

# PULA IMVULA

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IMAGAZINI YAKWAGRAIN SA YOPHUHLISO LWABAVELISI



*Lubalulekile ulondolozo lwempilo yesityalo kwimpumelelo yokufama njengoko izixa zesityalo esifumanekayo nomga-ngatho konke oko kuxhomekeke kukhuselo lwaso.*

*Ifoto: Tersia Drotsky*

## Khusela isityalo sakho koobhubhane nakwizitshabalalisi

**I**PHAKATHI KWAMA 26% NAMA 40% ILAHLEKO YON-YAKA YEMVELISO YEZITYALO EBEZINOKUFUMANEKA EHLABATHINI NGENXA YOKHULA, IZITSHABALALISI NEZIFO. ABALIMI ABANINZI BASEBENZISA IIKHEMIKHALI UKUZE BAKHUSELE IZITYALO ZABO EKUTSHATYALALISWENI LUKHULA NAZIZITSHABALALISI – OKU KUBIZWA NGOKUTHI LUKHUSELO LWESITYALO.

Ukhuselo lwesityalo yinzululwazi nomgaqo wokubulala izifo zesityalo, ukhula nezinye izitshabalalisi ezonakalisa izityalo ezilinyiweyo. Kuqukwa zonke iinkalo ezinokuvelelwa zokulawula izitshabalalisi, izifo nokhula.

### IIKHEMIKHALI ZEZITSHABALALISI

Ngoku bamalunga nezigidi ezingama-925 abantu ehlabathini ababhuqwa yindlala. Ukuze kuncitshiswe indlala, sifanele ukwandisa ukuveliswa kokutya. Ukusetyenziswa kweekhemikhali ezifanelekileyo esinolwazi

olubanzi ngazo kuluncedo emsebenzini wabalimi. Kukho iintlobo ezahlukahlukileyo zeekhemikhali ezisetyenziswa rhoqo ekubulaleni iintlobo ezahlukahlukileyo zezitshabalalisi ezizizoyikiso kwizityalo ezikhulayo.

- **Iikhemikhali zezinambuzane** ziihemikhali ezibukhali eziya kubulala izinambuzane ezinesakhono sokonakalisa isityalo ngaphandle kokubulala uqobo lwesityalo.
- Ukuze kutshatyalaliswe ukhula ngaphandle kokubulala uqobo lwesityalo abalimi abaninzi batshiza amasimi abo **ngeekhemikhali zokhula**. Iikhemikhali zokubulala izitshabalalisi zineda abalimi ngokulima ukutya okuthe kratya entsimini engenkulwanga. Umzekelo, irayisi – eyondla malunga nesiqingatha sabantu kwiplanethi yethu – ukulinywa kwayo kwande ngaphezu kokuphindaphindwa kabini kanti sandile nesixa sengqolowa elinywayo phantse nge 160% ngokusebenzisa iikhemikhali kwinkqubo emanyaniswa yolawulo lwesityalo.

Kuthiwa izityalo zokutya zifanele ukukwazi ukukhuphisana neentlobo zokhula ezingama-30 000, iintlobo ezingama-3 000 zemibungu

## ← Khusela isityalo sakho...

kunye neentlobo ezingama-10 000 zezinambuzane ezitya izityalo. Njengoko abalimi beenkozi besazi kakuhle, izoyikiso azipheli zakuba izityalo ziwashiyile amasimi – iintsholongwane, imingundo nezizikrethi zonke zisenokubangela umonakalo koovimba.

### Izinto eziluncedo ngokusebenzisa iikhemikhali zezitshabalalisi

- Kolula ubomi bezityalo kuthintele ilahleko zasemva kokuvuna.
- Abalimi banakho ukuelisa ukutya okukhuselekileyo, okusemgangathweni ophezulu ngamaxabiso afikelekayo.
- Kunceda abalimi ukuba banikele ngokutya okuchume ngezondlo, ukutya okufumaneka ngawo onke amaxesha onyaka.
- Iziqhamo nemifuno, ezinikela ngezondlo ezisentloko, enyanisweni zinesakhono sokuxhaphaka ngakumbi futhi ziyafikeleleka.
- Iinkozo, ubisi neeprotheyini, ezinika impilo entle kuphuhliso lwabantwana, zifumaneka ngokubanzi ngenxa yeendleko ezithande ukuba phantsi noko zokuelisa oko kutya ngokunjalo nezondlo zezilwanyana.

NgokweZiko leARC leeNkoko eziNcinane zininzi izinambuzane ezinxulunyaniswa nengqolowa. 'Abanye basisebenzisela ukutya ezi sityalo kanti ukonakala kwaso kungade kwenze ukuba isivuno esifumanekayo singabi semgangathweni ophezulu. Ezinye zenzeka ngaxeshanye, ngokusebenzisa isityalo njengokutya kodwa oko kungabangeli monakalo kuqoqosho. Asizizo zonke izinambuzane ezifunyanwa engqoloweni ezinobungozi; zininzi iintshaba zendalo zeentlobontlobo zezitshabalalisi ezitsalwa ngamasimi engqolowa bubukho nezinambuzane ezizitshabalalisi ezizisebenzisa njengokutya nanjengabamkeli.' (ARC kwi-intanethi)

Kubaluleke ngokucacileyo kubalimi ukuziqhelanisa nezitshabalalisi ezixhaphake kwingingqi yabo ukuze bakwazi ukuyichonga kakuhle ingxaki ngokunjalo benze isigqibo ixesha liselihle ngamanyathelo abo afanelekileyo.

### IIKHEMIKHALI ZOMNGUNDO

Isixa kunye nomgangatho wesityalo kuxhomekeke kukhuselo. Ufundonzulu lwaseMelika luqikelele ukuba ngaphandle kweekhemikhali zomngundo izivuno zenkoliso yeziqhamo nemifuno beziya kuba nganeno ngama 50% ukuya kuma 90%. Iikhemikhali zomngundo zinciphisa ukuba sesichengeni sokusuleleka kokutya ngenxa yezidalwanana ezinobungozi kunye neetyhefu ezizenzekela ngendalo, ngokunjalo zithintela izigulo ezinxulumene nokutya. Iityhefu zee-mycotoxin ziyingxaki enobuzaza kulawulo lwesityalo sombona, ngakumbi ngexesha lokugcinwa kokutya.

Ubukhulu becala, izifo zibangelwa ziimeko ezingalunganga zemozulu ezifana nezandayondyo zeemvula, ubushushu nokufuma komoya. Ukufuma okugqithisileyo akusoloko kuyinto elungileyo; kunokukhokelela kugqabhuko lweentsholongwane zomngundo nezebaktiriya emagqabini nasezikhondweni zesityalo eziya kukhokelela kwimveliso ecuthekileyo. Ngethamsanqa, kukho iimveliso kwiindawo zeentengiso ezinokuphucula ukomelela kwezityalo futhi zizikhusele nakwizifo. Ngoko ke kubalulekile ukuziqwalasela iimpawu zokuqala ukuze uthathe amanyathelo.

Izifo zemingundo nezifo zeebaktiriya zixhaphakile kodwa zinakho ukulawuleka xa zikhawuleze zanyangwa ngokuchanekileyo. **Iikhemikhali zomngundo** ziikhemikhali zezitshabalalisi ezibulala okanye ezithintela ukukhula komngundo nezipora zazo. Zingasetyenziselwa ukutshabalalisa umngundo owonakalisa izityalo, oko kuquka iirusi, iimaleko zemingundo engephi nemitshaza. Kwakhona zisenokusetyenziselwa ukuthintela umngundo nemaleko yomngundo ongephi kwiimeko ezithile zeendawo.



*UOujan Masiu waseDriekoppen kwsithili saseSenekal uqinisekise ukuba isityalo sakhe sihlala sisempilweni.*

### IIKHEMIKHALI ZOKHULA

Ukhula siso nasiphi isityalo esikhula kwindawo esingafunekiyo kuyo – nkqu nezityalo zombona ezizikhulela zingalinywanga entsimini entsha kajongilanga zidinga ukutshatyalaliswa.

'Izityalo ezijika zibe lukhula zikhulisa ukukhula ngokukhawuleza, oko kwenze ukuba zikhuphisane nesityalo ngamanzi, ukukhanya, ngesithuba nangezondlo. Olunye ukhula lunokuphazamisa inkqubo yokuvuna kanti xa lubonakala ngexesha elingelilo elokulima lutsala ukufuma emhlabeni, ukuze xa lukhule ngokupheleleyo, lumilisele imbewu ekhulayo nebangelela iingxaki kwesityalo esilandelayo.' (ARC kwi-intanethi)

Kungangumsebenzi okruqula kakhulu ukukhetha iikhemikhali ezilungileyo ofanele ukuzisebenzisa ukuze ulutshabalalise ngendlela encomekayo ukhula emasimini. Zininzi kakhulu iimveliso ezifumaneka namhla, kanti zonke zineziphumo ezahlukahlukileyo ngokunjalo nefuthe emihlabeni yethu nakubume obusingqongileyo.

Kubaluleke kakhulu ukuba nolwazi oluphangaleleyo ngekhemikhali yokhula oyifakayo. Buza umthengisi wakho weekhemikhali imibuzo emininzi kangangoko unakho phambi kokuqalisa ngomsebenzi nokutshiza ikhemikhali. Fumanisa iqondo lokuyifaka kunye nexesha elilelona lifanelekileyo lokuyifaka. Zama ukuqonda iziphumo ezingafunekiyo ezinokubakho nangexesha lokomisa ukuze ufumane esona siphumo sincomekayo.

Imbali yesiganeko somlimi waKwaZulu-Natal ikufanele ukukhankanywa. Watyala umbona oqhelekileyo kunye nombona weRoundup Ready entsimini enye kodwa wenza impazamo yokufaka ikhemikhali yokhula yeRoundup kuyo yonke intsimi. Okungamangalisiyo kukuba,



## AMAZWI AVELA... Dr Dirk Strydom

**K**ULIMO, NGAKUMBI MALUNGA NABALIMI ABATSHA ABASAPHUHLAYO, KUNGALULA UKUBA UGQALISELO LUBE KWIINKALO EZINGALUNGANGA. INGQALELO YETHU IKOOMATSHINI NAKWIZIXHOBO ZOKUSEBENZA, KUBA SICINGA UKUBA OKO KUBONISA UKUBA SINGABALIMI ABANE MPUMELELO, KODWA INGABA KUNJALO?

Omnye wabacebisi undinike incwadi ethi, *The goal*, endinceda kulo lonke ixesha kwimisebenzi yam endiwuqeqeshelweyo ukuze ndiwuqonde kakuhle umba wokumisela imigqaliselo nokuyilawula. Umbhali, uEliyahuh Goldrat, wayengumphathi wefektri eyayisemngciphekweni wokuvalwa.

Yonke imimiso nemida esekiweyo malunga neempumezo ezincomekayo zefektri ibilungelelene kwaye ibukeka ilungile. Ifektri ibinabonke nobuchwepheshe bala maxesha kunye neerobhothi eziphantsi kwenkqubo yokwenziwa naxa bezingekanelwa kubaxumi ngelo xesha kwaye bezingafaki mali.

Omnye wabacebisi bakhe ubuze uMnu Goldratt umbuzo: 'Yintoni ogqalisele kuyo ngesityalo sakho?' UMnu Goldratt uyichaze yonke imimiso nemida ayisekileyo yakhe kwaze emva kwengxoxo ende, waphinda wabuzwa kwawona lo mbuzo kwakhona: 'Yintoni ogqalisele kuyo ngesityalo sakho?' Wafumanisa ukuba akukho malunga nayo yonke imimiso nomlinganiselo. Ugqaliselo malube kukungenisa imali, inzuzo.

Ngamanye amaxesha sigqalisela kakhulu kwimiba ethile side singaboni ukuba siphosa umgqaliselo ongowona wenene. Malunga nombakaMnu Goldratt abazange baqonde ukuba izakhono ezitsha eziphakanisiweyo enyanisweni bezifuthanisela futhi ekugqibeleni zabachithela ixesha nemali yabo.

Fumana imithombo yoncedo elungileyo ukuze ufikelele kumgqaliselo wenene. Qiniseka ukuba umisele umgqaliselo olungileyo wafama yakho. Qinisekisa ukuba konke okwenzayo, kuxhasa umgqaliselo wakho ekugqibeleni. Ukuba kukho isithintelo kufikelelo lomgqaliselo wakho, zingela ufuthaniselo olubangela oku. Qwalasela ukuba ingaba ufuthaniselo oluchongileyo lunokunxulunyaniswa nomgqaliselo wakho ngenene na.

Baninzi abalimi endibabone benephupha kodwa ngenxa yokungayilawuli ngobuchule imigqaliselo yabo, batsala nzima kwimpumezo yephupha labo. Sebenzisa icebiso likaMnu Goldratt: Chonga umgqaliselo olungileyo uze usebenzele impumezo yawo. Livavanye rhoqo inyathelo lakho malunga nomgqaliselo wakho uze uqinisekise ukuba uyawanelisa.

UMnu Goldratt uvune lukhulu ngesityalo sakhe esebenzisa oomatshini abadala kodwa wafumana iinzuzo ngenyanga enye. Wafumana esona sityalo sihle kwiinyanga ezintathu waze emva kweenyanga ezintandathu watyunjwa njengumphathi omtsha wecandelo. Nawe ungawaphumeza amaphupha afana neli emsebenzini wakho wokufama xa uyichonga futhi uyilawula imigqaliselo yakho ngokunjalo ushenxise neengxaki ezifuthaniselayo. ■

isityalo esingeyo Roundup Ready satshayeleka sonke. Intsimi yakhe yachokozeka ngesityalo esiluhlaza esingaqhelekanga, kodwa konke okunye kwakufike. Qaphela ungayenzi impazamo efana nale eneendleko ezingako! Landela ezi ngecebiso:

- Faka iikhemikhali zokhula ngemini ezolileyo ukuze umoya ungaphazamisi isitshizi sakho.
- Iikhemikhali ezininzi zineziphumo ezincomekayo ngakumbi xa zifakwe ngemini ekhanya ilanga ngokwaneleyo ukuze zifunxeke.
- Lumka! Iikhemikhali zingaba yingozi. Ziphathe ngenkathalo – yiba soloko unxiba iiglavu zokuzikhusela kunye nemarkhi ophefumlela kuyo xa uphethe iikhemikhali. ■

Ukuba unqwenela ukwazi banzi ngeenkqubo ezifanelekileyo zokutshiza izityalo zakho okanye ngesitshizi onokusisebenzisa nendlela yokutshiza ukuze zikhuseleke izityalo zakho, thetha namalungu eqela lase Grain SA aya kukunceda ngecebiso elichanekileyo.



**JENNY MATHEWS,  
INGCALI NOMHLOHLI  
WOLAWULO NOPHUHLISO**

# Zuza kangangoko kwisitshizi sakho

**A**KUKHATHALISEKI UKUBA UTHENGA UMATSHINI ONJANI, WONA UFIKA NENCWADANA YOQE-QESHO OKANYE ISIKHOKELO SOMSEBENZISI ESIFANELE UKUFUNDWA PHAMBI KOKUSEBENZISA UMATSHINI LOWO. KUBALULEKILE UKUYIQONDA INDLELA ASEBENZA NGAYO UMATSHINI NOKUZIKHUMBUZA NGOOMATSHINI BOMBANE, NGOKO KE, YIPHENGULULE INCWADANA YOQE-QESHO QHO NGONYAKA.

## PHAMBI KOKUHLANGANISA ISITSHIZI

- Hlola umphini obhexeshayo (wePTO) (Ifoto 1).
- Qwalasela impompo yoxinzelelo yesitshizi uze ukhangele iindawo ezivuzayo ioyile. Jonga indawo ephelela kuyo ioyile empompini. Kwakhona ufanele ukujonga ibala leoyile. Ukuba imhlophe okanye ngathi ilubisi oko kuthetha ukuba kukho indawo evuza amanzi empompini edinga ukulungiswa.
- Ukuba impompo yimpompo yedayaframu futhi kusetyenziswa umoya empompini qiniseka ukuba iphantsi koxinzelelo. Ukuba akunjalo, mpompa ude ufikelele kuxinzelelo olufunekayo, phinda uluqwalasele uxinzelelo emva kweyure. Ukuba akukho nguquko, faka idayaframu entsha yempompo.
- Hlola izisasazi zesitshizi, isakhelo kunye netanki yesitshizi ukhangele iintanda nerusi ukuze uzilungise ukuba kukho imfuneko (Ifoto 2).



**1** Faka iibheringi ezintsha jikelele zomphini wePTO ukuba kukho imfuneko.



**2** Grisa zonke iindawo ezhanjiswa ngakumbi iihenji zesisasazi zesitshizi.



**4** Kubalulekile ukukhangela iindawo ezivuzayo emibhojeni nakwizifakelelo logama sisebenza isitshizi naxa iivalvu zivaliwe.



**5** Faka ivalvu elawulayo entsha okanye yikhande xa ingasebenzi kakuhle.



**Hlaziya inkumbulo yakho ngendlela yokuseta isitshizi sakho qho ngonyaka.**

## EMVA KOKUHLANGANISA

- Zalisa isitshizi ngamanzi acocekileyo uze usihlambulule. Coca zonke izihluzi nemilomo ngokunjalo nemilomo esetankini. Galela amanzi ahambe kuyo yonke indawo uze ugungxule umbombho obhijelayo kunye nemilomo. Qiniseka ukuba ipateni yesitshizi iyafana malunga nayo yonke imilomo. Ukuba akunjalo phinda ucoce konke okanye faka umlomo omtsha endaweni yalowo umdala (Ifoto 3).
- Coca umhandle wesitshizi.
- Qwalasela uxinzelelo lwempompo, lawula iivalvu nepateni yesitshizi (Ifoto 4). Phinda uzalise itanki ngamanzi acocekileyo uze uhlole impompo yesitshizi. Vula izitshizi ulawule iivalvu (Ifoto 5). Hlola uxinzelelo olukhutshwa yimpompo. Seta uxinzelelo kwiqondo likratya lama 20% kunoxinzelelo lokusebenza uze uphinde uqwalasele uxinzelelo kwakhona. Ukuba uxinzelelo lwempompo luphantsi kakhulu oko kuthetha ukuba impompo idinga ukulungiswa.
- Okokugqibela, faka imilinganiselo kwisitshizi ngokwekhemikhali yokhula okanye ikhemikhali yezitshabalalisi esetyenzisiweyo. ■



**3** Emva kokugungxula imilomo, phinda uzicoce zonke izihluzi nemilomo.



**PIETMAN BOTHA, UMCEBISI OZIMILEYO KWEZOLIMO**



# Kubalulekile ukugcina iingxelo kakuhle

**I**NTSIKA EKUQALISENI NASEKUPHUHLISENI NALIPHI ISHISHINI NGEMPUMELELO, OKO KUQUKA UKUFAMA, YISETI ELUNGISELELWE KAKUHLE YEENGXELO NEEAKHAWUNTI. UKUXHOMEKEKA KWINKUMBULO KUPHELA KUNGAKHOKELELA KWIINGCINGA EZILAHLEKISAYO KUCWANGCISELO LWEKAMVA.

Uninzi lwabalimi lukhumbula iminyaka elungileyo ingezizo izivuno zenene eziqhelekileyo ezifunyenweyo nezibhalwe kwiingxelo. Oku kubonakele kuhlalutyo lweenkalo ezisentloko zomsebenzi apho abalimi bebenika khona iqondo eliphezulu abalicingela njengomyinge wezivuno zezityalo ekuqaleni kwale nkqubo. Abaninzi bamangaliseke xa bebuyela kwiingxelo zenene zangaphambili zemveliso kuba bafumanise inyaniso malunga nemiyinge ephantsi ngokunjalo neengeniso ngehektare nganye.

Ukuba ubuzazi izivuno ezifumaneka ngenene ubuya kuba nemimiselo ethile malunga nemigaqo yakho yokufama nexhomekeke kwisakhono esifana sodwa semithombo yoncedo yefama yakho. Iingxelo ezichanekileyo zikhokelela kulawulo lweshishini oluphukileyo noluncomekayo.

## INDLELA YOKUGCINA IINGXELO

Isiseko seengxelo zefama ngokubanzi singafumaneka kwiingxelo olindeleke ukuba ube nazo ukuze uzinikele ngokusesikweni malunga nerhafu. Zona ziquka amabango eVAT nawokusebenzisa idizili kunye nezinye iinkcukacha ezibaluleke kwiimveliso zeenozo nezezilwanyana. Kumashishini okufama amancinane ezi ngxelo zingagcinwa ngokuzibhala okanye ngokuzihlohla ekhompuyutheni ngokuncediswa yimiqulu yeenkqubo zekhompuyutha zobalo-mali lorhwebo okanye ngokusebenzisa iinkqubo ezandlala iinkcukacha ngokweekholam nemiqolo.

Ukuba akunazo izakhono eziyimfuneko ungafunda ngobuchule bobuchwepheshe okanye uhlawule umgcinizincwadi okanye iqumrhu lezobal mali ukuba lenze umsebenzi. Kubhetele ukuzenzela ngokwakho ube nobungqina neenkukacha ezibalulekileyo. Oku kudinga ukuqeqeshela kweminyaka emininzi.

Ungaxulumanisa iinkcukacha zobal mali nezo zenkqo yemveliso ezidingeka ekunikeni imida yengeniso epheleleyo nezibalo zenzuzo emva kokutsalwa kwemali eyinkcitho kuba zombini ezi nkqubo ziyasebenzisana.

Kukho abalimi abagcina incwadana yeziganeko zemihla ngemihla ngawo onke amaxesha apho babhala khona umba ngamnye wosuku lokufama, oko kuquka iingxowa okanye iikhilogram zeemveliso zamalungiselelo ezingqalileyo ezisetyenziswe kwintsimi nganye. Emva

kwexesha, ezo nkukacha zingafakwa kwiingxelo ezisentloko ezigcinwa eofisini yakho okanye ekhompuyutheni.

Kudingeka ukuba ugcine iingxelo ezinobugocigoci zokusetyenziswa kwedizili. Gcina iinkcukacha ezincwadini ezifanelekileyo zokuba zeziphi izithuthi, izixhobo zokusebenza noomatshini ezifakwe idizili yonke imihla. Makuqatshelwe nokusetyenziswa kwamafutha okubasele emisebenzini yasemasimini ezityalo okanye emadlweni. Ukusetyenziswa kwayo kungabalwa ngomsebenzi ngamnye ukuze kufumaneke okona kusetyenziswa kuphezulu ngehektare yefama. Oku kuya kukunceda ukuba ulawule nabuphi ubusela obenzekayo ukuze uqiniseke ukuba unedizili eyaneleyo oyigcinileyo yoomatshini bakho.

Qiniseka ukuba uyakulawula ukusetyenziswa kwemithombo yoncedo ngokunjalo neendleko zayo zeemveliso zamalungiselelo zoko konke okunxulumene nokulinywa kwezityalo kunye namanye amashishini aqhutywa ekufameni kwakho. Imiba eyingxaki efana nezivuno zezityalo ezinganelanga okanye iindleko eziphezulu ngokugqithisileyo zeemveliso zamalungiselelo inokuchongwa ize ilungiswe. Eyona nto ilungileyo kukuzihlaziya zonke iinkcukacha zisaqala ukufumaneka ngenyanga nganye. Makucwangciselwe iintlanganiso zolawulo ezihlalwa qho ngenyanga ukuze kuxoxwe ngeengxelo nangeziphumo zokulima.

## Iingxelo ezingundoqo ezifanele ukugcinwa

- Ubalomali: Impahla yexabiso, namatyala, iirisithi neendleko, iakhawunti yemali yeshishini, iakhawunti zamatyala kunye nempahla ekhoyo egciniweyo. Iakhawunti yemali yeshishini iya kuquka inxalenye yomhlaba wefama kunye nokusetyenziswa koomatshini ibandakanye nokuthotywa kwamaxabiso kunye namaxabiso angoku okufakwa kwezinto ezintsha endaweni yezindala.
- Iingxelo zokulima nezokuqokelelwa kwamanani ezinxulumene nokulinywa kwesityalo kunye namashishini okufuya.
- Uhlalutyo olubanzi lwamashishini okufama ludibanisa okungasentla okufanele ukuhlololwa imiba enamandla nenobuntununtunu kwishishini nokubala amanyathelo okuqinisekisa impumezo encomekayo. Olu hlalutyo lufanele ukwenziwa ngeshishini ngalinye ngokunjalo. ■



**RICHARD MCPHERSON,**  
UMCEBISI NGOLAWULO LOSHISHINO LOLIMO NEEPROJEKTHI

# Ingaba inakho

## UKUKWANELISA ifama?

**K**UNGANI UFAMA? UNINZI LWABALIMI LUNGAPHE-NDULA LUNGACINGISISANGA LWENJENJE 'NDIYA-KUTHANDA UKUFAMA' OKANYE 'KUYANDONWABISA UKUBA KUFUTSHANE KWINDALO' OKANYE ENYE IMPENDULO EFANA NEZI. UNGAQHUBA NGOKUWONWABELA UMSEBENZI WOKUFAMA XA IFAMA YAKHO INGA-KWAZI UKUKUNIKA UMVUZO?

Ukuze ufumane umvuzo ufanele ukuzisebenzela okanye usebenzele omnye umntu oza kukunika umvuzo. Kwinkqubo yokusebenzela umvuzo uthengisa ngezakhono zakho zobuchule, uqeqesho, imfundo, namava ukuze ufumane ingeniso. Xa usebenzela omnye umntu ufumana umvuzo wenyanga osisigxina.

Ukuba uziphethe, kwawona lo mthetho-siseko usasebenza, umahluko kukuba umvuzo wakho umiselwa nguwe. Umbuzo uthi, 'Ungangakanani umvuzo wam? Impendulo yawo ithi ungakwazi ukufumana umvuzo kuphela ukuba ishishini lakho lokufama lifaka inzuzo. Isixa somvuzo sixhomekeke kwisixa senzuzo efunyenweyo.

Kufuneka uphile ngokomvuzo owufumanayo futhi ungachithi imali engaphezu kwaleyo uyifumanayo. Ukuchitha imali engaphezu kwengeniso yakho kuya kukunyanzela ukuba uboleke imali kanti imali ebolekiweyo ifanele ukubuyiswa kwixesha elithile. Ukuba uyoyiswa kukubuyisa imalimboleko yakho, kungenzeka ugqibele ngokulahlekelwa kuko konke onako – ngoko ke ungakwazi kuhlawula naliphi ityala okanye utshone ngenxa yamatyala angahlawulekiyo.

### ULAWULO LWEMALI LUBALULEKILE

Ingaba inakho ukukwanelisa ifama yakho? Abaninzi baya kuthi, 'Ewe ifama yam inakho ukundanelisa'. Kodwa ingaba kunjalo? Ukuze ukwazi ukufumana umvuzo ifama yakho ifanele ukukwazi ukuhlawula zonke iindleko zomsebenzi wokufama kunye nomvuzo wakho. Kubalulekile ukuseka inzuzo efanele ukuyilwa lishishini, kwaye oko kungenzeka ngokuchanekileyo kuphela xa kusetyenziswa ulawulo olufanelekileyo lwemali.

Indlela echanekileyo yokulawula iimali zefama yakho kukuqala ngokuhlanganisa isicwangciso sonyaka ngamnye ozayo. Sichaze ngokweerandi neesenti esi sicwangciso ukuze sibe luhlahlomali lonyaka omtsha. Uganakho ke ngoku ukuzabela 'umvuzo' ofanele ukuhlawulwa ngenyanga nganye ngokuwuseka kwinzuzo yohlahlomali. Emva koko, phila ngokwaloo mvuzo.

Eyona ndlela ifanelekileyo yokulawula umvuzo wakho kukuhlanganisa uhlahlomali lwakho lwenyanga nganye ukuze uchithe ingeniso yakho ngokwesicwangciso/uhlahlomali lwakho kude kube ngathi usebenzela omnye umntu okunika umvuzo osisigxina.

Ekupheleni konyaka unghlanganisa iinkcazo zemali eziyimfuneko uze ufumanise inzuzo yenene efakwe ngumsebenzi wefama yakho. Ukuba inzuzo (emva kokuqulwa komvuzo osowutsaliwe) ingaphezulu kunaleyo ubuyicwangcisele, ungenza isigqibo ngento oza kuyenza ngenzuzo eyongezelekileyo. Kucetyiswa kakhulu ukuyisebenzisa ekwakheni ingxowamali egcinwayo yokukhulisa/ukuphucula ishishini lakho. Ngokulandela lo mgaqo uya kukwazi ukuphucula ishishini lakho.

Sebenzisa iikhawunti zebhanki ezahlukileyo ngenjongo yokulawula ishishini lakho neemali zobuqu bakho. Ukuba ukhetha ukungasebenzisa iikhawunti zebhanki ezimbini, kuba ngumngeni ukuzigcina zichanekile iingxelo zeendleko zefama yakho nezengeniso zoqobo lwakho.

Ngelishwa, abalimi abaninzi endaweni yokuzihlawula umvuzo nokuphila ngokomvuzo lowo, basuka bathathe iimveliso zefama – ubisi, amaqanda, inyama nemifuno – bazisebenzisele zona endaweni yokuzibona njengeniso yefama neendleko zabo. Okanye xa bethengisa ezo mveliso efama basuka basebenzise imali esesandleni abayingenise efama, kwiindleko zabo endaweni yokuzigcina ngendlela efanelekileyo iingxelo zeentengiso. Imali esesandleni itsalelwa iindleko zomntu kwiikhawunti yebhanki yeshishini nanini xa ifunwa. Konke oku kwenziwa ngaphandle kokugcinwa kweengxelo kakuhle nje xa isekhona imali ebhankini kuqhutywa ngolo hlobo. Lo ngumgaqo oyingozi ongafanelanga kulandelwa kuba imali esebhankini ayisosalathiso sokuba ingaba ifama iyayenza ngenene na inzuzo kwaye ingawanelisa umvuzo wakho.

Imfundiso yebali kukuba imali yemisebenzi yokufama kwakho ifanele ukulawulwa ngendlela efanelekileyo ukuze uphenduleke umbuzo othi: 'Ingaba ifama yam inakho na ukundanelisa?' Khumbula ukuba imali iyoyile egcina ishishini liqhuba kakuhle. ■



**MARIUS GREYLING,  
UMCEBISI OZIMELEYO  
NGOLAWULO KWEZOLIMO**

# Ukufumaneka kweemveliso zamalungiselelo namaxabiso

**U**MZANTSI AFRIKA (SA) UXHOMEKEKE EKUTHE-NGENI NGAPHANDLE UKUZE UHLANGABEZE IZIDINGO ZEEMVELISO ZAMALUNGISELELO ZALAPHA, MEKO LEYO EBKA USHISHINO LOLIMO LWALAPHA EMNGCIPHEKWE NI MALUNGA NOKUFUMANEKA KWEEMVELISO EMAZWENI ANAZO KUNYE NAMAXABISO. AMASHISHINI ASEMZANTSI AFRIKA EEMVELISO ZAMALUNGISELELO EBESOLOKO EKWAZI UKUTHINTELA UNQONGOPHALO OLUXHALABISAYO LWEEMVELISO ZAMALUNGISELELO KUNGENJALO BEKUYA KUBAKHO IINGXAKI ZOBUKHO BOKUTYA OKWANELEYO KWELI LIZWE.

Ukususela kuMatshi ngo-2020 xa kwakuphunyeywa izithintelo zeCOVID-19, kwaphazamiseka ukufumaneka kweemveliso zamalungiselelo, kwaze oko kwaba nefuthe kwixabiso. Umahluko phakathi kwentengo yezichumiso nentengiso ehlabathini ubeke uxinzelelo ekulimeni logama unyusa amaxabiso.

Iindleko zothutho, ezibalwa ngokweedola, ziphindaphindwe kabini xa kuthelekiswa nezonyaka ophelileyo. Amaxabiso eoyile anyuke kakhulu. izithintelo zeCOVID ziphazamise ukuveliswa kweemveliso ezikrwada eChina ekuqaleni kuka-2020 logama izikhukula bezizenza mandundu iimeko ngoAgasti yaze yema ngxi imveliso yeglyphosate kuba bekuse-

kho okulungiswa kwimizimveliso emikhulu emibini evelisa ama 65% emveliso yeglyphosate yaseChina.

KuFebruwari ngo-2021, bekukho obekubizwa ngokuthi 'luthintelo olukhulu' eTexas eUSA, nobelunefuthe elibi kubukho beemveliso ezikrwada nezongezelelo. Iziphazamiso kwizicwangciso zokwenziwa komsebenzi zinefuthe elikhulu kumqukuqelo weekhemikhali zolimo nakwizichumiso, umzekelo, iSuez Canal nangakumbi uthutho lwezikhongozelo zothutho ngolwandle. Kufuneka ioksijini xa kusenziwa iglyphosate; kodwa ke, kweli xesha langoku, kuqalwa ngokwabela abaguli beCOVID-19.

## AMAXABISO EHLABATHI EEKHEMIKHALI ZOLIMO

**Igrafu 1** ibonisa amaxabiso ehlabathi eekhemikhali zokhula ngokwesithako ngasinye esisebenzayo ngonyaka. Zonke iikhemikhali zokhula zinyukile ngokweedola – iglyphosate neAtrazine ziphume phambili nge 145% nange 33,8% ngokokulandelelana kwazo zilandelwe yimetolachlor nge 27%, iacetochlor nge 22% netrfluralin nge 8%. Amaxabiso malunga neerandi alandele ekhondweni lokunyuka ngaphandle kweAcetochlor netrfluralin eziye zehla noko. Nangona kunjalo, ngokweerandi, izithako azinyukanga ngamaqondo alinganayo okanye athe kratya njengoko kunokulindeleka ngenxa yenkxaso yerandi eyomelele ngokuthe chatha.

Amaxabiso eekhemikhali zezinambuzane anyukile ngaphandle kweLambda-cyhalothrin, ehle nge 1,8% ngonyaka omnye. Nangona kunjalo, ngenxa yerandi eyomeleleyo, izithako ezininzi ezisebenzayo zehle, ngaphandle kwelmidacloprid ebonise ukwanda noko kwe 7% ngonyaka.

## AMAXABISO EZICHUMISO

Amaxabiso ehlabathi ezichumiso ngokweedola kunyaka ophelileyo abonisa umzila wokunyuka obalulekileyo. Amaxabiso eammonia ande nge 188%, kuze kulandele iDAP nge 110% neurea nge 102%, ukuze iKCL ithande ukunyuka nge 43,8%.

Ngokweerandi, iammonia, inyuke yafkelela kwi 135%, kwalandela iDAP nge 71% neurea nge 64,7%, neKCL nge17%. Ukunyuka okungagqithisanga ngokweerandi kusisalathiso esichase irandi eyomeleleyo. **Igrafu 2** ibonisa amaxabiso eli lizwe angumyinge wamaxabiso ezichumiso ukususela ngo-2010. Phakathi kukaJulayi ngo-2020 noJulayi ngo-2021. Wona ahambelana namaxabiso ehlabathi, abonisa umzila wokunyuka malunga neMAP nge 73,6%, iLAN nge 46% neurea 64,8%, logama iKCL yehle nge 54,6%.

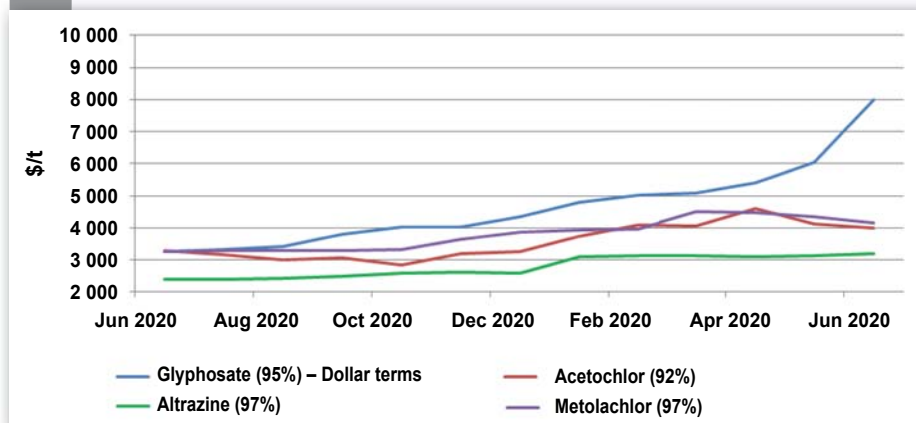
## ISIPHELO

Amaxabiso eekhemikhali zolimo nawezichumiso ebesoloko epezulu kwiinyanga ezimbalwa ezidlulileyo ngenxa yentengo ukwenzela ixesha lokutyala kwiCala elingaseNtla eHlabathini, oko kuphenjelelwe nangamaxabiso anyukileyo ezinto esizisebenzisayo. Ukuba phezulu kwamaxabiso eBrent Crude oyile kunyuse iindleko zokwenza iimveliso nezothutho. Yonke imiba yolu phuhliso ineziphumo ezibalulekileyo malunga nokufumaneka kweekhemikhali zolimo ngokunjalo nakucwangciselelo lomlimi lwexesha lokulima iinkozo zasehlotyeni. ■



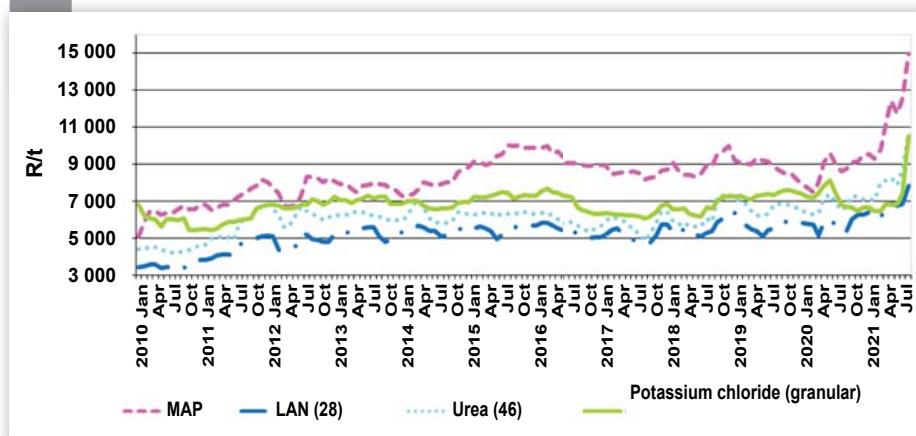
**IKAGENG MALULEKE, INGCALI YOQOQOSHO KWEZOLIMO EGRAIN SA**

### 1 Amaxabiso ehlabathi eekhemikhali zokhula ngokweedola.



Umthombo weenkukacha: Grain SA

### 2 Amaxabiso ezichumisozeli lizwe.



Umthombo weenkukacha: Grain SA

# Yenza uhlahlomali nocwangciso ngaphambili ukuze uphumelele

**S**ELIZA KUFIKA ELINYE IXESHA LOKULIMA NE-  
LOKUQOSHELISA UCWANGCISELO LOKULIMA  
IZITYALO EZILANDELAYO FUTHI UHLAHLOMALI  
LWANGO-2021/2022 LOKULINYWA KUKAJONGI-  
LANGA NEEMBOTYI ZESOYA LUFANELE UKUGQI-  
TYWA KULE NYANGA.

Izityalo ezisandul' ukuvunwa kufanele ukuba igqaliwe impumelelo okanye intsilelo yazo kunye nazo naziphi izifundo ezifundelwe ukuphucula izivuno okanye umgangatho wazo zinokusetyenziselwa ucwangciso lwangoku. Kweli nqaku siqwalasela iingqalelo ezithile zokulinywa kwesityalo ngasinye, inkcitho nganye yeemveliso zamalungiselelo kunye nohlahlomali oluqikelelwayo.

## ZEZIPHI IZITYALO EZIFANELE UKULINYWA?

Amxabiso eemboty zesoza kuMatshi ngo-2022 ngama-R7 837/ngetoni ukuze akajongilanga abe ngama-R9 050/ngetoni. Ukusebenzisa uthutho olungumahluko lweSafex kwiqondo le- R300/ngetoni kunika ixabiso lama-R8 750.

Imihlanganisela yoojongilanga ethande ukuba mitsha inezivuno ezihle kubalimi abaninzi abafumana iitoni ezi-2 ngehektare nengeniso epheleleyo ye-R17 500 ngehetare. Umyinge weetoni ezi-2,23 ngehektare yeemboty zesoza kungafuneka uvunelwe ukuba ulingane nengeniso yoojongilanga. Eli qondo lengeniso xa lithlekiswa neendleko zangoku zeemveliso zamalungiselelo libonakala linomtsalane malunga nasiphi isityalo kuzo. Bala ingeniso onokuyifumana kwiziphumo zexesha lokulima elidlulileyo ngokuqwalasela iingxelo zethuba elide.

Ukuze wolule ithuba lokulima zombini izityalo kufuneka uhlangani-sele umbona, iimboty zesoza, ujongilanga, ezinye izityalo okanye ifusi kwinkqubo yokujikeleziswa kwezityalo. Izivuno zeemboty zesoza zibadanisile abalimi kwiindawo ezithile ngenxa yezandyondyo zeemvula ebezikhona kunye namafu angqindilili abebangela ukusibekela.

Kumlimi osaqalayo ojongilanga sisityalo esilawulaka lula noko kwaye asifane sibe sisisulu selahleko yesivuno ebesinokubangelwa ziipateni ezibaxekayo zemozulu. Ukuba akuqinisekanga ngendlela yokulima iimboty zesoza ucetyiswa ukuba ulime ojongilanga endaweni yazo.

Iimboty zesoza zidinga amava okanye iingcebiso ezilungileyo kanti ugxininiso lusekulungiseni umhlaba, ukulima isityalo sakho ixesha liselihle ngakumbi ukuba usebenzisa imigaqo elungileyo yokugalela iintsho-longwane zerhizobia ezinamathelisa initrogen kwimbewu. Kucetyiswa kakhulu ukutshiza kwimbewu etyalwayo ngesixhobo sokutyala ngokusebenzisa itanki egxunye kiweyo nesixokolelwano sempompo. Kungenjalo tofa ingxowa nganye yembewu yakho emthunzini nje phambi kokutyala. Thenga isitofu sakho endaweni ethembekileyo neyaziwa kakhulu. Ukuphuma kwamaqhuhquva ancomekayo kusentloko ekufumaneni izivuno eziphezulu. Abalimi abasebenzisa imbewu yabo eshiyeke kwesityalo sangaphambili basemngciphekweni ophezulu wokufumana izivuno eziphantsi kunezo zihlelwe ngendlela efanelekileyo zaze zahlanjululwa ngumthengisi orhwebayo.

Iimboty zesoza ezivuthwa kwangoko, kwithuba eliphakathi ngobude nakwelide mazityalwe phambi kwemihla ecetyiswayo. Qiniseka ukuba unentshiyekela yembewu yoojongilanga oyigcinileyo enokutyalwa futhi iziphumo zibe zihle ngoDisemba xa iimeko zingakuvumelanga ukulinywa kweembewu zesoza ixesha liselihle.

## IZIKHOKELO NEENQALELO NGOHLAHLOMALI OLUNQAALISIWEYO LWEEMVELISO ZAMALUNGISELELO

Yiba soloko ucela icebiso lobungcali namxabiso kubathengisi malunga neemveliso ezithile zamalungiselelo ezifuneka malunga neemeko ezifumaniseke kwifama yakho kunye nezivuno ekujoliswe kuzo nezifanele ukufunyanwa.

### Ojongilanga

**Imbewu:** Tyala izityalo ezingama-40 000 ngehektare, iziqalelo zezixa ezincinanana kunye nembewu enyangwe ngekhemikhali yomngundo,

futhi kufuneka ithengwe kumrhwebi othembekileyo, ukwenzela amanani ezityalo asekuqibeleni malunga nezityalo ezingama-35 000 ngehektare (R650/ngehektare).

**Isichumiso:** Tyala ngokuhlanganisa ne 4:1:1 (30) plus zinc okanye umxube ofana nalowo okanye ngokweengcebiso malunga nesichumiso. Yiba nenitrogen eyaneleyo. Vumela malunga nama-25 kg esiquletho senitrogen ngetoni nganye yesivuno ekugqaliselwe kuso ngehektare (R1 800/ngehektare).

### likhemikhali:

- Ukutshatyalaliswa kokhula malunga nokhula oluyingxaki ethile kuwe (R1 200/ngehektare).
- Idizili: 70 yeelitha /ngehektare (R1 250/ngehektare).
- I-inshorensi yezityalo: 3,5% yengeniso (R620/ngehektare).
- Ukuvuna: Ikhontraktha yesixhobo sokuvuna sibhula okanye owakho umatshini (R750/ngehektare).
- Ukuthengisa nothutho: (R400/ngehektare).
- Ezinye iindleko: R1 000/ngehektare.

Iindleko ziphelele ngehektare yezinto ezingasentla ziya kuba ngama-R7 670 ngokunika ingqalelo kumda ongama-R9 830/ngehektare noza kufumaneka ukuze uhlangebeze iindleko zemisebenzi yakho esisigxina.

### Iimboty zesoza

**Imbewu:** Yenza isicwangciso samanani ezityalo ezingama-300 000 ngehektare. Kufuneka ube nobuncinane bezityalo ezingama-250 000 ngehektare emva kokuhluma. Thenga imbewu enyangwe ngeziqalelo zezixa ezincinanana ezifunekayo ezifana nemolybdenum kunye nezinye (R1 700/ngehektare).

**Izitofu zembewu:** Izomelezi zerhizobium nokukhula kweengcambu (R400/ngehektare).

**Isichumiso:** Tyala kunye ne-2:3:4 (30) + zinc nesulphur okanye umxube ofana nalowo njengoko iimboty zesoza zidinga ipotassium ethe kratya (R1 800/ngehektare).

### likhemikhali:

- R1 000 yedizili: R1,250/ngehektare.
- I-inshorensi yesityalo 7% yengeniso: R1 240/ngehektare.
- Ukuvuna: R1 200/ngehektare.
- Ukuthengisa nothutho: R500/ngehektare.
- Ezinye iindleko: R1 000/ngehektare.

Uqikelelo lweendleko ziphelele ngezinto ezikhankanywe ngasentla luya kuba ngama-R9 790/ngehektare, kwaye lunika umda wama-R7 710/ngehektare noza kufumaneka ukwenzela ukhuselo lweendleko ezisisigxina zokuqhuba imisebenzi.

### ISIPHELO

Yenza ufundonzulu olunobugcigoci oko kuquka imingxuma yohlolo lomhlaba, uhlalutyo lomhlaba neengcebiso ngezichumiso ngokuziseka kwisakhono sokulima ngolondolozo kwiifama zakho ukuze uyichane imithombo yoncedo neemveliso zamalungiselelo ezifanele ukusetyenziswa. Umba ngamnye wokusebenza ngemveliso ujike waba yinzululwazi kanti iimveliso zisoloko zitshintshatshintsha kwiindawo zentengiso. Ufanele usoloko usebenzisa abantu abawuqeqeshelweyo umsebenzi wabo kwintsimi nganye ukuze ufumane iingcebiso.

Nceda uqaphele ukuba ukunikelwa kweemveliso ezisisiseko zezichumiso kuye kwaphazimiseka (jonga inqaku kwiphepha lesi-7). Ngoko ke, kucetyiswa ukuba ufumanise futhi uthenge iimveliso zamalungiselelo ukwenzela inkqubo yakho yokulima izityalo msinya kangangoko kunokwenzeka. ■



**RICHARD MCPHERSON,  
UMCEBISI NGOLAWULO LOSHI-  
SHINO LOLIMO NEEPROJEKTHI**



# Ukutofa KUNGAKOMELEZA ukulinywa kwamandongomane

**A**MANDONGOMANE ASISITYALO ESIXABISEKE KAKHULU KUNGAKO ISIVUNO NOMGANGATHO WESIVUNO UFANELE UKUKHUSELWA KANGANGOKO. AKWASISITYALO ESIKWAZIYO UKUVELISA INITROGEN YASO XA IMBEWU ITOFWE NGESITOFU ESICHANEKILEYO.

Ukhula nezitshabalalisi zezityalo ziingxaki eziya kukhokelela kwizivuno ezinganeno futhi zisebenzisa ukufuma nezondlo ezisemhlabeni ukuze oko kubangele iindleko ezithe kratya kubalimi. Izivuno ezihle zamandongomane ziqala ngokulungiswa komhlaba ngendlela elungileyo nangomandlalo wezithole olungileyo. Oku kuthetha ukuba umhlaba ulungiswa ngenjongo yokutshabalalisa ukhula ngokunjalo kudityaniswa iintsalela zezityalo kunye neekhemikhali ukuze kwenziwe umandlalo wezithole ofanelekileyo ukuze imbewu intshule. Qinisekisa ukuba ukulungiswa komhlaba ngokuwupeta uqhekeza amagade azizhinto nokubumbana komhlaba okwenzeka ngaphantsi komphezulu wawo.

Umandlalo wezithole mawungabi nalukhula. Ngokunjalo mawungungelelane ukuze isixhobo sokutyala sifake imbewu kubunzulu obunqwenelekayo. Awufanelanga kuba namagade njengoko oko kuya kuphazamisa amanani ezityalo kunye nezithuba phakathi kwezityalo. Qinisekisa ukuba izithuba phakathi kwezityalo zifanelekile ukuze izityalo

zingakrwitshani xa zikhula futhi ziphuhla. Zonke ezinye iimpazamo ezenzeka xa kulinywa zinokulungiswa ngohlobo oluthile ukuba zibangela ingxaki kodwa ukuba imalunga namanani ezityalo ayinakulungiseka ngaphandle kokutyala isityalo ngokutsha.

Umhlanganisela onokutyala ngabalimi, uxhomekeke kubathengi bemveliso. Umlimi ngamnye wamandongomane unomhlanganisela ocetyiswa malunga nemveliso yakhe yokugqibela. Abalimi mabaxoxe nabathengi bamandongomane malunga nomhlanganisela ongowona ufanelekileyo ngelona xabiso lifanelekileyo. Okuqhelekileyo kukuba kubakho ikhontrakthi yexesha lokulima phakathi komlimi nomthengi.

## UKUNYANGWA KWEMBEWU YAMANDONGOMANE

Imbewu phambi kokuba ityalwe ifanele ukunyangwa ngesitofu seebhaktirya zemidumba ukuze ukunamatheliswa kwenitrogen kusebenze njengonyango lwembewu yamandongomane iMBFI Rizo-liq. Kubalulekile ukuxuba isitofu ngokweengcebiso zabathengisi kodwa okubaluleke ngakumbi kukugcina imbewu engumxube kude nemitha engqalileyo yelanga. Maze ungagcini imbewu engumxube kwixesha elide phambi kokuyityala. Funda uze wenze ufundonzulu lweleyibheli uze ulandele ezi ngecebiso.

Kwakhona le mbewu ifanele ukunyangwa ukuthintela ukufuma okungafunekiyo. Imveliso efana neCelest ingasetyenziswa. Kubalulekile ukuzidibanisa nomthengisi wekhemikhali yokhula ukuzeancedise ngeemveliso ezidingekayo nangamaqondo afanele ukugalelwa. Yakha ubudlelwane bolwahlulelwano nomthengisi weekhemikhali ukuze akuncedise ngolawulo lwesi sityalo sixabiseke kangaka.

## UFANELE UKUFUMANA LUKHULU NGESITYALO SAKHO

Ukutshatyalaliswa kweentlobo **zengca** malunga namandongomane kubaluleke kakhulu. Sebenzisa imveliso enesithako esisebenzayo seS-metolachlor esifana neMetagan Gold uyisebenzise nesityalo.

**Ukhula lwamagqabi abanzi** nalo lunokutshatyalaliswa ngekhemikhali yokhula. Imveliso ezifana neBroadstrike okanye iStrongarm zinokusetyenziswa. Ezi khemikhali zinokutshizwa nekhemikhali yokhula oluyingca nje emva kokutyala phambi kokuhluma kokhula.

Ukutshatyalaliswa **kombundane** nako kubaluleke kakhulu. Sebenzisa le mveliso nesithako seLamda-cyhalothin esifana neKarate EC.

Amandongomane afanele ukukhula kwiintsuku ezi-130 ubuncinane. Ukuba kuyenzeka ukolula ithuba lokukhula lide libe ziintsuku ezi-150 okanye nangaphezulu oko kuya kuba nefuthe elikhulu kwisivuno. Xa lisolulwa ithuba lokukhula kwamandongomane kubalulekile ukutshabalalisa naziphi **izifo zomngundo** ezifana nesamachokoza emagqabini kunye nerusi. Ziliqela iikhemikhali ezahlukahlukileyo zokubulala izitshabalalisi ezikhoyo ezikwaziyo ukubulala ezi zifo zomngundo. Zidibanise nomthengisi weekhemikhali akuncedise ngokuchonga isifo somngundo nokukucebisa ngowona mgaqo usebenzayo wokusilawula.

Kwakhona abalimi mabakhangele **imibungu esabungqukuva** njengoko le mibungu itshabalalisa ifektri yesityalo kwaye inefuthe elibi kwisivuno.

Ukuze usandise isivuno sakho, faka **isondlo samagqabi** ngokohlalutyo lwamagqabi. ■



PIETMAN BOTHA,  
UMCEBISI OZIME-  
LEYO KWEZOLIMO

# Khawuleza ubulale ukhula ukuze wandise IZIVUNO ZIKAJONGILANGA

**N**GENXA YOKWANDA KWEZIVUNO ZIKAJONGILANGA, UKWANDA KWEXABISO LIKAJONGILANGA NESIDINGO SOKUJIKELIZISWA KWEZITYALO NGAKUMBI EMASIMINI OMBONA KUPHELA, UKULINYWA KUKAJONGILANGA KUNOMTSALANE OTHE KRATYA. OKU KUKWANGUMGAQO OLUNGILEYO EKHUCULWENI KWEMPILO YOMHLABA.

Ingxaki malunga nokulinywa kwesityalo sikajongilanga ibisoloko ikukulawuleka kokhula lwamagqabi abanzi, ngakumbi xa umlimi engafuni kuhlakula kakhulu ukuze alondolozwe ukufuma komhlaba.

## UKUBULALA UKHULA LWAMAGQABI ABANZI

Inyathelo lokuqala kwidabi lokulwa ukhula lwamagqabi abanzi libe kukubhaliswa kweAlachlor, eyikhemikhali yokhula lwengca yaphambi kokuhluma ukuze kutshatyalaliswe ukhula oluninzi lweentlobo zamagqabi abanzi. Nangona kunjalo, ikhemikhali yokhula ayikwazanga ukubulala

ukhula oluxhalabisa kakhulu lwamagqabi abanzi nekunzima ukulutshabalalisa. Ukutshabalalisa ukhula ngekhemikhali yeAlachlor kuphinde kwancipha xa kusiyiwa ekupheleni kwexesha lokulima, ngoko ke, kuye kwafuneka ukuba umlimi ahlakule kanye okanye kabini ukuze agcine amasimi ecocekile.

Inyathelo elilandela ukutshatyalaliswa kokhula lwamagqabi abanzi koojongilanga libe kukubhaliswa kweflurochloridone (iRacer CS/Radical 250 EC/Rapid 250 EC neSun-Down 250 CS). Ezi khemikhali zokhula zifanele ukufakwa ngqo emva kokutyala phambi kokuhluma koojongilanga.

Ubunzulu bokutyala imbewu yoojongilanga nabo bubalulekile. Ukuba abafakwanga nzulu, izithole zoojongilanga ziya konakaliswa yikhemikhali yokhula. Iliqela imixube yealachlor kwiindawo zeentengiso ebhaliswe njengaleyo yahlukahlukileyo yeflurochloridone, umzekelo iAlachlor 480 CS, okanye iAlanex 384 EC okanye iAlanex 480 CS. lintsalela ze-Flurochloridone emhlabeni zingazonakalisa izityalo ezithile ezilandeliswayo.

Enye impumezo emangalisayo ngokutshatyalaliswa kokhula lwamagqabi abanzi koojongilanga yinkqubo yeClearfield®. Ekuqaleni



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iintlobo zikajongilanga zeClearfield® zinyangwe ngekhemikhali yokhula i-Euro-Lightning®, kodwa iye yabangela ibala elityheli nokungakhuli kakuhle kweentlobo zikajongilanga zeClearfield® kumaxesha ngamaxesha. Oku kukhokelele kuphuhliso lweentlobo zoojongilanga zeClearfield® Plus ezimelana phucukileyo nezithako ezisebenzayo zeEuro-Lightning®. Emva koko, kukhutshwe i-Euro-Lightning® Plus equlethe izivuseleli nezinyityilikiswayo ezikhaphukhaphu.

Ukuba kugalelwa ikhemikhali yokhula yeClearfield® Plus elukhuleni phakathi kwebanga lamagqabi lesibini nelesithandathu kwiintsuku ezingama-32 emva kokutyala, kufumaneka ukutshabalala kokhula okumangalisayo. Ikhemikhali yokhula yeClearfield® Plus ibulala, ubukhulu becala, ukhula lwamagqabi abanzi, kodwa iintlobo zengca nazo ziya kulawuleka phantsi kweemeko ezifaneleke kwaphela (ezifudumeleyo nezifumileyo) – ngakumbi ukuba ezo ntlobo zengca zisemfutshane kakhulu ngexesha lokugalelwa kwekhemikhali.

Seziliqela iikhemikhali zokhula ezibhalisiweyo ezifana neEuro-Lightning® eqhelekileyo, ezinjengeCaptora/Mistic nelmimox. Ngokwezobugcisa ezi khemikhali zokhula zinokusetyenziswa kwimihlanganisela yeClearfield® Plus kuba le mihlanganisela imelana kakhulu nezithako ezisebenzayo kwiikhemikhali zokhula, kodwa azibhaliswanga ngolo hlobo.

## SUMMARY

Ngokwesishwankathelo, okulandelayo kubhekiselelwa ekubulaweni kokhula koojongilanga:

- Yiba soloko uzifunda iileyibheli ezifanelekileyo zeemveliso ukuze ufumane iingcebiso.
- Ipesenti yokushinyana okuphezulu kwenqoboka nodongwe mayibe > 16%: Galela iEradicate Plus (umzekelo) kwiintsuku ezilishumi phambi kokutyala, ihlanganiswe nomhlaba. Tywina umphezulu womhlaba ukuze kugcineke igesi ye-EPTC emhlabeni kwixesha elide kangangoko.
- Xa iintlobo zengca zishinyene kakhulu galela iAlachlor, imetolachlor 960 okanye iS-metolachlor 960 ngqo emva kokutyala. Yisebenzise kuyo yonke imihlaba yepesenti yodongwe kodwa uyigalele ngokwepesenti yodongwe, Ubukhulu becala, ibulala iintlobo zengca kodwa nokhula oluthile lwamagqabi abanzi nalo luyatshabalala. Inqoboka elushica etyheli itshabalala ngocoselelo ukuya ekutshabalaleni ngendlela ekhethekileyo ngokuxhomekeka kwiimeko zobume obuyingqongileyo.
- Ukhula olushinyeneyo lwamagqabi abanzi: iFlurochloridone ifanele ukugalelwa phambi kokuhluma qha. Galela ngokwepesenti yodongwe ukususela kwi 11% yodongwe.
- Ukhula olushinyeneyo lwamagqabi abanzi nolwengca kwiintlobo eziqhelekileyo zoojongilanga. I-flurochloridone plus alachlor ukususela kwi 5% yodongwe inokugalelwa. Ifakwe phambi kokuhluma qha.
- Ukhula olushinyeneyo lwamagqabi abanzi nolwengca iClearfield® Plus kwimihlanganisela yoojongilanga. I-Metolachlor ifanele ukugalelwa kuwo onke amaqondo epesenti yodongwe – galela ngokwepesenti zodongwe zesityalo, ulandelise ngeEuro lightning® Plus kangangelitha ezi-2 ngehektare kwibanga lamagqabi lesibini ukuya kwelesithandathu lokhula ngokunjalo koojongilanga. Ifanele ukugalelwa phambi kweentsuku ezingama-32 emva kokutyala. ■

ANTHONIE BOTES,  
UMCEBISI NGEZOBUGCISSA: AECI PLANT HEALTH

## Iqela labahleli

### GRAIN SA: PRETORIA

PO Box 74087  
Lynnwood Ridge  
0040  
■ 08600 47246  
■ www.grainsa.co.za

### UMHLELI OLAWULAYO

**Sandile Ngcamphalala**  
■ 082 862 1991 ■ Iofisi: 012 943 8296  
■ sandile@grainsa.co.za

### UKUMISELWA KWABAHLELI

**Liana Stroebel**  
■ 084 264 1422 ■ Iofisi: 012 943 8285  
liana@grainsa.co.za

### UMAHLULELANE KUPAPASHO INFOWORKS MEDIA PUBLISHING

**Umhleli ongumncedisi – Louise Kunz**  
■ louise@infoworks.biz

### Inkokeli yeqela lomsebenzi – Johan Smit

■ 082 553 7806 ■ Iofisi: 018 468 2716  
■ johan@infoworks.biz

**Abapapashi – Elizma Myburgh, Joritha Hechter**



## INkqubo yeGrain SA yoPhuhliso lwabaLimi

### ABAQUQUZELELI BOPHUHLISO

**Johan Kriel**  
Free State (Ladybrand)  
■ 079 497 4294 ■ johank@grainsa.co.za

**Jerry Mthomboti**  
Mpumalanga (Nelspruit)  
■ 084 604 0549 ■ jerry@grainsa.co.za  
■ e-Ofisini: 012 943 8289 ■ Smangaliso Zimbili

**Jurie Mentz**  
Mpumalanga/KwaZulu-Natal (Louwsburg)  
■ 082 354 5749 ■ jurie@grainsa.co.za  
■ e-Ofisini: 012 943 8218

**Graeme Engelbrecht**  
KwaZulu-Natal (Dundee)  
■ 082 650 9315 ■ graeme@grainsa.co.za  
■ e-Ofisini: 012 943 8287 ■ Nkosinathi Mazibuko

**Luke Collier**  
EMpuma-Koloni (Kokstad)  
■ 083 730 9408 ■ luke@grainsa.co.za  
■ e-Ofisini: 012 943 8280 ■ Luthando Diko

**Liana Stroebel**  
ENtshona-Koloni (Paarl)  
■ 084 264 1422 ■ liana@grainsa.co.za  
■ e-Ofisini: 012 943 8285 ■ Hailey Ehrenreich

**Du Toit van der Westhuizen**  
North West (Lichtenburg)  
■ 082 877 6749 ■ dutoit@grainsa.co.za  
■ e-Ofisini: 012 943 8290 ■ Lebo Mogatlangane

**Cwayita Mpotyi**  
Mthatha  
■ 078 187 2752 ■ umthata@grainsa.co.za  
■ e-Ofisini: 012 943 8277

### IPULA IMVULA IFUMANEKA NGEELWIMI EZILANDELAYO:

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# Inkqubo eguqula ubomi babantu



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## lingcebiso zobuso-ngobuso

**INTSINGISELO** enzulu yo-kubulisa ngesiZulu 'Sawubona' isisimemo kubungqina nobukho obunzulu. Lo mbuliso usisivumelwano esiqinisekisa nesenza uphando ngobudlelwane obunokuba khona kunye nesibophelelo esikhoyo kwithuba elithile. Kwiqondo elinzulu kakhulu oku 'kubona' kubalulekile kwinkululeko yomntu.

Abalimi abasaphuhlayo abajongani nezithintelo ezikhulu kuphela okanye iimeko ezinzima kulimo kodwa basokoliswa nakukufikelela kubungcali okanye kwiinkonzo zesolulo. Ikamva lophuhliso lomlimi olunempumelelo lifuna ukuba izidingo zakhe zibonwe futhi kufunyaniswe neendlela zokuvala isikhewu phakathi kwabalimi basemaphandleni aseMzantsi Afrika nobuchwepheshe banamhla, iinkcukacha nemigaqo eyiyona ifanelekileyo. Inkqubo yaseGrain SA yoPhuhliso lwabalimi ineendlela eziliqela zokugqithiseka kwabanye ulwazi kunye neenkqubo zenkxaso ezisebhokisini yayo yezixhobo zokusebenza. Esinye sezo zixhobo **yinkxaso yomntu ngamnye enikwa abalimi.**

Amalungu eqela anikela ngenkxaso kubalimi abachongwe njengabanenkqubela nabanesakhono sokukhulisa amashishini abo okufama ukuya phambili. Injongo kukuxhobisa aba balimi kwithuba elithile lexesha ngolwazi nokubangqonga ngothungelwano lwenkxaso abafanele ukuziqhelanisa nalo ngethuba lenkqubo yobuso-ngobuso. La maxesha eendibano anokuqhutywa efama kulo lonke ixesha lokulima nasezintlanganisweni ezikhethelwe oko, apho umlimi aziswa abanye abalimi nabadlali-zindima. Olu hlobo lokunika iingcebiso lomeleza abalimi ngokubonisa isakhono esifanelekileyo futhi sinegalelo kubukho bokutya okwaneleyo ekhaya nasesizweni.



*UGarth Winde wasePepsiCo ungene njengelungu leqela leGrain SA waze wazidibanisa ngotyebile lobuso-ngobuso noJeremiah Mathebula ngethuba lokuhlola intsimi kwifama yakhe, nokwalilungu lesigqeba esilawulayo seGrain SA.*

## Utyelelo kwindawo yaseLouwsburg

**UJURIE** Mentz Mentz ngumququzeleli waseGrain SA wophuhliso kwiofisi yaseLouwsburg. Ulimo ngumsebenzi obalulekileyo kuqoqosho kule ndawo kwaye lunefuthe kwimpilo nakubukho bokutya okwaneleyo kumakhaya azizigidi zabahlali basemaphandleni. Isakhono solimo siphezulu kwaye nengingqi leyo ikulungele ukulinywa kombona, iimbotyi zesoya neembotyi ezomileyo, kodwa ngokubanzi izivuno ezifunyanwayo zinganeno kwisakhono sengingqi.

Iofisi ilawula amaqela ofundonzulu, uqeqesho nokunikelwa kweingcebiso kubalimi baseLouwsburg nabaseVryheid KwaZulu-Natal ukuya emantla eBronkhorstspuit naseMiddelburg eMpumalanga. Iintlanganisano zamaqela ofundonzulu zihlangabeza wonke umba wocwangciselelo, ukuthenga, ukuvelisa iimveliso nolawulo lwamashishini ukuya kutsho ekuvuneni.

Abalimi bayazi ukuba kukutsala umnxeba kuphela okubahlukanisa nelizwi leengcebiso okanye isandla sancedo nokuba oko kuthetha ukuhlangabeza inkxalabo ethile ngegqabi elingenampilo okanye ngendlela yokugcina ukutya okanye eyokuthengisa imveliso.



*USifiso Michael Mnisi ebebambe intlanganisano noJurie Mentz usaqala lo nyaka malunga nokulinganiswa kwamasimi kunye nokwenziwa kocwangciselelo lwexesha elitsha lokulima.*



*UJohan Kriel, umququzeleli wophuhliso, nomcebisi uJacques Roux batyelele umlimi uTom Jacobs eFree State ukuba alandele ngeliso ukuvunwa kweembotyi zesoya.*



*Abafana bakwaDlamini banqwenela ukulima umbona okokuqala ngoko ke, batsalele umnxeba kwiofisi yaseLouwsburg baze bacela icebiso kuJurie ngendlela yokuqalisa umsebenzi.* ■