA AMABANGA OKUKHULA KWESITYALO SOMBONA KWIBAKALA LOPHUHLISO LWEENKOZO.**

## R1 – Ukuphuma kobulembu

Ngoku isityalo sombona siphakathi kweentsuku eziyi-55 ukuya kw-eyi-66 emva kokuhluma kanti ubulembu buyabonakala kwaye kuza kwenzeka umvumvuzelo. Ubulembu bukhula kangangeesentimitha ezi-2 ukuya kwezi-3 cm ngokusuku. linkozo zomvumvuzelo ezitshibilizela ezantsi zifike zichumise ilungu lobukhomokazi ziba sisqalo sokhoso.

Kuthatha malunga neentsuku ezi-2 ukuya kwezi-3 ngokuphathelele kubo bonke ubulembu besikhwebu esinye sombona ukuhluma nokufuma umvumvuzelo. Eli lixesha elibalulekileyo kwisityalo kwaye kubalulekile ukuba kungabikho ludandatheko xa kusenzeka umvumvuzelo. Ukuncipha okukokona kuhulu kwesivuno kuya kubakho njengesiphumo sodandatheko ngethuba lokuphuma kobulembu.

## R2 – Amadyungudyungu

Eli banga lenzeka kwiintsuku ezili-10 ukuya kweziyi-14 emva kokuphuma kobulembu. linkozo zimhlophe kwaye zibonakala “njengamadyungudyungu” amancinane kwizikhwebu. Isikhwebu siya kuba siphantse ukufikelela kubuhulu baso obupheleleyo ukuze

ubulembu buqalise ukoma bube nebala elintsundu. linkozo zingena kwibakala lokukhula ngokukhawuleza njengoko iinkozo ziqalisa ukuzalisa isikhwebu. Ukutya okusitatshi kuyaqalisa ukubumbeka elukhozweni ngalinye.

## R3 – Ubisi

Phantse kwiintsuku eziyi-20 emva kokuphuma kobulembu, iinkozo ziqalisa ukutshintsha ibala okanye zibe tyheli kwixolo elingaphandle kodwa ngaphakathi zibe zisaqulethe ulwelo olunobisi kakhulu nolusisitatshi esizalise ukhoso. Kweli banga ukhoso luqulethe phantse i-80% lokufuma kwalo. Uninzi lweenkozo ngoku lukhulela ukubonakala ngaphandle, iiseli ziyanda ngobukhulu ukuze sicukane isitatshi.

Umda wobisi ubonakala cacileyo kakhulu kwisikhwebu sombona otyheli. Kukweli banga apho abalawuli bezisele baqalisa ukuqwalasela izivuno ukuba ngaba sezilungle na. Kweli banga akukho nkxalabo engako kuba izivuno zisenokuncitishiswa ngamanani eenkozo ezingakhuli ngokupheleleyo kwaye ubunzima beenkozo basekuggibeleni buseno-kuchaphazeleka. Kuncinane kakhulu kuhula kweli banga.

## R4 – Intlama

Malunga neentsuku eziyi-26 emva kokuphuma kobulembu, iinkozo zingena kwibanga lentlama apho iziqulatho zeenkozo zijiya khona zibe ngathi yintlama. Amanqanaba esitatshi ayanda kanti ukufuma kweenko-



Amabanga okukhula kwesityalo sombona kwibakala lophuhliso lweenkozo.

## References

Amabanga oPhuhliso IweeNkozo eMboneni ngokubhalwa nguBob Nielsen, kwi-Pest and Crop ngoJulayi ku-2007, kwiYunivesithi yePurdue.



zo kuyancipha ukuze ezinye iinkozo zibonakalise iimpawu zokubothoka xa zisoma kwiincam.

### R5 – Ukubothoka

Eli banga liqalisa malunga **neentsuku eziyi-36 emva kokuphuma kobulembu** kwaye phantse zonke iinkozo zibonisa iimpawu zokubothoka. Iinkozo ezomayo zinomaleko olukhuni ngaphezulu. Umda omhlophe owaziwa ngokuba ngumda wobisi okanye ngumda wesitatshi uya phezulu kukhoso ngokuya luvuthwa. Isiquilatho sokufuma kweenkozo ngoku siyehla kuba sesiyi-55% kuphela kweli banga. Zonke iinkozo kufuneka zibothoke ngokupheleleyo ekupheleni kweentsuku eziyi-48 emva kokuphuma kobulembu kwaye ngoku iinkozo zivuthiwe.

**R4**



### R6 – Ukuvuthwa kokutya

**Malunga neentsuku eziyi-55 ukuya kweziyi-60 emva kokuphuma kobulembu**, iinkozo ziya kuba sezifikelele kubunzima obufumaneka xa zome kangangoko, ngokunjalo umda wesitatshi uya kuba ufiikelele kwincam yokhoso ukuze xa kunjalo zibonwe njengezivuthwe ngokupheleleyo. Ukuvuna okulungiselelwu izisele kufanele ukuba kube sekualile kodwa kungenze ka ukuba kuvunwe phambi kwexesha njengoko kusafuneka ukoma okuncinan. Amakhasi namaggabi aqala atshintshe ibala kodwa mhlawumbi idiza libe liseluhlaza. Isiquilatho sokufuma yi-20% ukuya kwi-26% kwaye iinkozo zisadinga ukoma zize zifikelele ekufumeni okufanele isivuno esiyi-14% apho izisele ziqlisa khona ukwamkela iinkozo eziza kulondolozwa.

NGUJENNY MATHEWS, UMBHALI KWIPULA/IMVULA

**R5**



# İmbewu yeoyite nepratheyini

## Jikeleza isityalo sakho samandongomane njengepolisa

ZININI IINTLOBO ZEZINAMBUZANE EZIKHATHAZAYO NEZIFO EZIHLASELA ISITYALO SAMANDONGOMANE ZIZE ZICHAPHAZELE NGENDLELA ENGAFUNEKYO ISIVUNO ESINOKUFUMANEKA NGOKWENZA NJALO ZIBE IINZUZO ZAKHO. WONKE UMLIMI MAKATHATHE IXESHA LAKHE EJIKELEZA IZITYALO NGALO LONKE IXESHA LOKUZIKHULISA – EZINGELA UBUKHO BEZINAMBUZANE EZIKHATHAZAYO NEZIFO.



Amachokoza antsundu emaggabini, ajikelezwe zizangqa ezityheli aziimpawu zamabali amachokoza asemaggabini enzeka kwangoko.



Inggokelela yamachokoza a-orenji aqala avele kwicala elingaphantsi legqabi aze aggibele ngokuba yingqokelela yamachokoza abomvu-sabuntsundu aluphawu lwerusi.

Ukizingela ngulu hlobo kuthetha ukuba iingxaki ziza kuqwalaselwa zize zichongwe ngokukhawuleza ngokubek'esweni ukuze kubonwe ukuba unga-kanani umonakalo owenzekeleyo ngokunjalo umntu afumane amacebisow kwiingcaphephe ngokuphathelile kwesona sisombululosibalaseleyosengxaki!

Izifo ezisemandongomaneni zikhola ukuchaphazela amaggabi, izikhondo okanye imidumba kakhulu, ngoko ke kufuneka ukuhlolwa ngo-qwalaselo kwako konke oko kwintsimi iphelele. Izinambuzane ezifana neentwala zemithi neentubi zisenokuba sisibetho kwisityalo sakho samandongomane. Ngokwe-ARC-Grain Crops Institute ePotchefstroom, esona sifo sixhaphakileyo sisesiso esamachokoza avela kwangoko emaggabini nokubola kwasikhondo esiQinileyo. Zombini ezi zifo kunzima ukuzinthintela kwaye zicaca kakhulu kwiimeko zeemozulu ezifudumeleyo nezomhlaba ofumileyo.

### Izifo ezizezona zixhaphakileyo

**Amachokoza amaggabi aphuma kwangoko namachokoza amaggabi asema kwexesha**

Amachokoza amaggabi aphuma kwangoko abonakala ngamachokoza antsundu abalisa ibali emaggabini kwaye akholisa ukurhangwa zizangqa ezityheli. Anokufumaneka kwiintsuku eziyi-30 emva kokuhlwayelwa. Kwicala elingaphezulu legqabi kubakho icicuku zembewu esabusilivere ngebala nenoboya nebonakala kuphela ngokuyijonga ngeglasi enesakhono sokwandisa kuba uboya obo buncinane!

Amachokoza amaggabi avela mva awaxhaphakanga kakhulu kwaye amachokoza awo wona anebala elintsundu ngokunzulu ukuya kumachokoza amnyama nakholisa ukuba kwicala elingaphantsi legqabi. Ezi zifo zamachokoza amaggabi amandongomane zibangelwa ziintlobo ezimbini ezahluka-hlukileyo zezidalwanana zomngundo kodwa zombini ezi ntlobu zikhula kakhulu kwiindawo ezifumileyo nezinomphunga omnini emoyeni. Isiphumo sohlaselo Iwamachokoza asemaggabini kukuphela kwamaggabi okukhawulezayo njengoko amaggabi esiwa kwisityalo ukuze oko kubangele ukulahleka kokutya kwesondlo njengoko ifila iyinxenyel ebalukeleyo yesityalo sesondlo seziwlwanya.

Ukuba uziqwälaselela kufuphi iimeko zeemozulu uya kuba nolwazi lokuba kufuneka usilumkele esi sifo esanda kakhulu kwiimeko ezifumi-leyo nezinomphunga omnini emoyeni. Zidibanise nommeli wakho wemichiza akucebise ngenkqubo efanelekileyo yokutshiza.

### Irusi emandongomaneni akho

Irusi ngumngcipheko owothusayo kwizityalo zamandongomane nebangela iilahleko ezinkulu zezivuno ngakumbi ukuba isityalo



sesisulelekile ziintlobo ezimbini zezidalwanana zomngundo owenza amachokoza emaggabini.

Irusi ivela njengengqokelela yamabala a-orenji abizwa ngokuba ngamaqhuhuvana naqala avele kwicala elingaphantsi legqabi aze agqab-huke njengamachokoza asisicu samachokoza antsundu sabubomvu aziwa ngokuba zizipora. Amaggabi anosulelo lwerusi awakholisi kuwa njen-ganosulelo lwamachokoza amaggabi kodwa asuka aswame aze ome naxa ekholisa ukuhlala enamatheli kwisityalo.

Izityalo zabo bonke ubudala ziba zizisulu xa iimeko zifanelekile ngenxa yokufudumana nokufuma okukhatshwa ngumphunga omninzi emoyeni. Ukuvuthuza komoya, ukutshiza kwemvula okanye ukuhamba-hamba kwezinambuzane ukusuka kwisityalo esithile ukuya kwesinye zonke ezo zinto zikhuthaza ukusasazeka kwesifo. Kukho imichiza ephuhliselwe ukuse-tyenziselwa irusi ngoko ke wakuba uyiqaphele kufuneka ubize iingcaphephe ukuze ufumane amacebiso kuzo ngokuphathelele kwinkqubo yokutshiza.

### **Izinambuzane ezikhathazayo ezizezona zixhaphakileyo**

#### **lintwala zomthi**

lintwala zomthi ezikholisa ukufumaneka emandongomaneni zimnyama okanye ziba ntsundu okunzulu ngebalal kanti ngobude ziphakathi kwe-1,5 mm ukuya kwi-2 mm. Olu hlolo lwasinambuzane esikhathazayo luyingozi kuba asipheleli ekufunxeni incindi neejusi zesityalo kodwa zik-wangabathwali bezinye izifo zeevayirasi ezifana nesifo sevayirasi ye-ro-sette esiyinxaki enkulu kubalimi bamandongomane njengoko sicutha isivuno. Esi sifo sibonakala ngobukho bamaggabi amfaka-mfaka, ajijkekileyo naneziphene kanti sona isityalo sibukeka zingakwazanga kukhula.

Imikhwa yeentwala zomthi yokufunxa incindi yenza ukubuna nokuqubuda kwamaggabi. Ukukhula kwesityalo kuyanqongophala kanti amagqabi alahlekelwa libala kwiziganeko ezixhalabisayo. lintwala zomthi zitya naphi kwisityalo – emaggabini, kwizikhondo nasezingcanjini. Ezi zinambuzane zinotshaba oluyindalo lwezinambuzane ezingoob-hantom. Xa iinkitha zeentwala zomthi zingatshizwa oobhantom abaninzi abalamibileyo bafika bazondle ngeentwala zomthi, nangona kunjalo xa lunobuzaza uhlaselko khangela amacebiso eengcaphephe ngokuphathelele kwinkqubo yokutshiza.

#### **lintubi**

Kwimimandla yembalela yeli lizwe kukho izinambuzane ezikhathazayo ezixhalabisayo. lintubi zihlasela izityalo kuwo onke amabanga okupuhla kwaye zikholis ukenza umonakalo kumxokomelewano weengambu ngokwenza imijelo ezijikelezileyo. Unyango lwembewu phambi kokutyalu luya kunceda ngokuphazamisa uhlaselko lwezinambuzane kodwa apho aphezulu khona amanqanaba ohlaselo, imichiza ingasetyenziselwa ukutshabalalisa izinambuzane ngendrela encomekayo. NgokweARC-Grain Crops Institute, umonakalo weentubi unobuzaza kakhulu xa kusondela isiphelo sexesha lokukhula kanye phambi kokuvuna ngakumbi xa kukho imbalela.

Xa unokunqwenela ukuxoxa ngazo naziphi iinkxalabo onazo ngezinambuzane ezikhathazayo kune nezifo zamandongomane, unako ukuzidibanisa noNks Alana Pretorius okanye uNks Lorraine Solomon eARC-Grain Crops Institute, Umnxeba: 018 299 6100.

**NGUJENNY MATHEWS, UMBHALI KWIPULA/IMVULA**

***Bambisa abaphuli-mthetho utshabalalise amasela  
amancinane ngobuchule obukhulu kangangoko.***



# Zivavanye iimpumelelo zesityalo sakho kwaneentsilelo zaso

**UXANDUVA LOLAWULO LOMLIMI OLUBALULEKILEYO YINKQUBO YOKULANDELA NGELISO NOKWENZA UVAVANYO. SAKUBA SIKHULA ISITYALO, UMNTU KUFUNEKA ASIQAPHELE NGOKUNJALO AVAVANYE IIMPUMELELO OKANYE IINTSILELO UKUZE ABUYELELE KWIIMPUMELELO KODWA AZITHINTELE IMPAZAMO ESEZIKHE ZENZEKA.**

Umntu makazibuze imibuzo elandelayo:

- Ngaba ndifikelele kwijinjongo zam?
- Ngaba izinto ndizenza ngendlela encomeka nenoqoqosh kangan-goko kunokwenzeka?
- Ngaba izinto ndizenze ngendlela encomekayo?

Owona mbuzo unokubuzwa ngumntu ngulo: Ngaba ndikuwalasele na okulandelayo?

## **Ukukhetha intsimi – Ngaba ndilime isityalo sam kwawona masimi abalaseleyo?**

Oojongilanga bantshula bakhule kakuhle kuluhlu olubanzi lweent-lobo zemihlabu neemeko kodwa intsimi mayikhethwe ngobulumko. Ngaba ndizijkelezisile izityalo? Uyanda umngcipheko wezifo nokhula xa kulinywa isityalo esinye kodwa uyancipha xa zijkeleziswa izityalo. Oojongilanga abevani nemichiza yokhula eyintsalela yamaxesha onyaka adlulileyo njengoko besityalo samaggabi abanzi, ngoko ke kubalule-kile ukuyazi imbali yentsimi yemichiza yokhula. Oojongilanga baqhuba kakuhle xa kukho intsalela yesichumiso sesityalo ebessilinywe kwixesha elingaphambili – ngakumbi umbona okanye amandongomane, ngoko ke iluluvo olulungileyo ukusebenza ngokujikelezisa izityalo.

## **Umandlalo wezithole – Ngaba umandlalo wezithole ubulungiswe kakuhle?**

Oojongilanga akufuneki balinywe entsimini esandul'ukulinywa njengoko bedinga umandlalo wezithole owomeleleyo, intsimi ilunga xa ibilinywe ebusika yandule ukusetyenzwa ngekhuba lezikotile ize i-erhwe

phambi kokutyal. Oojongilanga bantshula kakuhle emihlabeni elinywe ngokutshwezw okanye eshuku-shukunyiswe ngokungcangcazeliswa njengoko le mandlalo yezithole ikholisa ukubumbana xa kuthelekiswa nentsimi elinyiweyo.

## **Amanqanaba obunzulu bokutyal – Ngaba ndityale kubunzulu obulungileyo bokutyal?**

Imbewu kajongilanga ayitayla nzulu. Xa umhlaba unodongwe oluninzi imbewu itayla kubunzulu obumalunga ne-25 mm kodwa imbewu yemihlabu eyisanti inokutyalwa kubunzulu obunokufikelela kuma-50 mm.

## **Ubuninzi bembewu – Indawo yam yokulima ibukeka njani? Ngaba ichanekile imilinganiselo yesixhobo sam sokutyal?**

Umntu kufuneka abe nenjongo yokutyalwa malunga nezityalo eziyi-35 000 ngehektare nganye

## **Izithuba phakathi kwembewu – Kufuneka zibe ngakanani izithuba phakathi kwezityalo? Ngaba isixhobo sam sokutyal sinobuchule bokubulawula ubunzulu? Ngaba sinawo amavili acinezelayo?**

Irixhobo zokutyalwa nezemilinganiselo kufuneka zisebenze kune ukuze kuqinisekiswe ukudibana okulungileyo kwembewu nomhlaba.

## **Ngaba isixhobo sam sokutyal sinikwe inkonzo yokusilondoloza efanelekileyo na? Yena umsebenzisi wesixhobo sokutyal uziqwalaesele na iipleyiti ukuba zicocekile?**

Intsalela yesityalo esidala neyokhula inako ukuxinanisa iipleyiti zesixhobo sokutyal ukuze oko kuphazamise ukusasazeka kwembewu.

## **Ukuhluma kwembewu – Ibiyintoni ipesenti yokuhluma?**

Oojongilanga mabensiwe i-duisend-poted kwiintsuku ezi-3 ukuya kwezi-4 emva kokutyal ukuze umphezulu womhlaba ukhululeke njengoko imbewu indindana lula.





#### ***Ngaba kubumbeke uqweqwe? Ndenze ntoni ngaloo nto?***

Ukubumbeka koqweqwe kumphezulu womhlaba kukholisa ukwenza ukuhluma okushiya-shiyanayo okanye izithuba ezingenanto kwindawo elinyiweyo. Izichotho neemvula ezina ngamandla phambi kokuhluma kwezithole zibangela amaqweqwe omhlaba ogqatsiweyo owenza kube nzima ukuba izithole zigqobhozele ngaphaya kwawo. Isenzo se-duisend-poot sinjenyeza lale meko.

#### ***Isantya ngethuba lokutyalala – Zingakanani izithuba phakathi koojongilanga abasemqolweni?***

Abanye abaqhube baqhube ngokukhawuleza kakhulu, isiphumo soko “kukungazinzi kwembewu” okubonakala ngezithuba ezingalinganiyo phakathi kwemiqolo. Izantya ezizizo ziphakathi kwe-6 km ne-8 km ngeyure enye. Kanene ndibafundile abaqhube bam beetrektara ngalo mba?

#### ***Ukufaka isichumiso – Ngaba ndizithatthe ithuba liselihle iisampulu zomhlaba? Yeyiphi ingqalelo endiyinike uhlalutylo lomhlaba?***

##### ***Bendisifake njani isichumiso?***

Oojongilanga bazisebenzisa kakuhle kakhulu izondlo ezssemhlabeni ngenxa yomxokomelelwano weengambu zabo. Uhlalutylo lomhlaba luqinisekisa ukuchaneka kwezichumiso ezifakwayo ukuze kuthintelwe incitcho engeyomfune. Ngaba bendiziwalasele na iimpawu zokunqongophala kwezondlo? Ukunqongophala kwe-nitrogen kubangela ukumbatsha kwamaggabi. Ngokunjalo, amaggabi asezantsi ayafa. Unqongophalo Iwe-phosphorus lubonakala ngeempawu zokunqaphela. Oojongilanga batsala izixa ezikhulu ze-potassium emihlabeni kodwa imihlabi yethu ikholisa ukuchuma nge-potassium ngoko

ke luyadingeka uhlalutylo lomhlaba ukuze lubonise ukuba ngaba kufuneka ugalele kangakanani (ukuba ikhona imfuneko). Izondlo ezifuneka ngezixa ezincincanana i-boron ne-molybdenum ziyim-funeko ebalulekileyo kwizivuno ezhile zikajongilanga kanti zidla ngokunganeli emihlabeni yethu ngakumbi kwiindawo zeli lizwe eziempumalanga.

#### ***Izinambuzane – Ngowuphi umonakalo wezinambuzane okhoyo? Ndiwuqaphele nini?***

Umbungu wovivane nombungu wombundane iyengozi koojongilanga kanti kwixesha lasebusika nentsalela yezytalo esentsimini. Unyang Iwembewu luyawunciphisa lo mngcipheko kodwa izityalo zisafanele ukubekw'esweni njengoko imichiza etshabalalisa izinambuzane inokongezwa kwimichiza etshabalalisa ukhula etshizwa emva kokutyla.

#### ***Ukhula – Loluphi ukhula olukhoyo?***

##### ***Indlela enditshabalalise ngayo ukhula incomeke kangakanani?***

Abanye abalimi bakhetha ukuyifaka emhlabeni ngekhuba lezikotile imichiza yokutshabalalisa ukhula phambi kokutyla kungenjalo makutshizwe ngomchiza wokutshabalalisa ukhula phambi kokuhluma kwsityalo kwangoko emva kokutyla. Zibalulekile iiveki zokuqala ezintandathu njengoko oojongilanga abaselula bengakwazi kukhuphisana nokhula oludlamkileyo. Izivuno zingandiswa ngokugcina amasimi engenalukhula kwaphela kweli banga.

#### ***Elokuphetha***

Ukulandela ngeliso elibukhali nokwenza uvavanyo kuphathelele nokuqokelela iinkcukacha nokuhlalutya ingxaki ukuze kubonakale okufanele ukulondolozwa nokufanele ukuguqulwa ngenjongo yokwenza izinto ngendlela ephucukileyo kwixesha elizayo.

***Olu phawu lohlobo olulodwa  
Iwenziwe Iwaba yinto enokubakho  
ligalelo leTrust Yophuhliso  
Lwembewu yeOyile neProtheyini.***

# Mazi... uWhermit Dirks

KULO MNIKELO WEPUA/IMVULA SIZA KUDIBANA NOWHERMIT DIRKS, UM-LIMI OVELA KUMMANDLA WEGENADESHOOP ENTSHONA-KOLONI. UWHERMIT UQHUBA IFAMA YENGQOLOWA, IBHALI, IZITYALO EZINAMEVA NEEGUSA.

## Uyiqhuba phi ifama yakho kwaye ulima iihektare ezingaphi? Uyiqhuba ngantoni?

Ndilima ingqolowa, ibhalo, izitalo ezinameva ndibe neegusha kwiihetare eziyi-600 zomhlaba kummandla we-Genadeshoop eNtshona-Koloni.

## Yintoni ekukhuthazayo/ekuvuselelayo?

Ndinlothando olushushu lomsebenzi wokufama, ndiyithanda kakhu-lu indalo kwaye ndiziva ndiskeleleke kakhulu xa ndisebenza efama yonke imihla. Ubudlelwane bam nomDali wam nabo buyandikhuthaza bundivuselele kakhulu ukuze ndihlale ndiqhubela phambili.

## Chaza imiba owomelele kuyo nobuthathaka kuyo

Undonwabiswa ngenene umsebenzi wokufama kune nendalo. Ndine-sakhono sokuphatha imali kwaye ndikuthanda kakhulu ukusebenza ngezilwanyana. Mandithi yimiba endomelele kuyo leyo. Ubuthathaka bam maxa wambi kukuba ndikhawuleza ndibe nomsindo.

## Sasingakanani isivuno sesityalo sakho ukuqala kwakho ukwenza umsebenzi wokufama? Zingakanani ngoku izivu-no zakho ezhambelana nezakuqala?

Kwixesa elidlulileyo isivuno sam sengqolowa besiba malunga neetoni eziyi-220 ukuze izitalo zam ezinameva zibe malunga neetoni eziyi-50 (malunga neetoni ezi-1,5 ngehektare nganye). Kulo nyaka sikkwazile ukufumana isivuno seetoni eziyi-460 zengqolowa kune neetoni eziyi-170 zebhali (eso sisivuno esiqhelekileyo seetoni ezingama-2,5 ngehektare nganye). Izitalo ezinameva zathengiselwa ukutyisa imfuyo.

## Ucinga ukuba eyona nto eyenze ukuba uqhubele phambili kwaye uphumelele?

Uqequesho olabalaseleyo endlifumene kwaGrain SA ngokunjalo noncedo lokuphatha imali endlifumene kwiSebe IezoLimo lundincede kakhulu.



## Loluphi uqequesho olufumeneyo kude kuke ngoku iloluphi uqequesho osanqwenela ukuluzuza?

Ndigqibe izifundo zoPhuhliso lomLimi ngohlalutyo lomhlaba kodwa ndinqwenela ukuthatha izifundo zoLawulo Iwefama kune nezoLawulo IwabaSebenzi.

## Uzibona uphi kwiminyaka emihlanu ukususela ngoku?

Ndingwenela ukuba nefama yam noomatshini kune nezihobo zam zokusebenza.

## Leliphi icebiso onokulinika abalimi abatsha abanomnqweno?

Kukusebenza nzima, ukusebenza nomcebisi njengeqela elisebenza kune nokulangazelela ukufunda izinto ezintsha!

NGUTOIT WESSELS, UMQUQUZELELI WEPHONDO  
WENKQUBO YASEGRAIN SA YOPHUHLISO LWABALIMI



**Western Cape**

# Isicwangciselobundlalifa phakathi kwabalimi

**UMILIMI NGAMNYE, NOKUBA UNGAKANANI NGOBUKHULU UMSEBENZI WAKHE WASEFAMA, UJONGANA NENYANISO YOKUQWALASELA UKUBA NGUBANI OZA KUTHWALA UXANDUVA OKANYE UTYALO-MALI LWAKHE LUYA KUQHUTYWA NJANI XA NGENYE IMINI ENGAKWAZI KUZILAWULELA NGOKWAKHE UMSEBENZI OKANYE XA ENGASEKHO EMHLABENI.**

Abanini beefama abaninzi okanye abalawuli beefama abaphethe umsebenzi othile nosekwe kwimeko yobumbano basibeka ecaleni esi siccwangciselobundlalifa kangaka kulondolozo abalishiya emva "lwelifa lokufama". Xa kungekho siccwangciso senziwego ukuze kudlulisewa ngokusesikweni nangocwangco ubunini noxanduva, kusenokubakho ingxushungxushu phakathi kosapho enokukhokelela kubudlelwane obunkenenkene nobuzele ubutshaba kumashumi alicqela eminyaka emva kobuthathaka obuthile okanye emva kokusweleka komnini-fama.

Izimvo ezibalulwa kweli nqaku zjoliswe kwifama zabantu ngabanye phakathi kwamaqela ngamaqela ngokusemthethweni kwaye ezo fama azinxulumenanga nazicwangciso zokulinywa kwendawo ethile kummandla wogunyaziso wohlanga oluthile ngokwesithethe. Ngokwesi sitethe ulandelwano lokusebenzisa indawo ethile yomhlaba lunokuhla ukusuka kunyana ongoyena mkhulu emva koqwalaselolufanelekileyo olwenziwa yinkokel yomthonyama nabancedisi bayo.

Isicwangciselobundlalifa befama sibandakanya ukudlulisewa okusebenzayo kobunini nolawulo iwashishini lokufama. Isiphumo esiyimpumelelo saso nasiphi isicwangciso sobundlalifa siya kuyilwa ngendlela ehangabezananezidingo zavo onke amalungu osapho ukuze kuqinisekiswe ishishini eliphiliyeo nelilondolozekayo kwixesa elizayo.

Isicwangciselobundlalifa kananjalo sinokuchazwa njengenkubo esoloko iqhytuya, phakathi kosapho ukuze kuqhutwyne ngokweemeko eziguukayo, kukwenza isicwangciso sokudluliswa kolwazi, izakhono, umsebenzi, ukuqhutwyne kolawulo nobunini beshishini losapho phakathi kwesizukulwana esinye njengabasunguli okanye isizukulwana esithatha umhlala-phantsi, kune neslandelayo okanye isizukulwana esixhamla kulandelelwano.

Isicwangciselobundlalifa sikhola ukubekelwa ecaleni kuba sisuka sibonakale njengomsebenzi omkhulukazi kwaye inkubo elandelwayo yona ngokwayo inako ukukhokelela kungquzelwano nokungavumelani kwamalungu osapho. Kulula kuloo malungu asebenza kwishishini losapho ukuzibona bekholelwa ekubeni ngabo abaya kufumana ilifa lomhlaba othile okanye balawule imisebenzi ethile njengenxene yonxulumano losapho. Maninzi amalungu osapho anemfanelo anokumangaliswa kakhulu xa kufundwa umyolelo okokuqala xa ukusweleka komsunguli okanye komlawuli kufike phambi kwexesa okanye kungalindelekanga.

Kwiziganeko ezinjalo amalungu osapho aseleyo kusenokufunka ukuba athengise impahla yexabiso kubandakanya umhlaba ukuze kwensiwi intlawulo yomzi okanye kusonjululwe ungquzelwano phakathi kosapho.

Kubhetele ukuqalisa ngale nkubo phambi kokuba umsunguli weshishini asweleke. Oku kuluncedo kakhulu kuba isibini esesikhulile esisungule ishishini sonwatyiswe kukubona iinzuzu zokuhlala kwifama ebonakala ineziqhamo ezh-

le zemizamo yabo idlulisewa phambili sisizukulwana esilandelayo. Bayaphumla kwinkxalabo yokuthwala uxanduva lokuqhube imisebenzi yemihla ngemihla yasefama. Isizukulwana esidal, esinamava eminyaka ngeminyaka yokufama iyawkazi ukusoloko inika amacebiso adingekayo.

Xa le nkqubo ikhawuleze yaqala kwaye ilungu ngalinye losapho liziva liifumene ithuba lokuphalaza izimvo zalo, oko kutyhila iindlela ekonukhethwa kuzo.

Kucetyiswa ukuba emva kokuqaliswa kwenkubo kumenye igqwetha eliyingcali kwizicwangciso sobundlalifa ukuze libhale nawaphi amaxwebhu asemthethweni. Umyolelo unokwenziwa ngendlela equka nenxulumanisa zonke iziphumo zeengxoxo zosapho ukuze zicace kwaye ziqondeke.

## Inkubo yokwenza isicwangciso

Amabakala amabini aphambili okuzoba isicwangciso anokwahlulwa ngokubanzi ngokweenxalenye ezimbini. Ibakala lokuqala libandakanya ubukho bawo onke amalungu osapho, mhlawumbi eliqala ngokukhokelwa ngumphathi oza kuxoxa ngaso, ocingayo ngaso, nowenza uphando ngezinto ngezinto ekunokukhethwa kuzo, isicwangciso, ukuvumelana nokwenza iziqqibo ngeendlela ezinokusebenza nezinokusetyenziselwa impumezo. Ibakala lesibini libandakanya iziqqibo zokwenziwa kwamaxwebhu okanye ukugcinwa kwezigqibo ngokwenza isicwangciso sobundlalifa esibhaliweyo.

## Intlanganiso yokuqala

Akuba umsunguli okanye abasunguli abaphambili benze isiqqibo sokuhubela phambili ngenkubo, naliphi ilungu losapho elisenokuba linomdla kwishishini lefama nakwizidingo zalo zekamva kufuneka libandakanywe kwinkubo yokubonisana. Maxa wambi, ngokuxhomekeka kwiinguqu-nguquku zokudelwane bosapho, kwasekuqaleni kunokumenya umngeneleli oyingcali nonolwazi ngeziphumo zasemthethweni nangezigqibo ezenziweyo.

Wonke umntu makamanyelwe ngobunono. Kubalulekile ukuqonda oko kufunwa ilungu ngalinye nokugoba ngokwesidingo zabo nezinokuguquka ngokupuhla nokukhula kwezfundo zabo abaziqeleshelweyo ngabanye nangokoxanduva losapho.

## Izinto ezentloko ngesicwangciso sobundlalifa

Isicwangciso sobundlalifa siphathelele kwisicwangciso sokuggithiselwa kwemithwalo yoxanduva kwimimandla emithathu engundoqo. Esi sicwangciso sibandakanya imisebenzi yamalungu ahluka-hlukileyo kwimisebenzi yemihla ngemihla, uxanduva lolawulo nolokwenza iziqqibo okanye ukulawula imisebenzi yokufama kune nobunini obungqalileyo bempahla yexabiso yasefama yamalungu ahluka-hlukileyo.

Njengabasunguli okanye ubudala bendlalifa, ukugqithiselwa kwecandelo lemisebenzi yokuqhube ifama kwimihla ngemihla kukholisa ukuba kokona kulula. Ukugqithiselwa kolawulo nokwenza iziqqibo kuthanda ukubangela olona ngquzelwano luninzi kwaye kokona kunzima umsunguli afanele "ukuyekelela" kuko.

Ukuqithembala okufunwa ngumsunguli ukuze agqithisele olu xanduva kunyana, kumkhwenyana, kwintombi yakhe okanye kumlawuli oyingcali kwimisebenzi emikhulu kwakhwiha kwiminyaka eminzi yokusebenza kune. Kubude bexesa umsunguli ophambili namanye amalungu osapho benza uhlo-lo lokuba ngaba umntu/abantu "abakhethiweyo" bakufanele na ukufama kwaye banalo na ulwazi nezakhono zobuchule obufunekayo bokuwuthathela kubo umsebenzi nokusebenza ngempumelelo efama kwixesa elizayo.

Xa kuqalisa ngesicwangciso sobundlalifa kunokwenziwa isicwangciso esifunekayo soeqesho nophuhliso lwezakhono zobuchule ukulungisele iindima ezithile zamalungu abantu ngabanye. Kwezinye iziganeko oonyana neentombi okanye abalingane babo emitshatweni basenokukhetha ukulawula icala





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## I-PULA IMVULA IFUMANEKA NGEELWIMI EZILANDELAYO:

### isiXhosa,

isiNgesi, isiBhulu, iSeTswana, iSeSotho,  
 iSeSotho sa Leboa nangesiZulu.

Injongo yethu kukuvelisa olona papasho lubalaseleyo xa lunokubakho. Nawaphi amangaku aphawulwayo ngesiqulatho sompheli okanye ngedlela yokubhalwa kwaso ngoko ke, mawabhekiwe kuJane McPherson.

# Isicwangciselobundlalifa phakathi kwabalimi

lemfuyo kwishishini kunolawulo loomatshini okanye icala lokulima leshishini. Abanye basenokukhetha umzekelo, isicwangciselobundlalifa sokulawulwa kwemali, ulawulo lwe-ofisi okanye ulawulo Iwabasebenzi.

Amava okusebenza abonise ukuba liyafuneka ithuba lokukhokela eliphakathi kweminyaka esibhozo nelishumi kumsebenzi wokufama othile ukuqinisekisa ingqiqo ecacileyo yokwenza umsebenzi wasefama nolawulo olunempumelelo Iwemali ukuya kwikamva. Yonke indawo eMzantsi Afrika iza kuba neengxaki zemveliso ezifumaneka kuyo kuhela. Izakhono zolawulo, amava okusebenza nezakhono zobuchule zingafumaneka kuhela ngokusebenza kwenene kwishishini lokufama.

## Imibandela ekufuneka iqwalaselwe kwasekuqaleni

Phambi kokulungisa isicwangciselobundlalifa kufuneka kuvunyelwane ngokuthi injongo yosapho kukugqithisela ishishini lefama ngendlela enocwangco kwisizukulwana esizayo. Ukuba iimpendulo ziayavumelana, kudingeka ukuba iindlalifa ezinokuxhamla zibe yinxene yengxoxo nesigqibo siphelele.

Umba obalulekileyo luhlalutyo oluneenkucacha ezinotshelwezo zokusetyenziswa kwemali zenzuko yangoku neyekamva zeshishini langoku lokufama. Ezi nyaniso ezinxulumene nemali namannani nemiba ekhaniwayo ziya kuniqa uffii lokuba mangaphi amalungu osapho anokuqkwa kwaye kowuphi umgangatho wokuphila. Kusenokubonakala ukuba ngekubhetele kwamanye amalungu ukulandela ezinye izifundo zobungcali njengoko kungasayi kubakho "sithuba" kwishishini elikhoyo ngokobukhulu balo bangoku.

lingqalelo ngokusetyenziswa kwemali zenziwa nzima ngamanye amaxesha kukwanda okukhulu kwexabiso lempahla yomhlaba kwithuba elide xa kuthelekiswa maxa wambi nesakhono saloo mpahla yexabiso sokufaka iingeniso ingangxamanga. Ukugqithisela kobunini bempahla yexabiso kuquka ukuthengwa kwenene sisizukulwana esitsa okanye ukuthengiswa nokuphisa okanye ukunikelwa kwezixhobo zokusebenza, iinkomo, okanye intsimi sisizukulwana esidala kwamanye amalungu osapho.

Ulungiselelo Iwexesha lokuphunyezwa kwesicwangciselobundlalifa seshishini lokufama esibhaliweyo masibe sisikhanyiso semibandela engasentli ekuxoxwe ngayo ngokupheleleyo, yaqondwa kwaza kwavunyelwana ngayo ngabo bonke abenzi beendima.

## Amacandelo abhaliwego esicwangciselobundlalifa

Imigqaliselo namacandelo alandelayo acetyliswayo

nafuneka ekubhalweni kwesicwangciso iya kuquka isishwankathelo esingundoqo, ishishini ngokubanzu, isicwangciso-cebo, isicwangciso somhlala-phantsi sabo bakhutshelwe ngaphandle lishishini, abaphethayo, ulawulo isicwangciselobundlalifa sokugqithisela kwa-basebenzi, izicwangciso zemali zangoku nezexesha elizayo kanye nemiba ekhaniwayo, isicwangciso samanyathelo kanye nolungiselelo Iwamaxhesa okuphumeza, ngokunjalo namaxwebhu anika inkxaso ngenyathelo ngalinye.

Umba obalulekileyo kwesicwangciselobundlalifa sisicwangciso esineenkucacha ngokuphathwa kwe-mali okufunekayo, imithombo eyahluka-hlukileyo ekhoyo kanye neendlela ezahluka-hlukileyo ekunokukhethwa kuzo zokuphathwa kwemali. Isicwangciso ngokunjalo, masiqwalasele iinkxalabo zabantwana ezisenokungabandakanywa kwishishini lokufama. Ilifa labo linokwenziwa ngokweminielo okanye ngokweziqulatho ze-inshorensi yomgaqo-nkqubo wobomi.

Eminye imiba enokubhalwa phantsi zizicwangciso zoqequeso nezophuhliso zeendlalifa, imijelo echazwe ngobuchule zonxibelelwano kanye ne-sicwangciso sezinto ezicingeleta ukuba zingenzeka nokuba zeziphi ngokuphathelele kumsebenzi wokufama okanye ezijongene noqobo lomntu ezifuna inyathelo lakwango.

Konke okungasentla makulungiselelwano ngokwemithetho ekhoyo yemiyoelo elawula ilizwe, amafa, ukugqithisela kwempahla kanye nokuthotyelwa kwemithetho yelizwe.

lindleko ezininzi zinokubalwa zize zigcinwe ngokwenza izicwangciso kuselithuba ngokwemithetho eyahluka-hlukileyo namalungelo erhafu.

Kunokwenziwa iingqalelo zogqithiselo okanye zenguuko kumaqela ahluka-hlukileyo asemtheth-veni omnini/omlawuli ozimele yedwa, ulwahlulelwano, ubumbano loshishino okanye iqumrhu Pty (Ltd). Maziquke onke amalungu osapho kulwabewano ngeshishini lekamva. Amalungu asebenzayo, abahluelani okanye ababelana ngegunya banako ukuxhamla kwingeniso yokuphangela, ukufumana izabelo bengasebenzanga nto okanye kwiingeniso zethuba elide ezinxulumene nempahla yexabiso.

Njengoko kubonakala izisombululo zobilungisa zengokwenzenka zinanzi kwaye ziyahluka ngokunjalo zifuna ukuvuleka kwabo bonke abenzi beendima kokulindelekileyo kanye neengxoxo ezibanzu phakathi kwabo bonke abenzi beendima beenkalo ezininzi ezinokufumaneka.

## Elokujoshelisa

Isicwangciselobundlalifa esicingisisiweyo sinako ukubunciphisa ubukho bongquzulwano phakathi kosapho size siqinisekisa ukuba kuyagcineka okulin-delekileyo nobomi bexesha elizayo bezizukulwana ngezizukulwana ezizayo.



UMBHALI KWIPULA/IMVULA