

# PULA IMVULA

GROWING FOOD • PEOPLE • PROSPERITY



## U-2020

### – unyaka wokuba uzingcolise izinyawo zakho

**A**BALIMI KUDINGEKA BAZAME UKUYA EMASIMINI NGESIKHATHI SESIZINI YOKULIMA. KWESINYE ISIKHATHI ASIKWENZI LOKHU NJENGOBA ZININGI EZINYE IZINTO EZIQHUBEKAYO. KODWA IQINISO UKUTHI UKUZIBONA MASINYANE IZIFO NEZINA-MBUZANE KUNGASHO UMEHLUKO PHAKATHI KOKULAHLEKE-LWA YIKHO KONKE NOMA UBE NONYAKA OYIMPUMELELO.

Ukizingcolisa ensimini yakho izinyawo zakho kanye ngesikhathi kunga-ba yinto ebaluleke kakhulu futhi mhlampe ingakuhlenga enhlekeleleni mhlambe okungenzeka ukuthi iyaqhubecka emaqabungeni ommbila wa-kho. Onke ama-organism asakhula aguquka izinambuzane nezifo. Konke

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akudingayo yisimo sezulu esiwavunayo ukuze aqale umonakalo woku-hlasela izilimo zakho.

Izifo zidaleka ngenxa yezimo zezulu ezifana nemvula eningi, ukushi-sa nomswakama. Umswakama omningi ngokweqile awuyona into enhle



## IZWI LAKA...

### Jane McPherson

**U**NYAKA OMUSHA! LOKHU KUNGABA ENKULU INTOKOZO KUWE NOMA UNGAZIZWA UFIKELWA UKUKHATHALA NGAMATHUBA OKUBHEKANA NAZO ZONKE IZINSELELO ZONYAKA OMUSHA. NOMA YIKUPHI, SIQHUBEKELA PHAMBILI ESIKHATHINI ESISHA SEMILO ESIKEZWE SONA NJENGESIPHO – ISIPHO ESIKHULU UKUZEDLULA ZONKE, IMILO UQOBO.

Kulezi zinsuku, iningi lethu lithola ulwazi oluningi, izindaba, izexwayiso nemibiko futhi asinaso nesiqiniseko sokuthi yini okufanele siyenze ngalo lwazi olungaka. Mayelana noguquko lwestimo sezulu kanye nokufuduma la komhlaba. Abanye ochwepheshe bathi okwangempela, kanti abanye bathi lokhu akulona iqiniso. Empeleni angazi noma akulona noma yiqiniso. Iqiniso ukuthi, kodwa, sihlaselwe yisomiso nokushisa okungakaze kube khona. Ngabe kufanele sidangale? Angikholwa. Singenza kuphela lokho esingakwazi ukukwenza – ukunciphisa amanzi owasebenzisayo, unciphise udoti/imfucuza owukhiqizayo, lima ngobuhlakan, phila ngokucophelela – futhi ube umnakekeli womhlaba omuhle. Ngamunye wethu angenza okuncane, kodwa konke lokho okuncane kwenza omkhulu umehluko uma sibanangi thina esenza lokho okuncane, esingakwenza. Izwe lethu loniwe ukweba nokukhwabanisa futhi iningi lizizwa liphelela yithemba ngale simo.

Okunye futhi, ngamunye wethu unomsebenzi wokuba yisakhamuzi saseNingizimu Afrika esihle nesime mpo. Umuntu ngamunye wethu ugcina umthetho, uyenxa futhi akhiqize, singaphinda futhi silakhe izwe. Kufanele siyinakekele impilo yethu nekusasa lethu – singakwenza lokho kancane kancane!

Njengomlimi, likhulu iqhaza olibambile ezimpilweni zabantu abaningi – Abantu baseNingizimu Afrika banokudla ngenxa yakho. Noma ngabe yini oyikhiqizayo isiza ukwenza izwe lethu libe yindawo enhle okungahlalwa kuyo.

Asisingathe u-2020 futhi siwenze unyaka omuhle. Ngicele ufunde nasi isiBusiso sase-Irish ngezans:

#### IRISH BLESSING

Umgwaqo awusukume ukuhlangabeze,  
Umoya ubo emvakwakho njalo,  
Ilanga likhanyise ubuso bakho ngentokomalo,  
Izulu likhemezele emasimini akho.  
Size sihlangane ngokuzayo,  
UNKulunkulu akubeke entendeni yesandla Sakhe. ■

## U-2020 – unyaka wokuba uzingcolise...

njalo; ungaholela ekuhlaselweni *yi-fungal* nebhakthiriya emaqabungeni naseziqwini zesitshalo nesizogcina ziholela ekuncipheni komkhiqizo. Ngenhlanhla, ikhona imikhiqizo etholakala ezimakethe engazenza ngcono zizimelele futhi zizivikele ezifeni.

Ngakho ke, kubalulekile ukuhla uziqaphile izimpawu zisaqala ukuze uthathe izinyathelo. Izifo *ze-fungal* nezebhakthiriya zivamile kepha zingalawuleka uma zilashwe ngokufanele. Ngesinye isikhathi amavayirasi nawo ayafika futhi maningi kakhulu, ngakho kuhle wazi ukuthi ufunani uma uhlola amasimu akho. Sizoxoa kafushane ngezifo ezimbawla ezahlukene nembangela ngayinye nokuthi yiziphi izimpawu zazo namakhambi okuzelapha.

#### IZIFO ZE-FUNGAL

##### Ukugqwala kommbila

Le zifo zitholakala emhlabeni wonke kodwa zivame kakhulu ezindaweni ezinomswakama kakhulu nezinamaklayimethi ayisivivi. Ukugqwala kuqapheleka kakhulu ngenkathi ummbila ufinyelela esigabeni soku-faka isiyephu phecelezi *tasseling*, kodwa zikhona izimpawu ezingabonakala masinyane zisaqala njengokuncane okunsundu sawolintshana nokunsundu, amabala abonakala kancane kumaqabunga futhi aggama kakhulu njengoba isitshalo sikhula. Lesi yisifo esijwayelekile nesingleshwa ngemikhizo enhlobonhlobo, owo-dwa wamakhemikhali amasha nedumile esetshenziswayo *yi-Abacus*.

#### I-Grey leaf spot

Le sifo naso ngokuvamile sifika ezindaweni eziseduze namathrophikhi nezisivivi nezinomswakama omningi. Kuzoqapheleka ukulimala okude okuzobonakala ukuthi kunombala ompunga sansundi. Phakathi nokulimala kuzoba namachashazi amancane. Lesi sifo sizodala ukuwa kwamaqabunga futhi emuva kwasikhathi, izinhlamvu ngeke zigcwale kahle phecelezi *poor grain fill*.

#### I-Stalk rot

I-Stalk rot yenzeka ezindaweni ezishisayo, nezinomswakama, ikakhu-lukazi uma lezi zimo zithatha isikha eside kakhulu. Izitshalo zommbila ezinalezi zifo ziyashesha ukoma zingavuthiwe nezinhlanga ziyaklayeka zihlukane. Uzophinda uqaphela imibala empunga okujiyile nemnyama ezigabeni ezipansi zohlanga. Kubalulekile ukuyelapha masinyane le nkinga ukuze ugweme ukulahlekelwa okusanhlamu ngenxa yokoma masinyane kwesitshalo.

#### IZIFO ZEBHAKTHIRIYA

##### I-Bacterial stalk rot

Lena *yi-bacterial pathogen* ehlasela ezindaweni ezinamazinga aphezulu okushisa nezinomswakama omningi. Lesi sifo sizosabala la nesitshalo masinyane futhi sisibulale. Izitshalo ezinomthelela *we-pathogen* zizoba nombala omnyama emsukeni wohlanga; ofana *ne-fungal* stalk rot futhi ngokuvamile isitshalo siyafa masinyane emva kokufaka isiyephu.

#### I-Stewarts Wilt

Kukholakala ukuthi le *pathogen* ithuthwa ama-*flea beetles* ommbila, ngakho ke qinisekisa ukuthi usebenzisa isibulala zinambuzane esifanele ukuze unqande isifo kuzilimo zakho. Uma isitshalo sesithelelekile uzobona ngodwebeka okupuzi okuhamba nobude beqabunga. Umthelela uzokwelela esiqwini bese masinyane wenze isilimo sidondobale singakhuli, lapho ke sizobuna, bese isitshalo siyafa.

## AMAVAYIRASI

Maningi amavayirasi angabamba izilimo zethu zommbila; indlela ezedlula zonke yokulwa nawo ukuzilungiselela nokuhlwanyela imbewu eyikhwalithi efanele neyaziwayo ethengwa emithonjeni eyaziwayo. Lokhu kuzonciphisa ubungozi bokuletha imbewu yangaphandle engaba ne-*genetic flaw* noma ezothwala amavayirasi. Iningi lamavayirasi ngokuvamile aba nezimpawu ezifanayo neze-fungal nezifo zebhathiriya, ngakho ke kubalulekile ukuthola iseluleko kuchwepheshe uma ubona into esolisayo noma engajwayelekile. Amanye amavayirasi ngesinye isikhathi enzeka kwamanye amazwe ase-Afrika okubalwa kuwo neNingizimu Afrika yi-*Mosaic virus*, *Streak virus*, *Maize stunt virus* ne-*Stripe virus*.

Umkhuba omuhle kakhlulu mayelana nokumeneja izifo emmbileni ukubheka nokuqapha. Uma isifo sinyamalala singabonakalanga futhi singanakiwe singadala omkhulu umonakalo. Qaphela izimo zezulu. Uma izilimo zakho ziphoqwa ukuba zibekezelele izimo zendawo ezbucayi, ngalokho zingabheduka njengezifo ezizodinga ukuba uzinake masinyane. Uma ubona umonakalo noma ukubheduka kwamanye amaqabunga ensimini yakho nesiqiniseko sokuthi yini ungenaso, ngakho isinyathelo sakho sokuqala kufanele kube ukuyobuza kumdasi wamakhemikhali ozokwazi ukukweluleka futhi akunike amasu ngesinyathelo okufanele usithathe ukuze uyiisombulule le nkinga. Sibekise lesi simo ukuze ube nereferensi esikhathini esizayo ngoba kubalulekile ukuba sifunde kulezi zimo. Uma kwenzeka uphindu uyi- bona lenkinga emmbileni wakho uzokwazi masinyane okufanele ukwenze. Izinyawo zakho azihlale zingcolile. ■



*Hlola yonke* into ebukeka engajwayelekile.



*Bhekisia zonke* izimpawu zesifo.

# Ukumaketha *kungalakha* noma *kulibhidlize* ibhizinisi lakho

**U**KUMAKETHA, KUBALULEKE KAKHULU KODWA NAMANJE KUSEYINDAWO ENOBUNZIMA KUBALIMI UKUYIMENENJA. EZIKHATHINI EZININGI SISHILO UKUTHI UKUPHATHA IPULAZI KUNZIMA NGENXA YOBUNGOZI BONKE OBUBANDAKANYEKAYO. UKUPHATHWA KOKUMAKETHA KU-AFEKTHA IMIPHUMALA YOKUGCINA YEZIMALI ZEBHIZINISI LAKHO, NGENXA YAMANANI OWATHOLILE NGOMKHIQIZO WAKHO. KUNGABA UKWAKHEKA NOMA UKULIBHIDLIZA IBHIZINISI LAKHO.

Ngalezo zinsuku ukumaketha kusakhonthrolwa, abalimi babetathwa njengabakhqizi bemikhiqizo. Abalimi bethu namuhla bayancintisana *ku-free-market system*. Abalimi basaqhutshwa umkhiqizo, futhi bazi-jaja bona ngokufanele, kodwa manje kufanele bazihambele bona ngqo futhi izimakethe zemikhiqizo yabo. Ngakho ke umsebenzi wokumaketha manje ngowabalimi uqobo. Futhi ukuba yimenenja yokumaketha kufanele ube nolwazi mayelana nokumaketha imikhiqizo yakho.

Abalimi bethu namuhla kufanele bazi ukuthi umthengi wanamuhla useyashintsha kwakufunayo uma ethenga imikhiqizo. Abathengi abanangi banamuhla bafuna ukudla okukhiqizwe ngenkambo elungle ngenxa yokukhathazeka ngenhlalo yendawo. Bafuna ukwazi ukuthi kuvela kuphi ukudla kwabo, noma umlimi ukukhiqize esebezisa indlela engahlukumezi inhlahlo yendawo, nokuthi ngabe abasebenzi bakhe baholelwu iholo elifanele, kazi ukunakekelwa ngokufanele oku-qinisekisa ukuvikeleka kokudla ngokwekhwalithi noku-afoda. Ukulima ukhombise nokulandeleka kuzoba yinto ebalulekile, ngeshwa kukhona okusashoda eNingizimu Afrika, uma kuqhathaniswa namanye amazwe amanangi.

## UCWANINGO

Ngabe uyazi yini ukuthi abathengi banamuhla yini abayidlayo? Ucwanningo IwaseMelika luhkombise ushintsho lwedayethi futhi singakuqinisa ukuthi lesimo sizolandela eNingizimu Afrika. Ngashlangothini Iwenyama ukuthengwa kwenyama yenkomo neyemvu kwehlile kodwa eyenkukhu negalikhuni iphezulu. Ukuthengwa kokotapheya kanye nomango. Ukuthengwa kobisi phecelezi *i-whole milk* kwehlile, okwelogathi kuphezulu. Kwangathi izizathu ezinkulu ezidala lolu shintsho amafektha exemplilo. Abathengi bafuna ukudla okunempilo. Yiqiniso futhi ukuthi umthengi uthenga isithelo sakhe noma amaveji ngendlela abukeka ngayo. Abathengi bakuthola kunzima kakhulu ukulungisa okudingekayo ukuthenga isibonelo, ama-aphula ambalwa amabi kodwa, abangawadla kahle.

Isibonakalo esiphathekayo sokumaketha naso siyashintsha futhi njengomuntu omakethayo kudingeka uziqaphele lezi zibonakalo. Isibonakalo esikhulu nesibalekile ukungaguquki. Izitolo nabathengi bafuna isaplayi engaguqukiyo emakethe, ngezikhathi ezinhle nangezikhathi ezimbi. Isaplayi engaguquki isisekelo ekumaketheni noma yimuphi umkhiqizo wakho.

Abathengi namuhla bafuna imikhiqizo ehlanzekile, efreshi, ewusayizi okahle, enombala ofanayo, unesimo nosayizi, othambile nongenaso isici. Ukvuna ngesikhathi esilungele ngenye yezindlela zokuqinisekisa ukubukeka komkhiqizo. Imikhiqizo emihle ithengwa

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ngentengo ephezulu. Imikhiqizo kufanele iohatue ngokukhulu ukucophelela ezigabeni zonke zokuvuna, ukugreda, uyifaka emaphaketheni nangesikhathi isithuthwa.

## IZIMO EZINTSHA

Isimo esisha esandayo phakathi kwabathengi yidimandi yezikhwama ezincane zemikhiqizo ukuze iphatheke kalula futhi igcineke. Ngokwengeza ivelu nokusebenzisa le simo ungeze ubuhle bokumaketha kwakho. Thatha isikhwama esisodwa sama-olintshi eliuw-7 kg ulidayise ngemali ephezulu asithi libiza u-R20 emakethe. Hlukanisa okuqukethwe yile sikhwama kube amaphakethe ayisikhombisa amahle abonakalisa okuphakathi ayi-1 kg futhi mhlampe ubonisa ilogo yakho. Elilodwa ulidayise ngo-R9,99. Mhlambe ungathola u-R69,93 kuno-R20. Kungcono.

Ngabe yini engaheha iso lomthengi? Zibuze wena – ngabe amaphakethe ami ayaheha nokuthi asayivikele umkhiqizo ongapphakathi? Ngabe imikhiqizo engaphakathi iwusayizi olingenayo? Uyaqinisekisa ukuthi izinga lokuvuthwa linephakethe lalo? Ngabe sikhona istikha esiqqamile ephaketheni ngalinye noma i-prepack yokuphromtha i-bhrendi?

## IKHWALITHI

Abalimi okokuqala bayohlala bangabakhqizi futhi banekhono lokusebenza ngomkhiqizo lokho kuyohlale kuwukhiye osophe inzuso. Njengomlimi wena uqobo kufanele ube nekhonthroli enku kulokhu. Kepha, ukumaketha okuzonquma inani ozolithola ngomkhiqizo wakho futhi kufanele ukumeneje ukumaketha kwakho ngekhono elisezingeni eliphakeme. Ukukhiqiza imikhiqizo eyikhwalithi kuzokwenza impilo ibe lula.

Umgomo okufanele uwusebenzise mayelana nokukhiqiza nokumaketha jikelele – ukhumbule ukuthi ungalokothi, ukhiqize ikuwantithi yomkhiqizo ngaphambi kokuthi uthole imakethe yayo. Kubaluleke kakhulu, ukuba umaketha umkhiqizo ngesikhathi isikulungele ukumaketha. Imikhiqizo eminingi inesikhathi esincane sokumakethwa.

Uma ufunu ukufunda ngokumaketha umkhiqizo wakho vakashela izindawo ezifana ne-silo, izindali zemfuyo, izimakethe zama-fresh produce, emadeleli, kanjalo kanjalo. Kubalulekile ukuba wazi ukuthi isebenza kanjani le migudu yokumaketha. Ngabe wake waluchitha usuku uhlezi nomdayisi wasemgwaqeni omsaplaya ngamaveji?

Okokugcina, qoqa ulwazi oluningi mayelana nokumaketha imikhiqizo yakho. Funda, uhambele izinsuku zabalimi, ubavakashele naba-nye abakhqizi.

Sikhulume ngezibonakalo zokumaketha jikelele. Ungakhohlwa ukuthi umkhiqizo ngamunye unezidingo zawo ezechukile mayelana nemakethe ezokhonjwa nezosetshenziswe. ■

# I-ENGELE entsha yokwenza i-top dressing

SISHO ESITHI 'TOP DRESSING NOMA SIDE DRESSING' SICHAZA UMKHUBA OWAMUIKELEKILE WOKUTHASISE-LA UMANYOLO ENSIMINI EMVA KOKUMILA KWESILIMO JIKELELE. INYUTHRIYENTI EBALULEKILE EFAKWA NGAPHEZULU KUKAMANYOLO OFAKWE EKUQALENI NOMA NGENKATHI KUHLWANYELWA KUZOKUBA YI-NITROGEN. YI-NITROGEN KUPHELA NOMA INHLANGANISELA YE-NITROGEN NAMANYE AMANYUTHRIYENTI ANGAFAKWA NGE-SIDE DRESSING NGAPHEZULU KWENHLABATHI NOMA NGE-TYNES ENHLABATHINI EPHAKATHI KWEMIGQA.

Le aplikheshini ngokuvamile ingenzeke kanye emva kokuhlwanya nokuqhuma kommbila ezindaweni ezomile nakweminye imiqqa yezimo. Ngokuvalime ukufakwa kaningi kwe-nitrogen, ngokohlobo lwe-urea encibikilisiwe, kufakwa kuzilimo zommiba ezikhqiza isivuno esikhulu ezingaphansi kwe-centre-pivot nakwamanye amasistimu okunisela.

Uma isilimo siside kakhulu ukuba umanyolo ufakwe ngogandagenta, kungadingeka 'i-top dressing' elungele uma kukhona ukukhathazeka ngogezeza namanzi kwe-nitrogen okudalwe yizimvula ezinkulu noma ukunisela. Ukwethulwa kogandaganda besimanje abaphakeme ngokwanele nezinto zokusebenza bayabavumela abalimi ukufaka umanyolo esigaben sakamuva sokukhula uma kudingekile.

Nakuba le athikhili igxile emkhiqizweni wommbila, ukufakwa kwamanyuthriyenti kungenziwa kuzo zonke izilimo zokusahlamvu ezesemiggeni uma kudingekile. Amanyuthriyenti engafakwa engamagamuza phecelezi *granular* noma ewuketshezi futhi ingaba ingxenyepfakheji yenhlabathi efakwe kumanyuthriyenti kanye ne-foliar spray emaqabungeni esitshalo ukufaka ama-micronutrients adingekayo ashodayo. Isinqumo sokwenza lokho ngokuvamile sithathwa emva kokucubungula amasampula amakhasi ezigaben ezhile zokukhula.

## UKUFAKWA KUKAMANYOLO EMMBILENI JIKELELE

Kuthathwa ngokuthi inhlabathi yakho uyihlole ngokufanele nokuthi uyenizle iprofayile yenhlabathi kuyo yonke inhlabathi ozohlwanya kuyo ummbila. Uma ubenzile ubudlelwano nomdayisi kamanyolo othembekile ungasebenza ngokuhlanganyela naye ukuze nihlolisise ukufakwa kukamanyolo owanele nama-micro nutrients ukuze ufinyelele esivunweni esiyithagethi esikhonjisa ukujula komhlaba, ukuvunda kwenhlabathi okukhona, izinsuku zokutshala, i-cultivar ongayikhetha kanye neklayimethi enamapethini emvula evamile empulazini lako.

Kubalulekile ukufaka umanyolo emhlabathini ukuze ufinyelele emandleni awo njengoba izindleko zokukhqiiza uthole imali ziqaqhubeke nokincipha.

Ungabha jetha ngokuphephile ngesamba sika-25 kg se-nitrogen nge-thani lommbila okhiqizwayo ngehektha. Lokhu kuvumela ukukhula kweitzhalo kanye nokugcwala kwezinhlamvu okudingekayo ukuze ufinyelele esivunweni osithagethile. Ngakho ke, u-3 t/h othagethi kuchaza ukuthi uzofaka i-nitrogen engengaphansi kuka-75 kg ngesikhathi utshala noma uhlukanise phakathi okutshala kanye ne-side noma i-top dressing. Isilimo esi-4 t/ha sizodinga u-100 kgs we-nitrogen/ha. Phezulu ekugcineni ithagethi yesivuno sika-8 t/ha ngakho ke sizodinga u-200 kg we-nitrogen ihektha. Ukufakwa kwavo onke la manani ngesikhathi kutshala kungadala umonakalo ngenkathi kuqhuma izithombo angeke kubekwe ne noma

Ibhawo umfama  
osathatha umhlaphansi



### 1

#### Umhlahlandela wokutshala.

Inyuthriyenti	I-Nitrogen	I-Phosphate	I-Potassium
Okusanhlamvu i-kg/ha kuphela	15	3	3,5
I-Whole plant kg/ha	27	4,5	20

kusondelane kakhulu nama-seed kernel ahlwanyelwayo. Uyelulekwa uku-thi wenze i-side noma i-top dressing kulezi zimo. Ungakhohlwa kulengxo-xo engenhla sicabanga, nge-nitrogen edingekayo ngokwe-kg/ha, hhayi isamba sengxube.

Siza ubuze umdayisi wakho kamanyolo noma umeluleki wezokukhiqiza mayelana nokufakwa kwengxube yonke kamanyolo, noma ngokwamagqamuzana phecelezi *granular* noma okuwuketshezi, okudingekayo ukuze kunqunwe ngekwethagethi yesivuno. Ziningi izingxube zikamanyolo, ezi-nye zifaka phakathi isalfa ne-lime (ukunciphisa i-esidi), emakethe.

Ngokungengaphansi i-nitrogen, i-phosphate, ne-potassium aplikheshini ngokwe-Kg/ton yembewu/ha ekhonjisa ngezansi kufanele ifakwe ngesikhathi kutshala noma ngesikhathikutshala ne-side dressing use-benzisa umhlahlandela oku-**Thebula 1**.

Ulwazi olwedlule lukhombise ukuthi izilimo eziningi ezikhombisa ukushoda nge-nitrogen empeleni zisuke zishoda nge-Sulphur. Lokhu kungabonakala ngokubheka nokuhlaziya iqabunga.

I-side dressing ene-urea kuphela noma i-UAS okuyinhlanganisa ne-urea ne-ammonium sulphate inconwy ka-khulu.

Abanye abalimi sebeqale umkhuba wokufaka ngokusakaza zonke izidingo zikamanyolo enhlabathini ngaphambi kokuhlwanya. Lokhu kungahlanganisa ne-side placing yekwengeza noma inani eliplaniwe le-nitrogen ngokuhamba kwesikhathi. Lo mkhuba uwema amathuba okuba ungakwazi ukufaka i-side dressing eliplaniwe eminyaka ngeminya enemvula eningi.

## ISIKHATHI SOKUFAKA I-SIDE NOMA I-TOP DRESSING

Ummbil uthatha cishe uhfafu we-nitrogen eyidingayo enhlabathini phakathi kwasigaba sokukhula kwasitshalo u-V8 kuya ku-VT. Lezi zigaba zingenzeke phakathi kwezinsuku ezingu-32 kuya ku-56 wezinsuku emuva kokuqhuma kwezithombo. Siza uthole noma ubheke ishadi lezigaba zokukhula uma ungakaze ulibone. Isikhathi esifanele sokufaka i-side dressing ye-nitrogen ngakho ke isikhathi esingaba u-24 kuya ku-30 wezinsuku. Uma isilimo esithole imvula enkulu emva kokumila kufanele kufakwe i-nitrogen eningi kunaleyebihleliwe masinyane uma ogandaganda nezinto zokusebenza sezingakwazi ukusebenza emasimini.

## ISIPHETHO

Ukuplana ngokucophelela isamba esikhulu sikamanyolo kakhulukazi nezidindo zenayithrojini yesilimo sakho kufanele kuqalwe ngaso ngaphambi kwesizini yokuhlwanya. Ukusebenzisa inhlanganisela yogandaganda nezinto zokufaka i-side dressing okuvele zingezakho kuzokuvulela indlela enhle eya empumelelweni. ■

# IKHANOLA

## Izinselelo okudibana nazo nenqubekela phambili

ZIMVULA ZOKUQALA ENINGIZIMU NEKAPA NASE-OVERBERG YENZA ABALIMI BAKWAZI UKULAWULA UKHULA NGEMPUMELELO LOKHO KWAHOLELA EKUBENI ISI-LIMO SIKHULE KAHLE ESIFUNDENI SONKE. KWEZINYE IZIMO, ISILIMO SASIMINYENE KAKHULU ABALIMI BESABA UKUTHI IZITSHALO ZININGI KAKHULU KUSKWE MITHA NGASINYE.

Ngeshwa lezi zimo ezinhle zalandelwa ukushisa okukhulu nokoma ngo-Julayi nango-Agasti. Ikhola eningi yayisiqhakazile ngo-Agasti into eyafinyeza kakhulu umjikelezo yokukhiqiza nokwadala ukusha kwezimbali nezagcina sezsukile (**Isithombe 1**). Izimo ezomile nezfifudumele zaqhubea nokuba khona esigabeni sokugcwala izinhlamvu lokho kwawushabalala umqondo wokuthola isivuno esiyirekhodi sekhanola eNingizimu yeKapa nase-Overberg.

I-Swartland ayizange ibe nenhlanhla njenge-Overberg neNingizimu yeKapa mayelana nemvula ekuqaleni kwesizini. Izimo ngesikhathi sokwakheka kwezithombo zaba lukhuni kodwa ngenhlanhla kwaba khona ukushenxa kwezimo zezulu kwasukela kumhla-ka 20 Juni lokho kwasenza ngcono isimo sezilimo kwaze kwafinyelela kunya werekhodi eSwartland kwaphinde futhi kwalindeleka kule sizini. Ngeshwa isivuno esiyirekhodi esasilindelekile sashabalala ngenkathi isimo sesivuvu esishisayo u- (>35°C) sihlasela izindawo eziningi kuze kufinyelele ekuhhohlokeni kwezimbali ezingu-5% kuya ku-8%. Okunye futhi, amazinga okushisa abengaphezulu kwe-avareji ngoSepthemba lokho kwasinciphisa kakhulu isivuno esasilindelekile endaweni.

Ngaphandle kwezimo ezingezinhle ngasekupheleni kwesizini, abakhiqizi bekhanola baqhubea nokumangaza ngesivuno esinaphezulu kwe-avareji kulo nyaka. Izivuno ze-avareji ka->1,8 t/ha zaqhubea nokutholakala kwezinye izingxenyenye eziseNtshonalanga neKapa ngenkathi kukhethwa *i-cultivar* elungele ngokuxhumana nemikhuba yokuphatha eyohlala yensiwa.

### IMIKHUBA YOKUMENEJA EWUKHIYE

Okufingqiwe imikhuba yokumeneja angukhiye yezimo zesomiso esinconywe ngabakhiqizi bethu abanconyiwe:

- Namathela kuma-*rates* embewu efanele (2 kg/ha kuya ku-2,5 kg/ha kuma-*cultivar* esiko nama-Clearfield kanye no-3 kg/ha kuye ku-3,5 kg/ha yama-*cultivar* e-77).
- Hlwanyela kuphela imbewu eqinisekisiwe.
- Qinisekisa ukuthi imbewu yelashwa nge-*insecticide* nange-*fungicide* (imbewu eningi eqinisekiswe iyelshwa).
- Khetha ama-*cultivar* akhula ngesikhathi esifushane.
- Shintsha i-*herbicide* programme ihambelane nesimo esivunguzayo (isibonelo: Uma ulindele izimo ezomile – aplaya i-*clethodim* phakathi kwsigaba seqabunga u-2 kuya ku-6 (hhayi ngemuva kwsigaba sesi-6 seqabunga).
- Guqlula i-*insecticide* programme ukuya ezimeni ezivamile (isibonelo: I-Pyrethroids kuyasebenza ukuxega kwayo ku- >25°C wezimo).
- Thandela esigabeni sombala ofanele wembewu. Ukulahleka kwsivuno kuba kukhulu uma usheshe wathandela okuphakisana nokuthandela esigabeni esisemuva kwsikhathi (ukungafahlazeki kwemidumba yama-*cultivar* amasha ekhanola sekungcono kakhulu).

Isamba somthamo womkhiquizo wekhanola ka-2019 wawulinganiselwa cishe ku-100 000 wamathani uma kuqhathaniswa no-109 707 wamathani

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ngo-2018. Njengamanje, i-avareji yezindawo ezintathu okulinwyu kuzo eNtshonalanga neKapa u-1,35 t/ha (e-Overberg), 1,28 t/ha (eNingizimu neKapa), u-1,51 t/ha (eSwartland) no-2,64 t/ha (maphakathi nezwe) ngokulandelana. I-avareji yesivuno sesisonke sekhanola esidiliviwe ku-Soill njengamanje simi ku-1,37 t/ha, okusho ukuthi yi-avareji yesivuno



**Ukusuka kwezimbali ngenxa yamazinga aphezulu okushisa (>28°C).**



*Ikhanola e-Overberg.*



*Ikhanola eSwartland.*



enhle kakhulu uma ucabanga ngezimo zezulu ezibucayi kakhulu zangesizini edlule.

#### **IZINSELELO NENDLELA EYA PHAMBILI**

Isimo sezulu saphinda saba yinselelo enkulu yesilimo ikhanola kulonyaka. Ikhanola ikukhombisile ukuba yisilimo ongasethemba esingamelana nezimo zesomiso singaba yinhlanganisela ye-crop rotation system nokusanhlamu.

Ukufudumala komhlaba nomthelela wakho ezimeni zezulu eziqhubeckayo ngeke kusashaywa indiza. Kubalulekile kubalimi ukuhlanganisa imikhuba yokuphatha eqhubeka isikhathi eside ukuze kunciphiswe ubungozi uma kungeenzeka kuhlasele isomiso. Ngakho ke, ezokulima okongayo kufanele zibe yingxene yesistimu yokuphatha yabo bonke abalimi bekhanola. Futhi, ngokukhetha i-cultivar yekhanola elungle ungaqhubeckela phambili nokugwema ukulahlekelwa yisivuno esidalwa yisomiso. Ubuchwephesho bembewu bukukhombisile ukuthi ngokulandela umgudu wesimo esikhona futhi nokuhubeka nokukhulula ama-cultivar akhula ngesikhathi esifushane nokukhombisile ukuthi nakuba kunjalo asasidiliva isivuno asingaphezelu kwe-avareji nakuba imvula iphansi namazinga okushisa aphezelu. ■

# UBHEKILANGA

## – ithuba elihle

ZIMBALI EZINHLE EZISAGOLIDE EZIPENDA IZINGXENYE ZEZWE LASENINGIZIMU AFRIKA NGOBUHLE OBUYIGOLIDE SAPHUZI EZINYANGENI ZASEHLOBO, ZINIKA ABALIMI ITHUBA ELIHLÉ ABAZIBANDAKANYA EZINHLELWENI ZABO ZOKUKHQIZA. LE SITSHALO SINAMAQABUNGA AMAKHULU SINHLOBONHLOBO FUTHI SINENZUO.

Ivelu ebalulekile kabhekilanga igxile kuwoyela omningi owuuketha. Izinhlamvu ziyanidezelwa kukhanywe uvoyela nomkhiqizo walapho *yoil/cake* ebalulekile enephrotheni eningi nowoyela futhi ixutshwa nokudla kwezinkomo. Ukudla kwezinkukhu nezinyoni okuningi nakho kuxutshwa



### UBUNGOZI OBUHAMBISANA NOKULIMA UBHEKILANGA

- Kudingeka ukuthi ubhekilanga ame kahle (iphophleshini kajika nelanga) ukuze akhiqize izivuno ezinhle eziphakathi kuka-1,5 t/h kuya ku-2 t/h ezifundeni ezintshonalanga zezilimo zasehlobo. Kufanele sinakekelwe kakhulu le silimo ukuze kuqinisekiswe ukuthi siqhuma ngempumelelo. Umndeni wami wabalimi ufukamela amasimu awo amasha kabhekilanga njengomama esingatha usana lwakhe olusanda kuzalwa!
- Ubhekilanga akakuthandi ukushisa okunamandla kakhulu uma esaqhuma. Izinhlamvu azizikhicizi izithombo ezinamandla aqinile ekuqaleni. Ngisho ukuqina okuncane kwesafesi yenhlabathi kungakuimbela ukuqhuma, ikakhulukazi uma imvula ine kakhulu emva kokuhwanyela nangaphambi kokuhuma. Uma kwenzeke uqweqwe kufanele kucophelelwel kakhulu ukuthilwa kwenhlabathi noqweqwe ulucubuze kungalinyazwa izithombo.
- Ngenxa yokuthi ubhekilanga unezimpande ezinde, kubalulekile ukuba wazi ukuthi nakuba le silimo sikkwazi ukusebenzisa lonke iconsi lomswakama esilitholayo (nokuyinto enhle), nakho lokho futhi kungayomisa iphrofayile yenhlabathi. Lokhu akudingekile ukuthi ukukhohlwe ngenkathi uhlela ukulandela isilimo phecelezi *i-follow-on crop* keleyo nsimu.
- Ukumunca amanzi kwesthalo sikabhekilanga kusho ukuthi uma kuna izimvula zasekwindla ngasekupheleni kwehlobo, kubaluleke kakhulu ukuthi lawo masimu uwagcine ehlakuliwe engenalo ukhula izinyingeni zasebusika ukuze wonge kakhulu umswakama wakamuva ukuze uvikele umthelela wokoma kwsilimo sikabhekilanga.



### IZINKOMBA ZOKUGCINA

- Ubhekilanga akufanele utshalwe ensimini eyodwa iħlandla elingaphuzulu kwelilodwa njalo eminyakeni emi-3 kuya kwe-4.
- Isilimo sikabhekilanga asizishiyi izimvithi eziningi ensimini emva kokuvuna – yinto okufanele uyikhumbule uma uzama ukulawula ukuguguleka kwenhlabathi.
- Ubhekilanga umila kahle enhlabathini owamunca kahle amanzi phecelezi *well drained soils* kodwa uyabekezelu naku-clay loam kuya ku-sandy loam soils.
- Okunye okuhle kakhulu ngesitshalo sikabhekilanga, sikhula ngamandla izitshalo namaqabunga kuqinile futhi kukhulu. Lokhu kusho ukuthi sincintiana kahle nokhula, kodwa kubalulekile ukulawula ukhula ekuqaleni, ukuze lungafolosi ngaphambili kukabhekilanga.



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nezinhlamvu zikabhekilanga. Izinhlamvu zikabhekilanga zisetshenzisa kakhulu njengokudla okunempilo. Njenge-snack noma kufafazwe kosaladi.

Iklayimethi efudemele neyomile ithathwa njengelungele kakhulu ekukhiqizeni ubhekilanga ngakho ke ubhekilanga usebe yisilimo esibaleke kakhulu ezifundeni eziphakathi nezisentshonalanga yezwe. Izimo ezipholie nezinomswakama sigaben i sokuvuthwa kwale silimo azilungle, ngoba lokho kungadala ukugqwala nokubola kwekhanda; kanti izimo ezishisa kakhulu zingadala *i-charcoal rot*. Inesizini yokulinywa emfushane futhi iyakwazi ukumelana nezimo ezibandayo kanye nesithwathwa ukwendlula ezinye izilimo eziningi. Ilyisitshalo esiguquka kakhulu. Singatshalwa ngasekupheleni kwehlobo – esikhathini esisemuva njengeviki lokuqala likaFebhuwari uma izimvula zifike emva kwsikhathi, njengoba bekunjalo eminyakeni embalwa edlule.

Okunye okuhle ngokutshala ubhekilanga izindleko zokuwukhiqiza ziphansi kakhulu njengoba le silimo siyakwazi ukusebenzisa amanyuthriyenti ezimvithi asenħlabathini ezisele kwizilimo ezedlule. Lokhu kudalwa ukuthi ubhekilanga unezimpande ezidepha kakhulu ezikwaziyo ukushona phansi zifune umswakama namanyuthriyenti egeleze ayozika phansi kanti ezinye izilimo azikwazi ukuwafinyelela Ngenxa yale sizathu, isitshalo ubhekilanga yisilimo esihle ongasibenzisa kusistmu yokushintshanisa izilimo nezinye izilimo ezifana nommbila nobhontshisi noma nezinye izilimo ezithela imidumba phecelezi *leguminous crops*.

### UBHEKILANGA UPHATHINA ONGADANSA KAHLÉ NOMMBILA

Ukulima ubhekilanga emva kommbila kuyasiza ekunciphiseni zonke izinkinga eziyimbangela ensimini. Emyne imihlomula yokuxuba nobhekilanga ekushinstisaneni izilimo zakho yilezi:

#### Kudingeka umswakama omncane

Isistmu yezimpande ezinde zikabhekilanga zingafinyela ku-1 m kuye ku-1,5 m ukushona phansi enhlabathini. Lokhu kusho ukuthi wona uhlome kangcono ukwendlula ezinye izilimo eziningi ngokumelana nezimo ezifudumele futhi ungadiliva umkhiqizo wesivuno umkhulu ngomshwakama omncane. Izilimo ezifana nommbila azinayo isistmu yezimpande efanayo futhi ngeke zikwazi ukufinyelele kumanayuthriyenti nomswakama ekudepheni njengoba kwenza ubhekilanga.

#### Isiza ukunqamula umjikelezo wesifo

Lokho okwaziwa nge-'qiniso lokushintshanisa' yilokho okwenzekayo uma ushintsha isilimo esilinywe ensimini okugcina sekuciphisa ukuduluisa izifo kanye nezinambuzane ezinenkani. Uma ushintsha isilimo, ama-pathogen esifo ayafa, nomjikelezo wempilo yawo iyaphazamiseka. Isibonelo yilesi ubhekilanga akufanele itshalwe ensimini eyodwa ngaphezulu kokukodwa njalo eminyakeni emithathu kuya kwemine ngenxa yokuthi ujikanelanga uzwela kakhulu kwi-Sclerotinia ukubola kwekhanda kunjalo ke nakubhntshisi isoya etheleleka kalula nge-cyst nematodes. Ukushintshanisa izilimo kunciphisa nokunqwabelana kokhula futhi.



# Okungahle kwenzeke nge-oilseed ngesizini entsha

**N** GESIZINI KA-2020 YOKUTSHALA UBHONTSHISI ISOYA NOBHEKILNGA, LE ATHIKHILI IZOCHAZA KAFUSHANE NGOKUZOKWENZEKA EKUTSHA-LENI.

## OKUNGAHLE KWENZEKE NGESOYA

Ngombiko we-Crop Estimates Committee (CEC) okungenzeka ekutsha-lweni kwesoya ka-2020 kukhombisa ukukhula ngo - 2,05% noma ngo-15 000 ha uma kuqhathaniswa nesizini edlule – ukusuka ku-730 500 ha kuye ku-745 500 ha.

Eminyakeni eyishumi edlule, umkhizo wesoya ubukade ukhula futhi uphakathi kwezilimo zasehlobo; bekuyindlela ekahe yokushintshanisa nommbila njengoba bekuqhathaniseka kahle ngokwenzuzo; ikakhulu-kazi ezindaweni ezithanda ukuhlaselwa yisomiso eNyakatho neNtshonalanga nakwezinye izingxenyi zeFreystata. Nakuba indawo yesoya beyanda ngamandla, izivuno bezilokhu ziphansi. Ukuze uthole isivuno esihile, kucatshangwa ukuthi kufanele kube nezimvula ezinhle kanye nama-cultivar asenziwe ngcono.

Kulindeleke ukuthi imali yesoya ekhokhela imfuyo nobuchwepheshes izosheshisa inzuko yesivuno esikhathini esizayo. Ukukhetha ukutshala isoya eningi ngesizini ezayo kungenzeka ngenxa yomnyakazo wenani lentengo esuka emazingeni e-export parity ngamazinga e-import parity (**Igrafu 1**). Kepha, isinqumo esikhulu sizothathwa yisimo sezulu. Isikhathi esikhulu sokutshala siqala kusukela maphakathi noNovemba; abanye abalimi bayithole imvula encane, kanti abanye bayethemba ukuthi bazyithola eyanele ngesikhathi sokutshala. Ngokusho kwabesimo sezulu i-South African Weather, kulindeleke amathuba amahle emvula eziny-ingeni ezimbili ezedlule ka-2019 kuze kuge uJanuwari ka-2020; izinto zizohamba kahle mayelana nokuphelelisa i-dimandi yakuleli.

## OKUNGAHLE KWENZEKE NGOBEKILANGA

Mayelana nembewu kabhekilanga, indawo okulindeleke ihlwanyele-lwe u-2020 ilinganiselwa ku-538 500 ha, lokhu kulinganiselwa ku-4,49% noma u-23 150 ha ngaphezulu kuka-515 350 ha ohlwanye-lwe ngesizini edlule. Amanani entengo kabhekilanga ahweba ngokusondele emazingeni e-export parity uma kuqhathaniswa nesikhathi esifanayo ngonyaka odlule (**Igrafu 2**). Lokhu kuzoba ngenye yamafe-ktha azothatha isinqumo sokuba abalimi bawutshale noma benga-wutshali ubhekilanga. ■

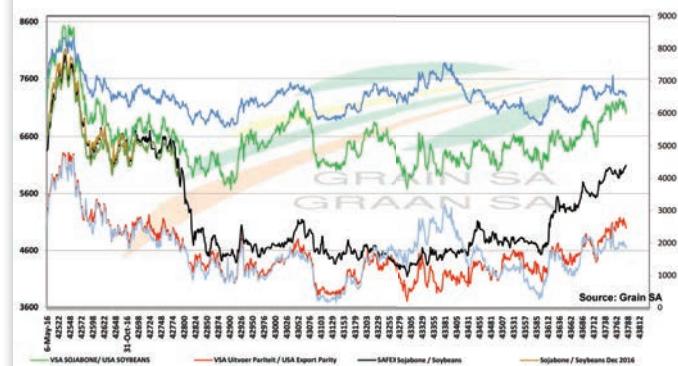
**U-Ikageng Maluleke, i-Junior Economist, ye-Grain SA. Thumela i-imayili ku-ikageng@grainsa.co.za**



1

Amanani e-parity kabhontshisi isoya.

Prices of Argentinian soybean seed delivered in Randfontein



Umthombo: i-Grain SA, 2019

2

Amanani entengo ayi-parity kabhekilanga.

Prices of EU sunflower seed delivered in Randfontein



Umthombo: i-Grain SA, 2019

# Ungahlala ungayenzi I-CROP ROTATION?

**U**KULIMA ISILIMO ESIFANAYO UNYAKA NONYAKA KUBIZWA NGOKUTHI YI-MONO-CROPPING. UKUSHINTSHANISA IZILIMO YINDELELA, YESISTIMU EHLELWAYO LAPHO KULINYWA KHONA IZILIMO EZAHLUKENE NGOKULANDELANA OKUSHINTSHA UNYAKA NONYAKA NANGESIZINI NGE-SIZINI. KWAKUYINTO EJWAELEKILE UKUTSHALA ISILIMO ESIFANAYO NJALO NGONYAKA. EZINYE ZEZIKULEZIKHUTHAZO BEKUNGABA UKUJWYEZA IMAKETHE NOMA UKWESWELA IZINTO ZOKUSEBENZA EZIFANELE ZOKULIMA IZINHLOBO EZAHLUKENE.

Kube khona olukhulu ushintsho ukusuka ku-*mono-cropping* njengoba abalimi besebeqale ukukhathazeka ngempilo yenhabathi nangokunciphisa ukwethembela kwabo kumaphrogremu omanyolo ababizayo nakumakhemikhali okulawula ukhula, izinambuzane nezifo. I-*Grain SA* iphomotha kakhulu ukushintshanisa izilimo kuPhrogremu yayo yokuthuthukisa.

Amasistimu okushintshanisa izilimo angahlukana kusukela eminykeni emibili kuya kwemine nomina iminyaka eminingi. Isithuba eside sokushintshanisa izilimo yisona esingcono kakhulu kunesikhathi esifushane. Ukulandela ukushintshanisa okufana nse unyaka nonyaka nakho akusizi ngalutho ekuhambeni kwsikhathini isiboneko ukutshala ummbila – ubhekilanga – ummbila – ubhekilanga... akukhona ukushintshanisa izilimo lokho. Into efunekayo ukulima okwahlukahlukene futhi kungenzwiwa unyaka nonyaka nomina cube yisizini ngesizini onyakeni owodwa (isiboneko ukulima kabilo) phecelezi (*double cropping*).

Ukushintshanisa izilimo akuyona ifomula kawonkewonke. Umlimi ngamunye kufanele acabange ngezdindo zakhe nezimo – imali yama-input, usayizi wepulazi, ukuba khona kwempahla yokusebenza, izimo zenhlahlo yendawo namathuba emakethe. Uplane lokushintshanisa lidinga ukubamba iqhaza emsebenzini wokulima isikhathi eside.

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## OKUHLE NGOKUSHINTSHANISA IZILIMO

### Kukhulisa ukuvunda kwenhabathi

Izilimo ngokwehlukana kwazo zidinga amanyuthriyenti ahlukene eziwathola enhlabathini lapho zimila khona futhi uhlobo ngalunye lukhipha futhi lumunce amanyuthriyenti ahlukene. Ukulima isilimo esisodwa isikhathi eside unyaka nonyaka kuholele ekuqedeni uhlobo oluthile Iwamanyuthriyenti enhlabathini ngoba leso sitshalo sihlala ngokumunca amanyuthriyenti afanayo enhlabathini. Ukushintshanisa izilimo kulungisa inkinga yokwentuleka nomina ukwanda kakhuu kwamanyuthriyenti enhlabathini futhi kusize ekuvundiseni inhlabathi. Izilimo ezahlukene zisiza ukubuyisela amanyuthriyenti asuke esencipophile ngaleso sikhathi emunca amanyuthriyenti amaningi.

### Isivuno esikhulu sesilimo

Inhlabathi enempilo iqukethe amanyuthriyenti ahlukahlukene alungele ukusetshenziswa yizitshalo futhi aqhubezele ukukhula. Uma inhlabathi ibukeka ikhiqiza ngaphansi kwalokho obekwaziwa esikhathini esedlule, abalimi bayelulekwa ukuthi bamonithe impilo yenhabathi baphinde baqalise isistimu yokushintshanisa izilimo.

### Amazinga aphezulu amanyuthriyenti enhlabathi

Inhlabathi idinga ukulolwa phecelezi *rejuvenated* nokwenziwa kabusha ngisho amaphrogremu omanyolo abanamandla abayona indlela elungi-le. Sifundile ukuthi inhlabathi inawo amandla okuzilungisa ngokwayo.



*Ukushintshanisa izilimo kungakha i-structure senhabathi futhi kunciphise nokuguguleka kwayo.*

Lokhu kwenziwa ngokutshintshanisa izilimo kanye nokuwuyeka umhlaba ungaahlwanyeli, uma umlimi engakwazi ukuphumuza insimu isizini eyo-dwa. Le akuyona into abangayenza abaningi, ngakho ke abalimi kudingeka bathande ukulima izinto ezahlukene ngenxa yempilo yenhlabathi.

Ngokutshala isilimo esithela imidumba phecelezi ama-legume isibonelo amantongomane, izinhlobo ezahlukene zezilimo zikabhontshisi uphizi/udali awugqinsi namalentili, inganda i-nitrogen (*N*) enhlabathini. I-legume yaziwa njengesitshalo esilungisa i-nitrogen okusho ukuthi iyakwazi ukudonsa i-N ku-athimosifera futhi ihambe nayo iyifake ezimpandeni phecelezi root nodules ilungise (ifake) i-nithrogen enhlabathini. Isoya ingalungisa u-200 kg we-nithrogen ihektha ngonyaka owodwa. Abalimi kufanele bafunde ukuthi yiluphi uhlobo Iwesilimo okufanele balutshale nokuthi lusiza ngani, ukue baqhubeke nokuqinisekisa ukuthi amazinga okuvunda azokwakheka emva kweiskhathi.

Ngokushintshanisa izilimo phakathi kwezinezimpande ezidephayo ezinamaqbunga amakhulu isibonelo ama-legume, ubhekilanga kuye nakulezo ezingama-species otshani isibonelo ezinezimpande ezmfushane isibonelo, ummbila, amabele, usuke usiza uku- 'mayina' amanyuthriyenti nomswakama emazingeni ahlukena okudepha/ukuhona phansi kwenhlabathini.

#### I-structure senhlabathi esingcono

Impilo ye-structure senhlabathi ibalulekile ekukhuliseni isilimo njengoba sinomthelela ekquhumeni kwembewu nangendlela ezikhula ngayo izimpande, kanye nokuhamba kalula kwamanzi, umoya namanyuthriyenti ukuze kutholwe yisitshalo. Ukushintshanisa izilimo kungasiza ekwenzeni ngcono i-sturcture senhlabathi, nokho kuya ngohlobo Iwesilimo esishintshanisiwe, ngakho ke funda ukuthi yiziphi izitshalo ezinezimpande ezidephile noma ezimfushane bese ushintshanisa ngokufanele. Lokhu kuyasiza nasekuhlukaniseni i-subsurface yenhlabathi futhi kwenze ngcono i-structure senhlabathi ngokufaka i-organic matter eningi kanye nokuniwea ikhaya lokuhlala ama-organisms ahlukena ahllala enhlabathini.

Kuphinde futhi kuhulise amathuba okuhlanganisa, amanzi agcineke nemisele yokuhambisa amanzi. Inhlabathi ene-structure esihle esenza amanzi amunceke kalula ukuze umswakama ungalahleki kuma-run – off noma uhwamuke. Amanye amanzi aphangwa yizitshalo kodwa asalayo angena phansi ekujuleni komhlaba ahiale khona, njengesistimu yedamu amanzi angaphansi komhlaba phecelezi i-groundwater reservoir system, futhi agcinelwa izikhathi zesomiso lapho kudingeka khona ukuba izitshalo zidephe zishone phansi ukuze zithole umswakama.

#### Ukunciphisa ukuguguleka kwenhlabathi

Ukuguguleka kwenhlabathi yinkinga egcwele yonke indawo. Kwenzeka uma umkhakha ongaphezulu wenhlabathi phecelezi i-top layer uphephulwa umoya noma ugeleze namanzi emva kvesiphepho semvula enkulu. Izitshalo ezahlukene zinesistimu yezimpande ezahlukene, izidingo zamanzi, izikhala

ezahlukene ziphinde zakhe imipheme yamatente angefani. Ngokulima uhlobo olulodwa lwestishalo ngokuphindelala, inhlabathi iyaguguleka kulezo zindawo ezingemboziwe izitshalo. Uma inhlabathi okusafesi uvalwe yizimpande noma izimvithi ezomile inkinga iyancipha. Izinhlobo ezahlukene zezilimo zishiya ngemuva izinsalela ezingafani isibonelo, ummbila ushiya izinhlanga eziningi lokho kuhle ekukhandeni umvundisa enhlabathini kuphinde kwenze ngcono i-structure senhlabathi futhi kukhuthaze umsebenzi we-microbial okuphilia inhlabathi. Izinsalela zesilimo nazo zibalulekile ekunciphiseni ukuqina kwehlabathi engaphezulu phecelezi surface crusting kanye ne-run off yamanzi.

#### Ukunciphisa kwamazinga ezinambuzane nezifo

Izilimo eziphuma emndenini owodwa ziba nenkinga yezifo nezinambuzane ezifanayo. Ngamanye amagama, inhlabathi yesitshalo ehlukile ngayinye yakha indawo ethile yokuhlala neguquka ibe nama-pathogens afanayo noma izinambuzane zigcwala kuzo ngokuphindaphindiwe. Ngokutshala izilimo ezifanayo nezithandayo (izinambuzane) ngokuphindelala sakha isimo esivuna izinambuzane ezifanayo njalo futhi lokho kusho ukuthi siyazimema ukuthi zibuye zizokudla! Ngokushitshanisa uhlobo Iwezitshalo ensimini, ngokunqamula ukuingiliza kwempilo yezinambuzane usuke ulawula izinambuzane nezifo ekhaya lazo elilikethile. Ukushintshanisa izilimo kwaziwa njengenyi yezindlela ezibalulekile Inhlanganisela yokuMeneja Izinambuzane phecelezi *Intergrated Pest Management* nokuyindlela enobungani kunhlalo yendawo yokumeneja izinambuzane ngenhoso yokunciphisa ukusabalala kokusebenzisa amakhemikhali kwezolimo.

#### Indlela engcono yokulawula ukhula

Ukushintshanisa izilimo yiqhinga lemvelo elaziwayo lokulawula ukhula. Izilimo ezahlukene zihlanganyela nokhula oluningi ziluminyanise zilukhiphe ensimini nasekincintisaneni kumanyuthriyenti namanye amarisosi. Umlimi uyohlala emeneja ukhula njalo ensimini yakhe, kodwa ukushintsana ngezilimo kuneqhaza ekunciphiseni ukhula oluningi.

#### INOTHI EKUQAPHELISAYO

Buncane ububi kunobuhle kunobuhle bokushintshanisa izilimo. **Kubalekile ukuplana iphogremu yekhemikhali.** Amakhemikhali ahlukena asebenza ngokwehlukile ezitshalweni ezahlukene isibonelo, izifutho ezisetshenziswa ezitshalweni ezinamaqbunga amakhulu zinomthelela omubi kuzilimo zohlobo olusatshani ezifana nommbila. Amakhemikhali anomthelela owehlukile ezinhlangeni ensimini – amanye amakhemikhala ayahlala aphile enhlabathini futhi abe nomthelela kusilimo esilandelayo. Ngenxa yale sizathu, isistimu yokushintshanisa izilimo iplanetwa isikhathi eside; futhi amakhemikhali azosetshenziswa unyaka nonyaka aplanwa ngokuxhumana nochwepheshe. Ikhona imikhiqizo ethile engasetshenziswa ngokuphephile kusitimu eplaniwe yokushintshanisa izilimo. ■



Don't say you don't have enough time. You have exactly the same number of hours per day that were given to  
Helen Keller, Pasteur, Michaelangelo, Mother Teresa,  
Leonardo Da Vinci, Thomas Jefferson, and Albert Einstein.

~ H. JACKSON BROWN JR



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### IPULA IMVULA IYATHOLAKALA FUTHI NANGALEZI ZILIMI EZLANDELAYO:

IsiZulu,  
IsiBhunu, isiNgisi, IsiTswana, IsiSuthu,  
IsiSuthu saseNyakatho, nesiXhosa.

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# Incazeloo ngezimakethe jikelele

**K**ULE ATHIKHILE SINIKA  
INCAZELO YESAPLAYI  
YOMMBILA EMHLABENI  
NAKULELI NEDIMANDI  
KA-2019/2020 UMA KU-  
QHATHANISWA NESIZINI EDLULE.

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### INCAZELO NGOKOMHLABA 2019

Isibikezeloo somkhiqizo wommbila emhlabeni sika-2019 sehlile ngenxa yesibukezo sokubukeza okwehlisiwe eMexico, kodwa umkhiqizo emhlabeni usezofinyelela ezingeni lesibili ngokwerekhodi. Ukuthengwa ngesizini ka-2019/2020 kuselokhu kundalekile kanti idimandi yokudla iyakhula ngaleso sikhathi idimandi yesondlo ilokhu iyebla ikakhulukazi e-USA.

Ezohwebo 2019/2020 kukhombise ukwehla (-1,5%) uma kuqhathaniswa nomthamo werekhodi elelule. Isitoko sokuvala emhlabeni kulendeleke ukuba sikhule cishe ngo-1,8% mhlambe kwenziwa ukuhafalwa kwesitoko sokuvala e-USA.

### INCAZELO NGOKWAKULELI 2019

Ngokwe-Crop Estimates Committee (CEC), isibikezeloo sokukhiqiza ummbila sika-2019 silinganiselwa ku-11,186 wezigidi zamathani, cishe singaphansi ngo-14% kunese-

sizini edlule sika-12,510 wezigidi zamrandi (**IThebula 2**); nendawo elinganiselwa ku-2, 301 wezigidi zamathani kanye nesilimo esilindelekile sika-4,86 t/ha. Ikakhulukazi, ummbila omhlophe usalinganiselwa ku-5,538 wezigidi zamathani nesivuna esingu-4,27 t/ha, ngaleyo nkathi isilinganiso sommbila ophuzi sona siphezulu ngo-1,9% okungu-5,648 wezigidi zamathani nesivuno esilinganiselwa ku-5,64 t/ha.

Idimandi yakuleli kulindeleke ukuba ikhule uma kuqhathaniswa neyangesizini edlule ikakhulukazi ngenxa yesilinganiso esikhulayo sommbila ophuzi wemfuyo. Ukuwheba ngokudayisela amanye amazwe, ngenxa yokukhula okubalulekile kwehle ngo-48,7% ngenxa yokwehla kakhulu kommbila ophuzi odayiselwa emanye amazwe. Isitoko sokuvala silinganiselwa ku-36%, kanye nesitoko esizayo kulindeleke ukuba sihlale isikhathi esiyinyanga nohhafu. ■

1

### Isaplayi nedimandi yommbila emhlabeni.

	2018/2019 Isilinganiso (izigidi zamathani)	2019/2020 Isibikezeloo (7 Nov) (izigidi zamathani)
Umkhiqizo	1 118,1	1 122,6
ISaplayi	1 486,5	1 479,0
Okuthengwayo	1 141,6	1 141,5
UKuwheba	165,9	161,5
Izitoko sokuvala	356,4	331,0

Umthombo: USDA, 2019

2

### Amasaplaya akuleli nedimandi yommbila.

	2018/2019 (Amathani okugcina)	2019/2020 Isibikezeloo (31 Okthoba)
Umkhiqizo (CEC)	12 510 000	10 779 107
ISaplayi	15 867 123	13 936 193
Idimandi yakuleli	10 919 979	11 064 500
Uhwebo (okuthunyelwa ngaphandle)	2 284 058	1 170 000
Isitoko sokuvala	2 663 086	1 701 693

Umthombo: NAMC, 2019