

# PULA IMVULA

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## Cofa IKINOBHO LOKURIFRESHA isistimu yesilimo sakho

ZIFO ZEZITSHALO ZINAMANDLA OKUBULALA ISIVUNO SONKE SEZILIMO EZAHLUKAHLUKENE ENSIMINI. INALA YE-INFECTIOUS PLANT PATHOGENS (GERMS) NGENYE YAMAFEKTHA ADALA UMONAKALO OMKHULU WEZITSHALO ENZIWA YILAMA-PATHOGENS. UBUNINGI BALAMA-PATHOGENS OKUNGADALWA UKULIMA ISILIMO ESISODWA ENSIMINI EYODWA NJALO IMINYAKA EMININGI NGOKULANDELANA. ABALIMI BAYAKHUTHAZWA UKUBA BENZE UMJIKELEZISO WEZILIMO NJENGOBA KUNEMI-HLOMULO EMININGI OKUBALWA KUKHO UKUVUSELELA UKUBUYISELWA KWAMANYUTHRIYENTI ENHLABATHINI NOKUNCIPHISA INANI LAMA-PATHOGENS ENSIMINI.

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Inani labantu eNingizimu Afrika likhula zonke izinsuku ngereythi ka-1,2% njalo ngonyaka; nakuba inhlabathi yokulima ihlezi izinzile kodwa impilo yenhlabathi iyonakala. Emhlabeni wangempela, sinethemba lokuthi yonke imbewu etshaliwe (isib. ummbila) ikhula ngokuphelele



## AMAZWI AVELA...

### kuGq Dirk Strydom

**U**BUNZIMA OBUSELIZWENI LETHU NENDLELA ESINOKUDLULA NGAYO KUWO ONKE LA MATHANDABUZO NEMINGENI, BENZA KUBE LULA UKUBA KULAHLEKE ITHEMBA. KUKHO AMAVA ANGAPHAMBILI ANDENZE NDACINGA NGALE MEKO.

Amava okuqala endiwakhumbulayo, ngawotyelelo Iwangaphambili IwasePoland, ilizwe elihle kodwa elinembali yokuthwaxwa ziimfazwe. Apho ndibuze umlimi osisizukulwana sesi-5: ‘Usapho Iwakho lukwazi njani ukuhlala kule fama kuwo onke la maxesha enkathazo, lude lukwazi ukuqhuba ifama neshishini eligqibeleyo lodidi Iwehlabathi? Wandiphendula wathi: ‘Mnumzana, usapho Iwam belukholelw ekuxhaseni iinkokeli ezinomdla omkhulu kubomi bethu ingezizo iinkokeli zopolitiko. Ukuba konke okwethu kuqhuba kakuhle siphinda sityale eluntwini lwethu, kodwa evona njongo isentloko kukugqalisela kwinto esinobuchule bokuyenza, loo nto ke ngumsebenzi wokufama.’ Ngamazwi obulukko lawo, njengoko singenala wulo phezu kwezinto ezininzi.

Obunye ubulumko buvele kumlimi wasemaphandleni aphi ndabona ububele obuphuphumayo, indyebo yothando ngoThixo, kune nokubonga ngokunjalo nombulelo ongako. ‘Olu luntu lubonakala lungenazinto zininzi kodwa lunombulelo omangalisayo ... kwenziwa yintoni oko?’ ndazibusu. Ngoko ke, umlimi undichazele indlela azilima ngayo izityalo zakhe, izimvo ezintsha anazo nendlela ayithanda ngayo imigaqo emitsha yokulima efana nokungahlakuli kwisitiya sakhe esincinane esisemva kwendlu.

Kule ntsimi bekusekho udiza oludala lombona aselewuvune ngesandla. Umlimi undichazele wenjenje: ‘Ngenye imini ndathi ndiqwalasele isityalo ndaphawula ukuba xa ujonga isityalo ukususela phezulu, amagqabi ajikeleza isikhondo ukuze oko kwenze ifaneli yamanzi, aqukuqela ukuya ezantsi. Apho iingcambu ezixananazileyo zidlulisela amanzi emhlabeni kufuphi nesityalo ukuze aphinde asetyenziswe ngokufunxwa kwazizo iingcambu.’ Lo mlimi uthathe ixesa lokusiqwalasela nzulu isityalo ukuze aqonde indlela esisebenza ngayo abone nokuthi loluphi uhlengahlengiso olunokwenziwa kwinkqubo yokulima ngenjongo yokuphucula isakhono. Ukuzinika ixesa logqaliselo kwizinto ezincinane kumnike uvuyo, umbulelo nenqubela-phambili, kodwa ngokuya ukhula umsebenzi wethu sisuka singaziniki ngqalelo izinto, ukuze sizibhaqe siphoswa ngamathuba.

Ngamanyi amaxesha impendulo malunga nolonwabo nenqubela-phambili ilele kubushushu bovakalelo ngento ethile, kwizinto ezincinane nasebomini obungenabugocigoci, nto leyo ebangela ugqaliselo oluthe kratya kwizinto ezibaluleke ngakumbi.

Bahlolo bam, zeniskhumble njengenxye yobomi benu esi sifundo. Zinikeni ithuba lokonwabela, ukugqalisela nokuncoma izinto ezincinane. Qinisekani ngokuzilawula izinto ezilawulekayo. Zigcineni niluthanda ulimo nokuba ifama yakhe umntu inkulu okanye incinane kangananani. Ndisakholelw ekubenit ngolimo iintliziyo ziyanquka nokuthi ulimo liyeza elinokuyinyanga imingeni elijongene nayo ilizwe lethu. ■

## Cofa ikinobho lokurifresha...

ibe yisitshalo esivuthiwe esikhigiza isivuno esikhulu ukuze siqinisekise ukuvikeleka kokudla kwenani labantu esikhula njalo.

Kodwa, lokhu akwenzeki ngenxa yomthelela ofana nokhula, izifo zeztishalo kanye nezibulala zinambuzane. Phambilini kubikwe ukuthi izifo zeztishalo zibulala isivuno sonke sezilimo ezahlukene ensimini (isib. *i-Sclerotinia head rot* kajikenelanga (**Isithombe 1a**).



Enye yezimbangela eholela ekwandenii kwala ma-pathogens ensimini ukungazijikelezisi izilimo noma ukutshala isilimo esifanayo ensimini eyodwa amasizini amanangi alandelanayo.



Amanye amafektha anomthelela womonakalo omkhulu wezifo zeztishalo wezilimo kubandakanya (i) isilimo esiyikhaya esingakwazi ukuzilwela, (ii) izitshalo ezinomthelela (izitshalo ezinamagciwane), (iii) nenhlalo yendawo elungele ukukhula kwezifo zeztishalo. Isilimo esibuthakatha esiyikhaya lezifo singathathwa njenge-cultivar yesilimo esingakwazi ukuzimela ngokwamajini ukuya kuma-pathogens (amagciwane) noma leyo elinyazwe yizinhlayiya zenhlabathi ephephethwa umoya lokho kwenza umthelela we-pathogen ube lula. *I-infectious pathogen* ngokwejwayelekile idala umonakalo omkhulu wesilimo uma iyiningi ensimini. Enye yezimbangela eholela ekwandenii kwala ma-pathogens ensimini ukungazijikelezisi izilimo noma ukutshala isilimo esifanayo ensimini eyodwa amasizini amanangi alandelanayo.



1a

Ezinye zezifo ezi-afektha ubhekilanga; *i-Sclerotinia head rot* (**Isithombe 1a**), *i-Alternaria leaf blight* (**Isithombe 1b**), kanye *ne-Phoma black stem* (**Isithombe 1c**).



1b



1c

### UMJIKELEZISO WESILIMO

Ukungajikeleziswa kwezilimo emva kwsikhathi kunga-afektha isivuno sesilimo njengoba ama-*pathogens* amanangi engakwazi ukuphila enhlabathini nasezimvithini zesitshalo emva kokuvunwa kwezilimo. I-University of Pretoria yenze ucwaningo iphenya ukuthi i-*Alternaria leaf blight* i-(ALB), **Isithombe 1b** ne-*Phoma black stem* i-(PBS), **Isithombe 1c**, zikwazile ukuphila ezimvithini zikajikanelanga ezinomthelela epulazini elingenisa inzuzo. I-PBS ibikwazi ukuphila izinyanga eziyisishiyagalombili kanti i-ALB ingakwazi ukuphila isikhathi esingaphezulu kwezinyanga esingaphezulu konyaka ezimvithini zesitshalo. Ezinye izinto ezhambelana nokulima uhlolo olulodwa lwasilimo ensimini eyodwa unyaka nonyaka kungafaka phakathi ukuphela kwamanyuthriyenti. Ukujikelezisa izilimo kungafaniswa nekinobho loku-rifresha kusistimu yokulima izlimo. Ngaleso sikhathi ukujikelezisa isilimo kunganciphisa izinga lezifo enhlabathini; futhi ingenza ngcono umswakama wenhlabathi, i-soil carbon, i-macro-fauna, ukukhiqizwa kwezilimo futhi ikahle kakhulu ekongeni. Ukukhetha ukuthi yisiphi isilimo okufanele sijikeleziswe kuyoncika kwinhlalo yendawo, inhlabathi nakukla-

yimethi. Isitshalo kusafanele sibe nemihlomulo yezezimali kumlimi nomafufanele kuge nezinzuze yezomnotho (ukudla kwezinkomo).

Ukujikeleziswa kwezilimo kwensiwa ngokulima izitshalo ezinezinhlobo ezahlukene zezilimo ngokulandelana. Ukwenza isibonelo, uma umlimi etshala insimu yommbila ngesizini yokulima ka-2019/2020; kungensiwa isiphakamiso sokuthi atshale ubhontshisi ngo-2020/2021 ngesizini yokutshala. Lokhu kwensiwa ukuthi ummbila usebenzisa kakhulu inayithrojini futhi ubhontshisi iphindisela inayithrojini enhlabathini.

### UKUQAPHELA

Unyaka ka-2020 ubalulwe njenge-*International Year of Plant Health (IYPH)*. I-IYPH ihlose ukusungula ukuqapha ngokubaluleka kwempilo yesitshalo. Impilo yesitshalo ibalulekile ukukhulisa namasu oku-implementa amasu ukulawula nokuvikela izinambuzane, ukhula nezifo. Ngakho ke impilo yesihlahla idlala indima enkulu ekuqedeni indlala, ukuvikela i-biodiversity nokuqinisa intuthuko yomnotho. Ngakho ke ukuqinisekisa ukugcina izitshalo zethu zinempi.



There is a powerful driving force inside every human being that, once unleashed, can make any vision, dream, or desire a reality.

~ ANTHONY ROBBINS





# Ingqungquthela ikhanyisa igalelo labalimi

**K**WINGQUNGQUTHELA YONYAKA YASEGRAIN SA EBINGOMATSHI, ABATHUNYWA BAKHUTHAZWE ZIZITHETHI EZIFANA NENTLOKO YEZOBUUNGISA UMOGOENG MOGOENG KUNYE NENGCAHEPHE YOOQQOSHO KWEZOLIMO UGQ FERDI MEYER WE-BFAP (IQELA LEMIGAQO-NKQUBO YOKUTYA NOLIMO). KWAKHONA ABATHUNYWA BANIKWE UXANDUVA LOKUNYULA IINKOKELI EZINTSHA ZOMBUTHO.

## IINKOKELI EZINTSHA ZASEGRAIN SA

USihlalo uJaco Minnaar wethuba elisandul' ukudlula utshintshelwe kwinkonzo yecandelo lamaqonga ahluka-hlukileyo, oko kwathetha ukuba iNgqungquthela iye yanyanzeleka ukuba inyule inkokeli entsha yebanga eliphezulu. UDerek Mathews, umlimi okufuphi naseLichtenburg nobenguSekela-sihlalo uvotelwe ukuba abe nguSihlalo weGrain SA ngelixa uRichard Krige, obesakuba lilungu lesiGqeba esiLawulayo nobengumlimi waseNtshona Koloni enyulwe ngaphandle kokugatywa njengoSekela-sihlalo waseGrain SA.

Abathunywa baphinde bavotela uRamodisa Monaisa ukuba aqhube ngokuniqa inkonzo njengoSekela-sihlalo kwithuba elilandelayo lenkonzo yeofisi. Ungumlimi weenkozo nemfuyo kwingingqi yaseLichtenburg. UJeremia Mathebula ofama kufuphi nase-Ermelo noselelilungu unyulwe yiNgqungquthela ukuba anike inkonzo kwiKomiti yesiGqeba esiLawulayo.

## INTLOKO YEZOBUUNGISA UMOGOENG MOGOENG

Intloko yezobuLungisa uMogoeng uxelele iNgqungquthela wathi: 'UMzantsi Afrika ngowabo bonke – ingengabo abathile – abahlala kuwo!' Okuyinene ngayo iNtloko yezobuLungisa uMogoeng kukuba ucele iNgqungquthela ukuba ithandaze naye phambi kokubeka intetho yakhe. Uvakalise iimvakalelo zakhe ngoluntu olwenza umsebenzi wokufama: 'Siyabulela, siyabulela, siyabulela. Uthe abalimi benza indima ebaluleke kakhulu futhi ngenzondelelo kubizo lwabo lokavelisa ukuya okusemgangathweni wokondla abantu. Uphinde waphawula ukuba bangaphi abalimi ebebejongene namaxesha anizma waze wawabulela 'ngokulwa njengamajoni'. INTLOKO yezobuLungisa uMogoeng uzibandakanye nemeko abakuyo abalimi esithi uyayiqonda indlela ezishiya bonke abalimi beziva bengenathemba ngayo iinkxalabo abanamava azo abanye babantu baseMzantsi Afrika.

## Imbandela

Eminye imbandela ekhankanyiweyo yile:

- **'Amasela emihlab'a'** – ngaphandle kokuhankanya amagama abantu nokubonakalisa izimvo ezityhafisayo, iNtloko yezobuLungisa uMogoeng uyayihlonela indlela abalimi abakhetha ngayo kude kuge ngoku ukuzondelela imisebenzi yemfundo yabo abayikhethileyo ngokuthi baqhube ngokufaka igalelo kwimpilo yoqqosho IwaseMzantsi Afrika.
- **Uncedo lwemali olunikwa abalimi** – iNtloko yezobuLungisa uMogoeng uyayazi imingcipheko abakuyo abalimi abaya ngokungawazi ukusenzisa amaxabiso emihlab'a yabo ngokupheleleyo njengempahla ekumiswa ngayo xa kufunwa uncedo lwemali kuba abanye bengenazo iithayitile zobunini, kuphinde kubekho ukuxuthwa kwemihlab'a ngaphandle kwembuyekezo okunokwenzeka kwabanye.
- **Uphuhliso lwabali** – iNtloko yezobuLungisa uMogoeng uthu kudala esazi ngeNkubo yoPhuhliso lwabali yaseGrain SA kunye nendima yayo ebalulekileyo yokuxhasa wonke umntu waseMzantsi Afrika, omnya-

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ma nomhlophe, abafanele ukunikwa ithuba elinokufumaneka lokukhulula isakhono sabo njengabalimi. Uncome uthakazelelo IweGrain SA lokufikelela kubalimi ngoncedo nangengcebiso zayo.

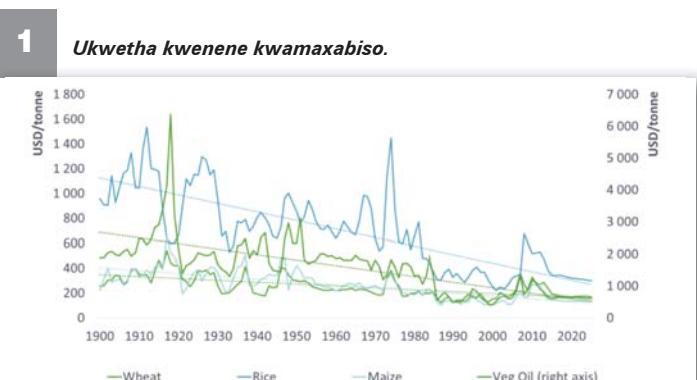
## Uqwaliaselo IoMgaqo-siseko wethu

INTLOKO yezobuLungisa uMogoeng ujike ingqalelo wayijolisa kumgaqo-siseko wethu. Thina, bantu baseMzantsi Afrika ... Akubhekiswa nakoluphi na uhlanga oluthile, inkubeko okanye ukholo – 'u-thina' uthetha wonke umntu. Asizilibelanga izenzo ezingenabulungisa zexesa elidulileyo futhi siyakwamkela ukuba uMzantsi Afrika ngowakhe wonke ubani ohlala kuwo, kuba sibanye ekwahlukaneni kwethu nangokwazi ukuba umgaqo-siseko wethu sisixhobo sokunyangwa kwethu. Uthe sifanele ukuziqonda izinto ezazikhona ngokwasembalini njengoko kungasayi kubakho sisombululo sifezekileyo kweli candelo side sikhaliqhe ngokwaneleyo, siphile ngokwentsulungeko sibe novelvano ngokwaneleyo ngokuggala izijwili malunga nobandakanyo, inxaxheba enentsingiselo eggibeleyonofikelelo emhlabeni. Sinoxanduva lokuchonga izisombululo ngeendlela ezakhayo kunokwahluhanisa, siqinisekise ukuba 'akukho bhola ebekwa ezandleni zabadlali bezopolitiko abaxhamla kumathuba akhoyo' nokuphinda kusahlule ngakumbi.

Vimbani abezopolitiko ithuba lokusahlula – silusapho! Ilizwe lethu lidinga ukuphila ekwaphukeni, kwizikrokro, kumoya wobuhlanga, kumoya wokucalulana kwabohlanga olunye, ekugwebeni ngokweemvakalelo nokungathembani. Sithanda singathandi silusapho kwaye sibanye! INTLOKO yezobuLungisa uMogoeng ukholelwa ekubeni kukho ubunye obuboniswa ngabantu baseMzantsi Afrika kuba siyakwazi ukuchwayita kunye. Uthi ujunge phambili ngomhla aphi icandelo labucala, abolungiselelo lolimo kunye norhulumente basebenzisana kunye kangangoko kinalo naliphi ixesa ngaphambili.

## Ukwabiwa ngokutsha komhlaba

Kumaxesha adlulileyo ukwabiwa ngokutsha komhlaba akubanga nampumelelo.



Umthombo weenkukacha: FAPRI, 2018



- Kufuneka sisebenzisane ekunikeleni ngomhlaba.
- Umhlaba mawubekwe ezandleni zabantu abanentlizayo yokufama ngenene nabanesakhono sokufama.
- Sifanele ukuqinisekisa ukunikwa kweengcebiso okunganqunyanyiswayo.
- Sifune inkxaso esesikweni kurhulumente.

### Kufuneka sibalise amabali angawethu

'Sifanele ukuba side sibe nendlela yonxibelelwano kuba xa kungenjalo kuya kusoloko kubakho iindaba ezingeyonyaniso phaya' INTloko yezobuLungisa uMogoeng ukhuthaze unxibelelwano lobutshantlizayo ukuze kuhlohlwe amajelo eendaba ngemisebenzi emihle eyenziwayo. Kwakhona kubalulekile ukuqaphela ukuba imiyalezo ayenzelwa ukubukisa kodwa yimizkelo yemisebenzi emihle eyenziwaya yiGrain SA engenalucalucalulo ngokwezopolitiko.

'Ukunikela nokucingelana kuya kufuneka kuthi sonke, abamnyama nabamhlophe!' INTloko yezobuLungisa uMogoeng uthe ulinqqina lokungazicingeli kwabo bodwa abalimi nelomoya wobubele waze wathi ukholelwu ekubeni abalimi banesakhono sokuba negalelo kuzinziso lweli cadelo.

### Sifuna ukwazi

INTloko yezobuLungisa uMogoeng ukhuthaze abalimi ukuba bafune isisombululo esikhawulezileyo malunga nomba womhlaba. Utshilo ukuba sidinga imigaqo-nkqubo eyilelwa ukuqinisekisa imveliso encomekayo namathuba anozinzo okufama ngokunjalo, okuhubekayo, ugxininise isidindo samava abalimi bangoku kanye nokugcinwa kolwazi okubalulekileyo ngokusesikweni. 'Ndingakucaphukela ukubona abalimi bevala ushishino kuba bengkwazi ukufama ngendlela efaka ingeniso eMzantsi Afrika. UMzantsi Afrika une kamva eliqaqambileyo kwaye nguwe nam kuphela, abanenzondelelo engenakuyhafiswa, nabankuqinisekisa ukuba eli lizwe lihle kangaka alinakonakaliswa.

### UGQ FERDI MEYER

UGQ Meyer ubek intetho yakhe kwiNgqungquthela ngemiba ephembelela uqoqosho Iweenkozo. Uthi ukuba kufanele ukuba kubekho nakuphi ukukhula kwixesha elizayo, sifanele ukuqwelasela oku: 1) Amathuba olwahlu-lelwano, 2) esigqalisele kuko, 3) imibandela esiyibeka phambili, 4) indlela esinxulumanisa ngayo itsheyini yentsebenziswano ngokunjalo 5) indlela esisebenzisa ngayo imigaqonkqubo. Asiyonto incinane eyokuba iGrain SA neBFAP zisebenzisana ekuqokelelweni kweenkcukacha nokuqwalasela iindlela zokuthumela imiyalezo yeziwangciso-cebo kubaqlunqi bemigaqonkqubo, kushishino nakumaqonga eengxoxo zokwenza izigqibo.

### Gobani igophe

Uthetha ukuthini ngokuthi 'Sifanele ukugoba igophe?' lingqokelela zamanzi zibonisa ukuba amaqondo esakhono senzuso ayebla naxa ethe chu kwicandelo lolimo. Bonke abalimi beenkozo baphambi koxinzelelo olukhulu kwaye baquvisana nemingeni emininzi. Igrifu yenene yomgca wamaxabiso ibonisa umkhwa wokwetha – oko kuthetha iinzu zabalimi ezinganeno, imingcipheko ethe kraty nezothuso kuzinzo lwemisebenzi yokufama. Sifanele ukufumana iindlela zokugoba igophe ukuze lalathe phezulu ngokunjalo likhokelele umsebenzi wokufama kwimo ephilisa ngakumbi nenozinzo.

Jonga kwiGrafu 1 ebonisa umkhondo wokwehla kwamaxabiso afunyenwe ngabalimi ngeemveliso zabo. Umkhwa owehlayo uykah-thaza. Sifanele ukufumana iindlela 'zokugoba igophe' lalathe phezulu ukuze ukufama kube nomtsalane ngakumbi, libonise ukuphila okuthe kraty kanye nozinzo. Njengabalimi sidinga ukukwazi ukubonelela

iintsapho zethu nokukhulisa amashishini ethu. Xa imikhwa ibonisa ukwehla njengoko kunjalo, asinakukwazi.

### Yintoni eya kutshintsha izinto incede ngokugoba igophe?

Sidinga ukufumana izisombululo siphakamise amazwi ethu kubaqlunqi bemigaqonkqubo nakurhulumente ukuze bayiqonde indlela elintununtunu nelisisisulu ngayo icandelo lolimo nokufunekayo ukuze lilungiswe!

### Imisebenzi, ukukhula nesiCwangciso seSizwe soPhuhliso (NDP)

UGq Meyer uthe kukho iinkalo ezifana nemihlabo engasetyenziswa ngokupheleleyo nabalimi abarhweba kancinane apho kufanele kubekho isakhono esikhulu sethuba lemisebenzi kodwa endaweni yoko amanani ehlile ukususela kwasigidi esi-1,3 ngo-2011 ukuya kwasigidi esi-1,2 ngoku. Kodwa imisebenzi yecandelo ekhokelwa kukuthengisa ngaphandle kwibanga lefama inyukile kanye nokuguqu-guqula iimveliso zolimo ngokunjalo netsheyini emanyanisiwayo yabo basebenzisanayo ibonise ukukhula okukhuthazayo.

### Itsheyini yentsebenziswano ngombona itshintshela kwimo enenguquko

UGq Meyer uyifakele iflegi ebomvu imibandela echaphazel a uzinzo lwethuba elide. Sifanele ukuthumela imiyalezo eza kugoba igophe.

- Amalinge ongenelelo ecandelo labucala abonelela ngokugqithiselwa phambili kwezakhono zobuchule, kodwa sidinga ubonelelo lwemali olungqalileyo olwenzelwa abalimi abarhweba kancinane.
- Umgaqonkqubo wokubuyiswa kwemihlabu kanye nokuxuthwa kwemihlabu udenga ingcaciso eyenzelwa bonke abantu.
- Abalimi badinga uncedo lwemali oluthembekileyo lomsebenzi wokufama kanye neinshorensi efikelelkayo yezyitalo.
- Iziseko zezibonelelo zidinga ukupuhliswa nokulondolozwa umzekelo, iindlela, umbane nobonelelo lwamanzi.

### Isakhono

'Sinesakhono esikhulu sokugoba igophe nokudala itsheyini yentsebenziswano eyehlayo kuqoqosho.'

- Ushishino lweembotyi zesoya lubone ukukhula okumangalisayo.
- Lindawo zokuthengisa iinkukhu nezinye iintaka zodidi Iweenkukhu – zinciphisa imveliso ethengwa emazweni angaphandle zize zenze ukuba ushishino lweli lizwe lube kukhutshiswano ngakumbi ngokunjalo kudalwe amathuba emisebenzi.
- Abalimi baseMzantsi Afrika banemingeni malunga neendleko zokulima. Abalimi abakwiindawo zemvula enqongopheleyo kuza kufuneka ukuba benze iinguquko zeziwangciso-cebo ngokunjalo bamanyanise inxenye enkulu ngakumbi yemfuyo.

### Izimvo ekufuneka kugodukwe nazo

- Abalimi badinga umbutho oqokelela iinkukacha ezichanekileyo ezilinganisa ifuthe labaqhubi abaninzi abahluka-hlukileyo emsebenzini wokulima nowokuguqu-guqlwa kweemveliso.
- Ibalulekile indima yeGrain SA neyeBFAP ekuqokelelweni nasekwabelaneni ngeenkukacha ezichanekileyo.
- Imiyalezo eqlunqwa ngoncedo Iweenkcukacha ezinjalo ifanele ukugqithiselwa phambili ngokucailleyo kubaqlunqi bemigaqonkqubo nakwabanye abadlali-zindima.
- UPhuhliso Iwabali Limi IwaseGrain SA alwenzi mahluko kuphela malunga nabacebisi kodwa lukwancedisa ngokuqokelela iinkukacha ezibalulekileyo ukuze lubalise ibali egameni labalimi. ■

# UKULINGANISA KUKWAZI

## – ukubaluleka kweengqikelelo zezityalo

**U**KENZA UQIKELELO LWEZITYALO NGUMGAQO WOKULINGANISA NOKUCINGELA KWANGAPHA-MBILI APHO ABAHLALUTYI OKANYE ABALIMI BACINGELA OKANYE BAQIKELELA ISAKHONO SEZIXA NGOKWEETONI EZINOKUFUMANEKA NGESITYALO ESITHILE. OKU KUNGENZIWA MALUNGA NENTSIMI ETHILE OKANYE IFAMA OKANYE MALUNGA NESIZWE. NGOKO KE, SINOKUZAHLULA IINGQIKELELO NGOKWEZINTLU EZIMBINI; IINGQIKELELO ZEZITYALO ZESIZWE KUNYE NEENGQIKELELO ZEZITYALO ZOBUQU BOMNTU.

Uqikelelo lwezityalo zesizwe kukcingela kwangaphambili isivuno esilinde-leke kwilizwe liphelele lona lwenziwa liqela labahlalutu abazinikeleyo kanye neengcali zoqoqosho ezisebenzisa uqukaniselo lwemigaqo ukuze kufu-nyaniswe inani lezixa ngokweetoni. Eli nani liza kutshintsha kulo lonke ixeha lokulima ngokokutshintsha kweemeko.

Iingqikelelo ziya kwensiwa kumabanga ahluka-hlukileyo kulo lonke ixeha lokulima lonyaka ngenjongo yokuzama ukuba zichaneke kangangoko kunokwenzeka. Imigaqo esetyenziselwa ukwenza iingqikelelo zezityalo isekwa kwiinkucukacha ezikhoyo kulo lonke ixesha lokulima. Okokuqala, ikomiti iza kuqwalasela iimveliso zamalungiselelo ebezhithengwe phambi kokuqala kwexesa lokulima. Ingaba ingakanani imbewu abalimi abanethembala lokuityalya emhlaben? Ngokuqinisekileyo, asiyio yonke imbewu ethengi-weyo eza kutyalwa njengoko iimeko zemozulu ziya kwahluka-hluu elizweni liphelele. Ukufumanisa ukuba zingaphi iihektare ezilinywe ngenene, ikomiti yeengqikelelo iya kukhenketha elizweni ukuze ihlole iimeko ngokunjalo isebenzise neenkubo zeenkukacha ngokwezelizwe (G/S) kanti neentlobo zobuchwepeshe bovavanyo olwenziwa qelete. Ukuze kufikelelwew kwiimpendulo echanekileyo.

Njengoko ixesha lokulima lisiya phambili, iqela elisebenza kanye liza kwenza uhlenga-hlengiso oluqhubbayo olusekwe kwiiimko zenginqi kulo lonke eli lizwe. Ukuba ufumana iimvula ezintle, oku akuthethi ukuba ilizwe liphelele kunjalo nalo kulo. Umyinge wesivuno sombona eMzantsi Afrika wahluka kakhulu konyaka nonyaka njengoko iimeko zemozulu zethu zingenazinzo. Umyinge wesivuno sombona kwithuba elide eMzantsi Afrika umalunga neetoni ezizigidi ezisi-8. Nangona kunjalo, sesifikelele kaninzi kwiqondo elingaphezu kweetoni ezizigidi ezili-10. Ngo-2017 uMzantsi Afrika ufikelelo kwisivuno esaphule irekhodi seeton ezingaphezu kwezigidi ezili-16 kanti zonke izalathiso zibonisa ukuba unyaka ka-2020 nawo ungafilela apho ukuba awudlulanga.

### SIZENZELA NTONI IINGQIKELELO ZEZITYALO?

Ukwenza uqikelelo lwezityalo sisenso esibalulekileyo kuba umbona ukukuya kwemihla ngemihla elizweni lethu naseAfrika. Amalunga nezigidi ezingama-200 ama-Afrika atya umbona yonke imihla. Ukuba nolwazi lokuba ungakanani umbona ofumaneka kwiindawo zeentengiso kuya kwalatha ukuba mna nave siya kuhlawula kangakanani koobhazabaza beeveenile. Ngoko ke, iingqikelelo zezityalo zinegalelo kwiintsebenzo-cebo zokubeka amaxabiso entengiso.

Zininzi nezinye iimveliso ezifana nemfuyo ezinamaxabiso alathwa ngokwamaxabiso ombona ngendlela engangqalanga. Ukuba nolwazi lokuba ungakanani umbona oza kufumaneka ngexesha lokuvuna nalo luya

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kusivumela ukuba silawule kwaye senze uhlahlo lwabiwomali ngendlela ehambelana nako oko. Mhlawumbi kwixesha lokulima elingelihihlanga siya kunyanzeleka ukuba sifinyeze esikuthengisa ngaphandle ukuze sigcine okuza kusetyenziswa ngamazwe ethu. Kunyaka wendyebo singaba nakho ukuthengisa okuthe kratya emazweni angaphandle okanye mhlawumbi sixhase imveliso yeziwanyana ngepesenti ethande ukuba phezelu. Zonke ezi ziziqibyo esizenza ngoncedo lweengqikelelo zezityalo.

Ezinini kwezi zizathu zokwensiwa kweengqikelelo zezityalo ziyafana nezifanele umlimi ngamnye. Abalimi bay auzenzela iingqikelelo zezityalo zobuqu babo ukuze bakwazi ukwenza uhlahlo lwabiwomali nokwenza ucwangciselo lwexesha lokulima elizayo. Itoni olindele ukuzivuna zinefuthe elingqalileyo kwisakhono seenzuso zakho. Abalimi abaqhuba imisebenzi edibeneyo apho imfuyo iyinxenyen yolkwakhiwo lishishino baya kukwazi ukwenza ucwangciselo benze izicwangciscocebo zokufumana ezona nzuzo ziphezulu ngokwenza isiqibyo malunga nendawo eziza kuthengiswa kuyo iinkozo apho ziya kuba nelona futhe likhulu. Abalimi abaninzi bathengisa ifula yesisele yombona kwyekwenza uqikelelo lwezityalo luya kubavumela ukuba bathengise ifula yesisele yombona ngokoqikelelo lwezityalo ezizinkozo ezomileyo. Ukwenza uqikelelo lombona kwintsimi nganye sisenso esilungileyo njengoko sikuvumela ukuba uhlole umgangatho wokusebenza kwakho kulo lonke ixesha lokutalya. Lukwakuncedisa ngokuhlalutya inkqubo yakho yokusebenzisa izichumiso.

Abalimi bakholisa ukusebenzisa imetametika elula ukuze babale iingqikelelo zezivuno zabo. Oku kwensiwa ngokulinganisa icandelo lomqolo entsimini nokubala inani lezityalo kwelo candel. Umlimi ke uya kubala inani lezikhwewbu kwsityalo ngasinye aze abale iinkozo kwsikhwewbu ngasinye. Ngokulinganisa esikalini isampulu yeenkoozo, umlimi unakho ukubala iikilogram zeenkoozo eziya kuvunwa kwelo candel. Ngokuphindaphinda uya kukwazi ukuqikelela itoni ngehet-tare ukuze ekugqibeleni kub zitoni ngentsimi ethile. Ukuze umlimi afumane uqikelelo oluchanekileyo ufanele ukuziqhelanisa nale nkquo-bo kumaxa aqjela kuwo onke amacandelo ahluka-hlukileyo entsimi.

Isithetho seAfrikansi sithi: ‘*Om te meet is om te weet*’, ‘ukulinganisa kukuwazi’. Thina senza iingqikelelo ukuze sazi ukuba singaba ngakanani esiya kuthunyelwa koovimba kwixesha lokulima. Oku kuvumela ucwangciselo lwexesha elizayo lokulima. Emsebenzini wokufama sisoloko sidinga ukucingela phambili ngokunjalo senze nocwangiselo lweemeko ngeemeko abanokuqubisana nazo. Senza ushishino kwiimko ezingenazinzo nakoku-singqongileyo okungacingeleki kwangaphambili yiloo nto kudingeka ukuba sisoloko sisensa ucwangciselo lweziphumo ezahluka-hlukileyo nokuthi sazi ukuba isivuno sethu singaba ngakanani kuba oko kungasinceda ekubeni sive nobuchule ngakumbi. ■

# UKUTHATHA IISAMPULU ngundoqo kwimpumelelo yesityalo

**U**KUTHATHA IISAMPULU ZOMHLABA, OKWENZIWA NGOKUCHANEKILEYO, LINYATHETO ELIBALULE-KILEYO LOLAWULO LOKUCHUMA KOMHLABA WAKHO MALUNGA NESITYALO NGASINYE SEMALI EYIKHESHI KWINKQUBO YOJIKELEZISO LWEZITYALO OKANYE EMADLELWENI ASETYENZISELWA UKULIMA IIMVELISO ZEMFUYO.

Kubalulekile ukugcina iingxelo zazo zonke iisampulu ezithathiweyo kunye neziphumo zeemvavanyo zomhlaba ozifumana malunga neesampulu zomhlaba ezahluka-hlukeneyo ebezithunyelwe ngqo kwii labhoratri zovavanyo okanye kubacebisi kushishino lwezichumiso. lingcebiso malunga nokusetyenziswa kwezichumiso kangangoko kufanelekile eznikwa isityalo okanye umhlaba ziya kwalatha isivuno sezityalo zakho ekuggibeleni kunye nempumelelo yangoku neyethuba elide emsebenzini wokulima izityalo zakho zemali eyikheshi.

Enyanisweni izivuno zezityalo ezipumanekayo zingatthelekiswa novavanyo lomhlaba, ulwazi ngamanqanaba kunye nawolwalamano lweenxenyen ezhkhoyo zokuchuma komhlaba ngokunjalo nezixa zezakhi zezichumiso zenitrogen (N), ii-phosphate (P), i-potassium (K), i-calcium, i-magnesium, i-zinc, i-boron nezinye izakhi ezincinanana ezipakwayo.



Umngxuma wenkangeleko ubonisa umzekelo womhlaba nobunzulu beengcambu obufanelekileyo.

Inqaku linikelwe ngumlimi othathe umhlala-phantsi



## ULWAZI OLUFUNEKAYO OLONGEZELELWEYO

Xa uthatha iisampulu zomhlaba kubalulekile ukwazi nokubona iinkangeleko zomhlaba zenene, igama elichaza umhlaba othile, ubunzulu beengcambu obusebenzayo ngokunjalo neenkukacha zakho zokuna kwemvula ukuze kubekho uqikelelo oluchanekileyo lwezakhono sesivuno sebloko ethile yeentlobo zemihlabo okanye amasimi ngamanye kushishino lokufama. Ukuchuma kohlobo ngalunye nesichumiso esiza kufakwa 'masilinganiswe' neziseko zovavanyo lomhlaba eziyiliweyo kunye nezivuno zenene ezifunyenwe kumakesha amaninzi okulima.

Imithombo ethile yeenkukacha ebalulekileyo enokufundwa nenokupathwa esandleni xa ukhangela iziphumo zeemvavanyo zomhlaba yiSoil Classification – A taxonomic system for South Africa (ISBN 0-621-10784-0) elupapasho olulona lumphume mva lweFertilizer Handbook (ISBN 0-909071-86-1). Incwadi ephathwa esandleni yezichumiso ifumaneke ichaneke kakhulu xa kulinganiselwa uvavanyo lomhlaba, iingcebiso malunga nezichumiso zamanqanaba ahluka-hlukileyo ezivuno zezityalo nezivuno ezipumaneka ngenene kwifama yakho.

Okumangalisayo kukuba abanye abalimi abanamava angaphezu kwama-20 eminyaka ngezityalo awazange akhe embe imingxuma yenkangeleko yomhlaba ngoko ke abasazi esona sakhono siyinene semihlabo. Kubalulekile ukufumana ezona zivuno zikhulu ukususela kwesona sakhono siphezulu semihlabo. Ingulowo makabe nenqubo engqalileyo yokufakwa kwezichumiso elungiselelwu ukuzuza ezona zivuno ziphezulu. Imihlabo engenaluoqosho malunga nokufaka izityalo zemali eyikheshi mayibuyiselwe emva kumadlelo alinyiweyo.



Ukuthathwa kweesampulu zomhlaba.

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isiXhosa, IsiNgesi, iSeTswana, iSesotho nesi IsiZulu.

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## Ukuthathha iisampulu ngundoqo...



### Ukuthathwa kweesampulu zomhlaba kuya kukubonisa apho kukho iintsilelo khona emhlaben.

Uvavanyo lomhlaba lusisiseko senkuthazo yomlimi ukuba andise ukuchuma nezivuno zeziyalo zemali eyikheshi ezifanele ukulinywa kwiminyaka emininzi.

### IINGCEBISO NEENGOALELO

Kubalulekile ukuthatha iisampulu zomhlaba kwiiveki ezi-2 ukuya kwezi-4 phambi kwexessa lokulima lasehlotyeni ukuze kuvumeleke ithuba lovavanyo nokutolikwa kweziphumo phambi kokufaka iodolo yesichumiso esichenekileyo. Umhlaba uqala ufudumale emva kwasebusika ngoko ke, inyanga ka-Agasti nekaSeptembera lithuba elifanelekileyo. Ukuba unokukhawulezisa uya kuzifumana iziphumo elabhorati phambi kokuxhabasha kwabanye abantu ngexesa lokulima bengxamele ukuvavanya amawaka eesampulu.

Iziko leeNkozo eziNcinane le-ARC elise-Bethlehem umzekelo, linikele ngenkonzo elungleyleo neziphumo ezithembakalayo kwiminyaka eliqela. Izikhokelo jikelele zokuthathwa kweesampulu zikukuthatha iisampulu ngebangla elinye nelenkqubo yokuhlakula, ukuze kusetyenzwe umhlaba ngokwesimbo esigosogoso ngesixhobo sokuthathwa iisampulu nengxowa eqhotyoshelwego zize iisampulu zithathwe ngendlela engacwangciselwanga, ngokulinganayo phakathi kwemiqolo yezityalo esekudlulwe kuzo.

Thatha iisampulu ukwenzela uhlalutyo lomhlaba ongaphezulu kubunzulu be-0 mm ukuya kuma-200 mm kwizowuni yeengambu zeziyalo ezingundoqo kunye nomhlaba ongezantsi kulo ophezulu ukususela kuma-200 mm ukuya kuma-600 mm. Ukuba wenza uhlalutyo lomhlaba emhlabeni ongaziyayo kucetyiswa ukuba uthathe zombini ukuze kugcinwe ingxelo echanekileyo malunga nokuphuculwa kokuchuma. Ukuba uthenga okanye uqesha ifama entsha, buza umnini wangaphambili ukuba anganakho na ukukunika iingxelo zexesa elidlulileyo zee-sampulu zomhlaba ezazithathiwe ukwenzela ukuthelekisa neemvavanyo zangoku.

Amasimi afanayo okanye ohlobo lomhlaba ofana nangobunzulu obunganeno kwiihetare ezingama-50 makuthathwe kuzo iisampulu eziphawulwe ngokuzahlukanisa. Makuthathwe iisampulu eziphakathi kwezingama-20 nama-40 kuyo yonke indawo yecandelo ngalinye elifana namanye entsimini. lisampulu ezingama-20 ukuya kwezingama-40 zifanele ukuxutywa ngocoselelo, ukuze isampulu yokuggibela engange-0,5 kg ukuya kwi-1,0 kg ifakwe engxoweni etywiniweyo ize ithunyelwe okanye isiwe elabhorati.

Kucetyiswa kakhulu ukuba iibhokisi zee-sampulu ezichanekileyo ezirikelwa ziilabhoratri ezahluka-hlukileyo zisiwe kwindawo ekusetyenzelwa kuyo ukuze ukuxutywa nukufakwa kweeleyibhile kwisampulu nganye kwensiwe ngenkuthalo kwintsimi nganye ukuthintela nakuphi ukubhideka okunokwenzeneka kokungazi ukuba umxube wesampulu ethile kuvela kweyiphi intsimi.

### ISIPHETHO

Qala ngokuthaththa iisampulu zomhlaba emasimini akho angawona anesakhono esiphezulu ukuba imithombo yoncedo nexesa azanelanga uze wenze uhlolo ngononophelo ngokunjalo nohlalutyo lwakho lwamanqanaba okuchuma kwintsimi nganye kwiminyaka embalwa elandelayo. Sisitshixo sokufama okunempumelelo ngezityalo zemali eyikheshi.



Iisampulu yomhlaba ethathwe eBergville.



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