

PULA IMVULA

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INCWADI YEGRAIN SA YABALIMI ABASAKHULAYO



Amantongomane kufanele avunwe uma imidumba yawo evuthiwe isifinyelela ku-75%. Kule sithombe indlela yokubeka ingwaba isetshenziswa lapho izitshalo sezikhululekile enhlabathini ukuba zikhwiwe ngezandla.

Ukwethulwa kwesisekelo **SOKUKHIQIZA AMANTONGOMANE**

AMANTONGOMANE ASETSHENZISWA KAKHULU UKUDLIWA ABANTU NJENGEZINHLAVU EZILU-HLAZA, U-PEANUT BUTTER, UWOLELA NEMINYE IMIKHIQIZO UKULIMA AMANTONGOMANE NGO-KUFANELE KUNGANIKA ABATHENGI ISILIMO ESINOMSOCO OPHEZULU KANYE NEMALI ENINGI ENGENAYO.

Kuleli, amantongomane alinywa ehlolo ezifundi ezhithola imvula ehlolo ezingaphansi kkwezimo zokunisa nezomile. Ekuqaleni, abalimi abancane phecelezi *smallholder farmers* ikakhulukazi ezingxenyeni ezisenyakatho nezisempumalanga nezwe eNingizimu Afrika bazikhiqizela amantongomane badle; futhi namanje asengumthombo obalulekile wormsoco ezingxenyeni ezisenyakatho yeKwazulu-Natal naseMpumalanga.

Labo balimi basanda kungena emakethe engenisa inzuso phecelezi *commercial market* ngoxhaso abalunikezwu abaphrosesayo ukwenyusa inani labakhiqizi nokugcina imboni yamantongomane iqhubekela phambi-

li eNingizimu Afrika. Lokhu sekuvule amathuba amanangi amabhizinisi amasha abakhiqizi abasafufusa nabangenisa inzuso, lapho izinhlangothi zozimbili zikwazi ukwenza ubudelwano obuqinile bokusebenziana ukujinisekisa ukuthi imboni yamantongomane iqhubeka isikhathi eside.

Iphrogremu yokutshala amantongomane yaqalwa e-Potchefstroom (ARC-GC) ngawo-1960, uhlolo Iwama-cultivar abizwa nge-Spanish-bunch esakhiqizwa khona (**fig 1**).

UMLANDO

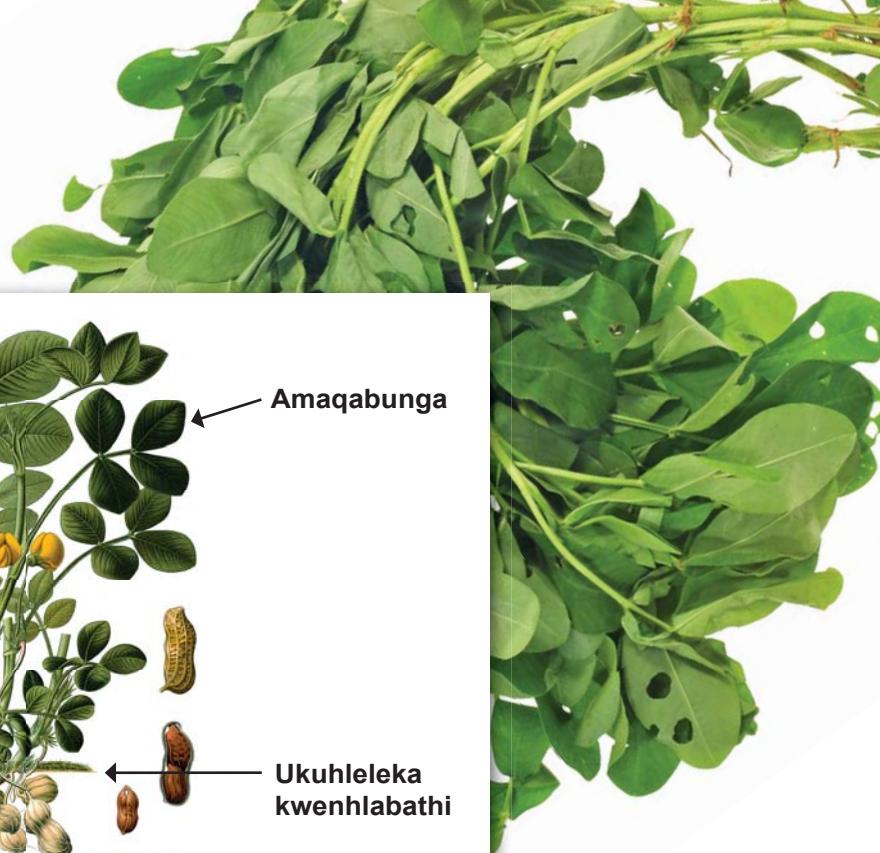
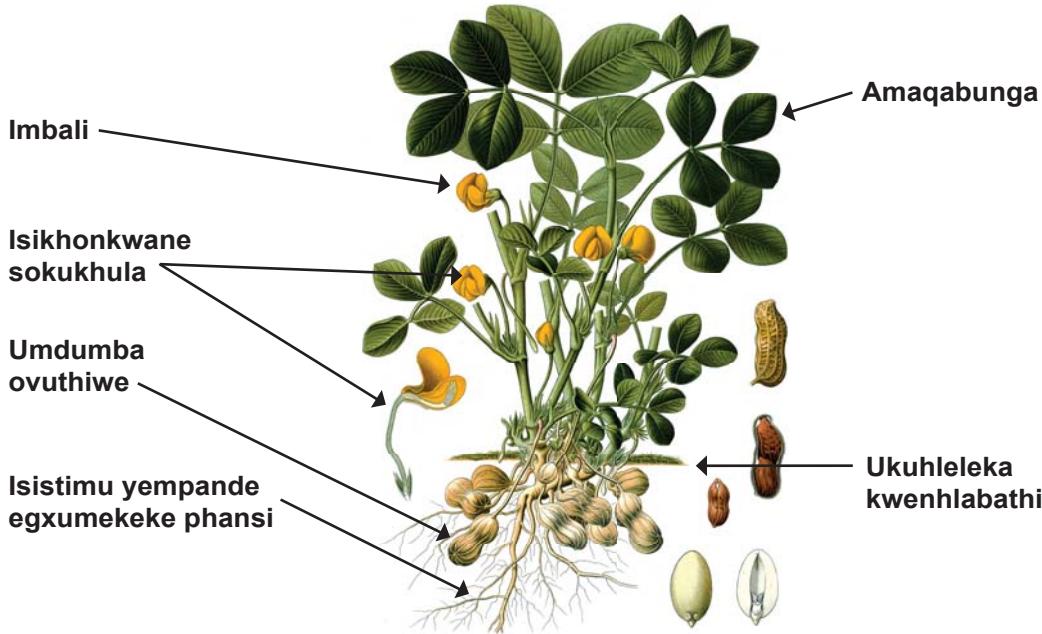
Amantongomane (*Arachis hypogaea L.*) ahlukene amaqembu amabili, okuthiwa iqembu le-Virginia and ne-Spanish-Valencia. Amantongomane adabuka eNingizimu Melika. Kungcono ukuthi sithi umcebo wamantongomane eNingizimu Afrika wethulwa amaPhuthukezi ayehamba olwandle nababehweba ngezigqili phecelezi Portuguese ngendlela ye-cultivar Natal-Common.

Ukubaluleka kwamantongomane emakethe yaseNingizimu Afrika

Ukwethulwa kwesisekelo...

1

Umfanekiso wesitshalo samantongomane.



ukucizelela i-value yawo ezweni aphinde abe umkhiqizo othunyelwa emazweni angaphandle ikakhulukazi ngokwemigomo yamandla awo okungenisa imali eyintela kusukela ngo-1967. U-Van der Merwe (1981) wachaza ukuthi amafama aphambilini aseNatal enza amathrayeli okuqala amantongomane ngo-1853, lapho uhlolo Iwe-cultivar ekhona kuleli ne-Virginia eyayithandwa amafama yahlolwa eNingizimu Afrika.

Uhlolo Iwe-Spanish lusifanele kakhulu isimo saseNingizimu Afrika ngoba luhambisana nokuguquguquka kwasimo sendawo, lukhombisa ukumelana nezifo, lusekela umjikelezo wokulinywa isikhathi esifushane futhi ikhombisa ukwentula i-dormancy yezinhlavu ezifreshi, njengokuncoma kuka-Hammans ngo-1994.

UKUQALA UMSEBENZI WAKHO WOKULIMA AMANTONGOMANE

Inhlabathi

Ngokuvamile inhlabathi ekhethelwa ukukhiqiza amantongomane kungcono ubeyisihlabathi phecelezi sandy. Amantongomane anesistimu enezimpande ezikhula kahle ezigxumekekile, okuya ngohlolo Iwenhlabathi, zingafinyelela ekujulen kuka-1,8 amamitha. Inhlabathi enamandla okukhiqiza amantongomane ngakho ijule kakhulu (1 500 mm kuya ku-2 000 mm), emunca amanzi ngokufanele, inhlabathi ebomvu ne/noma inhlabathi ephuzi enengxenye ecoysisakele kakhulu efana ne-sandy loam kuya ku-sandy texture kwi-topsoil. I-pH (KCl) kufanele ibe phakathi kuka-5,5 kuye ku-7.

Ukulungisa umberde wembewu kubaluleke kakhulu. Umbhede wembewu kufanele ube nomswakama, ulingane futhi uqine uvumele ukuthi kube nokuthintana kahle phakathi kwezinhlaya zenhlabathi nembewu ukuze imile kahle nezimpande zikhule kahle. Inhlabathi ebaluleke kakhulu yokulima amantongomane yi-Avalon, Bainsvlei, Clovelly, Hutton ne-Glencoe. Izivimbelo eziphathetkayo okufaka phakathi inhlabathi engadephile, i-hardpans noma imikhakha eminyene kufanele uwemeke ngoba ivimbela ukukhula kwezimpande ezigxumeke phansi.

Imbewu iyashesa ukumila uma inhlabathi iswakeme namazinga okushisa (engaphezulu kuka-18°C). Imbewu etshalwe enhlabathini engadephile (ukujula kwano kungaphansi kuka-50mm) kuzotshalwa enhlabathini efudumele. Imbewu etshalwe enhlabathini engadephile kakhulu

izokoma masinyane futhi ukumila kungaba phansi, lokho kungadala ukuthi izithombo zingaqini kahle.

Amanzi

Izindawo ezingapansi kwezimo ezondliwa yimvula okungalinywa kuzo amantongomane ngempumelelo, azandile, ngoba umswakama yife-ktha ebaluleke kakhulu ekukhiqizeni amantongomane. Uhlolo Iwe-Spanish kunconye kulezi zindawo ezilandelayo, njengoba isebezisa amanzi kakhulu (WUE) ngenxa yomkhuba wayo wokuhula ime iqonde umkhuba kanye nokulinywa isizini emfushane. Imvula engu-500 mm kuya ku-700 mm ngonyaka esifundeni yizimo eziphezulu kakhulu ekukhiqizweni kwamantongomane.

Akfanele kutshalwe ngaphandle kwemvula eysisilinganiso sika-50 mm okungenani esikhathini esifushane. Inqubo yokumila kwembe-wu ingasheshiswa ngokuwatshala enhlabathini eswakeme nefudumele.

Amazinga okushisa

Amantongomane adabuka ezindaweni ezi-tropical eNingizimu Melika futhi ngakho ke kudingeka isikhathi sokukhula okungenani esiyizinsuku eziyi-160 ezingenalo iqwa namazinga okushisa aphakeme. Gwema ukutshala enhlabathini eyomile nokunisela ngesikhathi kumakhaza noma utshale enhlabathini ebandayo, emanzi. Ukutshala enhlabathini eku-15°C edephe ngo-5 cm ukuqinisekisa ukukhula masinyane nokukhiqiza izithombo ezinempilo.

Ireythi yokumila ka-95% kungaphumelela phakathi kuka-18°C kuya ku-30°C. Ukuhula kwezitshalo okufanele kwenzeka kahle phakathi kuka-20°C kuya ku-35°C, ngeleso sikhathi amazinga okushisa asuku aku-27°C akulungele kakhulu ukuqhakaza kwezimbali. Ukufudumala kosuku u-29°C kanti ebusuku ukubanda kube u-23°C amazinga ashisayo amahle okukhandeka kwemidumba.

Umanyolo

Amantongomane awancikile kakhulu kumnyolo wenayithrojini ngoba njengesitshalo esithela imidumba phecelezi legume, ingakwazi ukuchsnda i-atmospheric nitrogen ngokusizwa yibhaktheriya yempande



eguqula i-atmospheric N₂ ibe yi-NO⁻³ i-(nitrification). Ama-nodule enayi-throjini esebezayano anombala onobuphinki bese kuthi lawo angasebenzi aluhlaza uma ehlukanisiwe. Emasimini asemakhaya, kodwa izinga le-phosphorous ngokuvamile iphansi futhi kufanele ifakwe ngokwengeziwe.

Njengezinye izilimo, amantongomane adinga amazinga anele epho-theziyamu ukuze akhule ngokwejwayelekile futhi athuthuke. Ezenzweni ezingajwayelekile lapho izinga lephotheziyamu liphansi, ingachibiyelwa kufinyelele ku-10 kg ha⁻¹. Ikhalsiyamu, ngakolunye uhlangothi, yi-elementi ebalulekile ekukhqiqizweni kwamantongomane futhi kubalulekile ekukhuleni kwembewu. Ukufakwa ngokweqile kwephotheziyamu enhlabathini kungadala ukwentuleka kwekhalsiyamu. Enhlabathini eyentula ikhalsiyamu, amantongomane azokhiqiza isivuno esinekhwalithi ephansi ye-kernel.

Ukwensiwa komkhiqizo

Ukutshala kuqala ngesikhathi kunomswakama owanele enhlabathini nangemuva kokulungiswa ngokufanele kombhede wembewu. Ukwenza ugqinsi olukahle lokutshala, kutshalwa u-50 kg wenani lembewu ehektheni.

Eziqeshini ezincane zenhlabathi, izikhala zembewu kulayini zingaqhelelana ngo-8 cm bese kuthi izikhala phakathi kolayini kufanele zibe ku-90 cm. Ezindaweni ezinemvula eningi izikhala phakathi kolayini zi-fanele zibe u-75 cm.

Imbewu kufanele ibekwe ekujuleni okungu-5 cm futhi kufanele kufake nengcindezi kancane kulayini wokutshala ukuze ukhulise ukuthintana phakathi kwenhlabathi nembewu. Uma kusetshenziswe ama-implimenti okutshala, imbewu nomanyolo kuyazingenela ngokwako. Uma kutshalwe ngesandla, umanyolo ungendlalwa ngesandla futhi yonke indawo emuva kokutshalwa.

Uhlobo lukamanyolo lunqunywa ngokuhlaiziywa kwenhlabathi. Kubalekile ukufaka i-pre-emergence herbicide, lapho kunganonywa khona inhlanganisela ye-Strongarm plus Alachlor. UKulawulwa kwezilokazane nezinambuzane ngokuvamile akuyona into ekhathaza kakhulu. Kodwa, uma kukhona ukuhlaseleka okuka-10% kufanele kuthathwe isinyatheko. Ngokuvamile kuhlasela njalo i-aphids, i-rust ne-leaf spot uma kuqhathaniswa nezinye izilokazane ezikhathazayo.

Ukunqoba i-aphids, i-insecticide ene-mercaptothion, i-pirimicarb noma i-thiomefon njengesithako esisebezayano ingasetshenziswa. UKulawula i-rust ne-leaf spot, i-fungicides enazithako ezinamandla ezifana ne-carbendazim noma i-tebuconazole kungasetshenziswa. Uknakekela amasimu amantongomane isizini yonke kubalulekile.

Ukvuna kuthatha izinsuku ezingu-150 emuva kokutshala. Sonke isthalo siyakhishwa enhlabathini futhi kungapakishwa kube yindunduma noma ku-windrows kuye ekomeni. Emva kwamaviki amabili neziqungasuswa, namagobolondo kungaqlala ukunakekelwa kufanele kwe-nzive ngesikhathi se-sokuqala kwamagobolondo ukuvikela ukonakala kwama-kernels kuzoba nonphumela wokwehla kwemali engenayo uma kuqhathaniswa ne-whole (choice grade) kernels. Kufanele kunakekelwe ngesikhathi senqubo yokukhula kwamagobolondo ukuze kuvikeleke umonakalo wama-kernel. Ukuqhephuka nokonakala kwama-kernels. Isivuno samantongomane siphakathi kuka-1,5 t ha⁻¹ kuya ku- 4 t ha⁻¹.

U-DR WIKUS SNIJMAN,
IMENENJA YEPHROJEKTHI:
YE-GROUNDNUT BREEDER
SEED, I-ARC-GRAIN CROPS



IZWI LIKA... Graeme Engelbrecht

E-UNITED STATES PHECELEZI EMELIKA NGO-KWE-AVAREJI UBUDALA BABALIMI IMINYAKA ENGAMA-57,5, E-UNITED KINGDOM PHECELEZI ENGILANDI IMINYAKA YABO INGAMA-59 KANTI E-KENYA KHONA BESEMINYAKENI ENGAMA-60. UMBUZO UKUTHI UBAWI OZOKHIQIZA UKUDLAESIKHATHINI ESIZAYO, UKUYAKHATHAZA EMHLABENI WONKE JIKELELE.

Uhlelo lokulandelanisa phecelezi *succession planning* akukhona ukupha nje kodwa ukuqinisekisa impumelelo esikhathini esizayo. Iningi labalimi abayingxeny yePhrogrammu yokuThuthukiswa kwabaLimi abasekho bancane. Ngizokusho ngesibindi ukuthi iningi labakhiqizi abangenisa inuzo ezimbonini eziningi balandela ithrendi efanayo.

Kodwa, into engikhathazayo engicabanga ukuthi idinga ukuxoxwa iseduze nasekhaya – mhlawumbe ingasetshenziswa ngqo, futhi ingasiza, ekuqedeni izinginga zokukhqiqizwa kokudla esikhathini esizayo. Lokhu ukudlulisela amakhono afundiwe, ukuqondisa ulwazi lenhbathi yethu ngayinye kanye ne-microclimate umlimi ngamunye abhekana nayo.

Ulwazi nokuthi kukhqiqizwa kanjani ukudla kungafundwa ezikoleni, emakolishi, amanyuvesi nangezifundo ezaahlukene, kodwa ulwazi oluso-ndele lomlimi ngamunye aluzuzile izifundo ezinzima azifundile ngokuhamba kjesikhathi. Lolu lwazi lubaluleke kakhulu. Ngezikhathi ze-minimal profit margins, lolu lwazi lungakha noma lubulale abakhiqizi abamasha.

Bekunzima kakhulu, umsebenzi ogobisa iqolo ukuphindsela amapulazi nomnhala esimeni okusa njengamane. Ngeqiniso kuzobaluleka ukuba lo mjikelezo awuqali nje ngokungena okulandelayo emhlabeni wezolimo.

'Umcebo wesizukulwane' yitemu eliphilayo nelisetshenziswa budedengu, noma okuvamise ukuphonswa emkhakheni wezepolitiki – okuvamile okungaba yizaba, mhlawumbe njengokusolwa, kodwa akuvamile ukuba yinhoso, futhi kufanele kube njalo. Lokhu akuvamile ukuba ukudlulisela umcebo wezimali osukela esizukulwane uya kwestiene. Ngokuamile kuba ukudlulisela kwethuba lolwazi esizukulwaneni esilandelayo ukuze siphumelele kalula kanye nokwenza ngcono nokukhula kulokho osekuvele kuphumelelwue kukho.

Iminyaka yobudala babalimi emhlabeni jikele, kanye nakuphrogemu yethu, kuzokhombisa ukuthi usengcupheni yokukwazi ukuletha lokho – umcebo wesizukulwane – kuya kwabalandelayo ababambe iqhaza. Kumayelana nomlimi ngamunye ukuqinisekisa ukuthi lokho okuzuwi, kungalahleki. Lokhu ngeke benzilwe khona futhi ngeke kulawulwe, kumemezelwe noma kuphoqwe. Kufanele kube ngokukhetha ngokucophelela noma ukuthola umhlahlandela womuntu ukuqhubele nolokho okuqalile – nengokulandelana kwempumelelo.

UMLIMI WONYAKA: Hlangana nabamafayineli

NHLOSO ENKULU YOMNCINTISWANO WONYAKA WE-GRAIN SA AKUKHO MAYELANA NOKUWINA, KODWA KUMAYELANA NOKUBUNGASA UKUFUNDA, UKUKHULA, UKUTHUTHUKA NOKUSEBENZA KANZIMA KWABALIMI ABAYIZINKULUNGWANE ABAYINGXENYE YEPHROGREMU YOKUTHUTHUKISWA KWABALIMI.

Emuva kokuba amajaji esewabhekile amabhizinisi okulima abaqokiwe, la balimi abalandelayo baqokelwa kowamafayineli umncintiswano ka-2022:

i-NEW ERA COMMERCIAL FARMER (NGAPHEZULU KWAMATHANI ANGAMA-250)

U-Lucky Khumalo (71) namadodana akhe angamawele alima ummbila nobhontshisi isoya e- Liesbethdale, epulazini elingu-672-amahektha esifundeni i-Dannhauser KwaZulu-Natal. Nakuba aba nentshisekelo kwezolimo esemcane kakhulu, umsebenzi wakhe wokulima waze wawulontsha ngo-1978, ngesikhathi ethenga ugandaganda wokuqala ukulimela ukwenza inzuzo – futhi akaphindanga wabheka emuva. Wezwa ngokuthi i-value engangezwa yi-Grain SA emabhizinisi akho okulima kusukela kongasekho uRemember Mthethwa nowajoyina inhlangoano ngo-2015. NgePhrogrammu yokuThuthukisa abaLimi kwa-Grain SA leli thimba likababa namadodana akhe selithuthuke kakhulu kwezolimo. Iphupho labo ukhulisa ibhizinisi labo nokuba abalimi abangenisa inzuzo.



Ngenkathi uMapidinyana Phillip Manoto (46) esafunda isikole, uyise wamfundisa ukushayela ugandaganda ukuze ezomsiza emasimini uma kufanele balime futhi batshale. Emuva kokuphotula ezifundo zakhe esikhungweni ezikhungweni eziphakeme, ngo-2001 wajoyina uyise epulazini. Imisebenzi yabo yokulima yaphumelela kakhulu emhlabeni olinywa ngokuhlanganyela baze bathenga ipulazi i-Lusthof endaweni ebizwa ngeLichtenburg eNyakatho Ntshonalanga ngo-2005 ngemalimboleko abayithatha eLand Bank. Njengamanje sebenalo itayitela, ngengoba sebeqidile ukulibhadala ipulazi. Lo mlimi onogqozi wajoyina i-Grain Sango-2016 futhi ufuna ukukhulisa ibhizinisi lakhe lezolimo ngulelkuanisa esikhathini esizayo.



UMzewakhe Clifford Mthimkulu (33) uphase kwezosizo oluphuthumayo futhi waphinde wasebenza njengomdayisi wamasistimu amalamu. Ngo-2008 wajoyina uyise epulazini, i-Astoria, esifundeni i-Senekal eFreystata wase eba yilokho ayehlezi efuna ukuba yikhona – umlimi. Waphekeleze-la uyise emhlanganweni wakhe wokuqala we-study group ngo-Juni 2014. Futhi manje usethame-la izifundo zokuqeqesha njalo. Ku-Clifford kubalulekile ukuthi izwe lizimele ngokwalo. Ukholelwa ekutheni njengomlimi osemncane angabamba elikhulu iqhaza ngokukhiqiza ukudla noqinisekisa ukuthi isizukulwane esincane siyakwazi ukuthatha umsebenzi ubuwenzeni abadala nokuthi babe abakhqiizi abaphumelelayo.



i-POTENTIAL NEW ERA FARMER (U-51 HA KUYA KU- 249 AMATHANI)



UBheki Isaac Mabuza (49) waqala ukutshala ummbila ngo-2007, kodwa isilimo asizange sibe nesivuno esinenzuwo Wajoyina ama-study group e-Grain SA ngo 2014 futhi kusukela lapho amakhono akhe okulima athuthuka, kwaba nomphumela omuhle esivunweni sakhe. Umlimi unenhliyo enhle endaweni yase-Lydenburg eMpumalanga usiza amalungu omphakathi adinga ukudla nempuphu yommbila. Impumelelo enkulu kaBheki kuze kube manje kube ukuphuma isithathu emkhakheni wokukhiqizwa kommbila empumalanga nesifunda saseNkangala phecelezi Highveld emncintisanenka-2021 Grain SA Grow for Gold National Yield Competition. Wancintisana nabakhqiizi abakhethiweyo abalimela ukwenza inzuzo eNingizimu Afrika.



UTamsanqa Raphael Masuku (74) waqala ukulima ngo-2021, ngesikhathi ethenga ipulazi i-Drift Farm eduze kwase-Dundee Kwa-Zulu-Natal. Kodwa, uthando lwakhe kwezolimo lwabonakala ese-mncane kakhulu, njengoba umndeni wakhe wawulimela ukubeka ukudla etafuleni. UTamsanqa wajoyina i-Grain SA ngo 2019 futhi kusukela lapho usethuthuke kakhu-lu ezilimeni zakhe ngokuthuthuka kwezindlela ezifanele kwezolimo. Unethemba lokukhulisa amahektha akhe ommbila nobhontshisi isoya. Unethemba lokukhulisa amahektha ommbila nesoya yakhe aphinde engeze izinkomo emhlambini wakhe ngesikhathi esizayo. Uphupha ngokuba umlimi omkhulu owenza inzuvo esikhathini esizayo, ungathenga ogandaganda abakhulu ukwedlula laba anabo njengamanje.



Njengentombazane esencane **uMampho Adeline Thaele (44)** wayesevele ephupha ngokuba umlimi. Ngo-2014 iphupho lakhe lafezekwa ngesikhathi ipulazi i-Perlot eliseduze kweHennenman eFreystata lithengwa yi-umNyango wezokuThuthukiswa kwezindawo ezisemaKhaya noKwabiwa koMhlaba (DRDLR) futhi inkontileka yokuliqasha yanikezwa umndeni wakwaThaele. Umalume wakhe owayengamele leli pulazi, wanikeza umsebenzi wokumeneja ipulazi. Wethamela umhlangano wakhe wokuqala we-study group ngomhl ka-30 Julayi 2015, wethamela umhlangano wakhe wokuqala futhi wePhrogrammu yoku-Thuthukiswa kwabaLimi kwaGrain SA wathuthuka waba umlimi. Unethemba lokuthi le phrogrammu izodlondlobala futhi iqhubeku nokweseka abalimi abasha.



I-SMALLHOLDER FARMER (1 HA KUYA KU- 50 HA)

U-TD Hlatswayo (41) wakhula esiza ubaba wakhe epulazini. Wayesebenza efemini ebaza ifenisha yasehhovisi ngaphambi kokuba ajoyine i-African Cables, okushintsha amakhebulu ezimayini eNingizimu Afrika yonkana. Ngasekupheleni kuka-2015, wathenga izimbuzi endalini e-Ermelo waphinda wezwange-Grain SA. Wajoyina i-study group eDaggakraal eduze kwase-Amersfoort ngo-2016 futhi manje usengusihlalo weBethamoya study group endaweni. U-TD ulima eMooipoort esifundeni sase-Amersfoort eMpumalanga futhi unephupho lokuba ngelinje ilanga abe nesiqephu esikhulu somhlaba wokulima. Uzothanda ukubona intsha yaseNingizimu Afrika ilangazelela kakhulu ulimo.



uJoseph Tuelo Mokaleng (54) wakhulela endaweni yasemakhaya, lapho babephila khona ngolimo. Omkhulu nogogo bakhe nabazali bakhe bonke babezimbandakanya kwezokulima. Ayikho enye indawo ake wasebenza kuyo ngaphandle komoya ofreshi wasepulazini. Ngomsebenzi wasepulazini lona ufile kumafayineli waseMorena Village eduze kwaseDelareyville eNyakatho neNtshonalanga usebe nogqozi kwezoLimo. Waba umlimi ngo-1983 futhi wajoyina i-Grain SA ngo-2006 emva kokupothula izifundo zakhe zokuqequesha. Angathanda ukuba nepulazi lakhe. Nakuba eke wahlushwa ukuntshontshelwa nezimo zezulu eziyinselelo, wayezimisele ukuba ngumlimi ongcono.

Eminyakeni elinganiselwa kwengama-20 **uDinabantu Lawrence Nqubuka (68)** wasebenza njengomsebenzi ojwayelekile eGoli ngaphambi kokulandela ubizo lwakhe lokulima ngokuphelele. Ukufunda kabanzi ngokulima, wajoyina amasosayethi amancane ambalwa ngaphambi kokuthi afumane i-Grain SA. Kwaba yingesikhathi eba yilungu leGrain SA ngo-2016 lapho aqala khona ukwenza ezolimo lokho okungamsiza ukwenza ngcono umsebenzi wakhe wokulima esifundeni i-Estcourt KwaZulu-Natal. Unethemba lokuthi uzophila isikhathi eside ukuze akhulise ibhizinisi lakhe futhi atshale amahektha angapezulu kwayi-100.



I-SUBSISTENCE FARMER (1 HA KUYA KU-10 HA)

uLindiwe Maureen Kubheka (56) waqala ukuba nogqozi ekulimeni esa-seskoleni samabanga aphansi, njengoba umndeni wakhe wawutshala amaveji endaweni encane engemuva egcekeni. Emuva kokujoyina i-Grain SA ngo-2014 njengelungu ngokuphelele, wahlabeka umxhwele kakhulu e-Doornkop Study Group kangangokuba waqala ukulimela ukungenisa inzuvo esiqeshini sakhe somhlaba esiyihetha eli-1 esifundeni sase-Dundee KwaZulu Natal. Unethemba lokukhula emkhakheni wezolimo futhi athole isiqephu esikhulu somhlaba, ukuze atshale kakhulu ngaphezulu kwalokhu akutshalayo manje. Angathanda ukukwazi ukudala imisebenzi yamalungu omphakathi osepulazini lakhe ngelinje ilanga.



Umlimi wonyaka...

UKhuphukile Vinah Mazibuko (62) usebenza emNyaweni wezeMpilo njengomnakekeli womphakathi. Waqala ukwazi ngokubaluleka kwezolimo ngo-1984, ebona ukuthi iminden iilima kanjani endaweni ahlala kuyo izitshalele futhi ilime ukudla ngembewu. Kusokela ajoyina i-Grain SA ngo-2015, akasatshaleli ukubeka ukudla etafuleni kodwa ulimela uku-thola inzuzo. UKhuphukile, osuka esifundeni sase-Escourt KwaZulu-Natal, amaphupho okunweba insimu yakhe yommbila ibe yinkulu kakhulu futhi atshale esikali esikhulu. Uzothanda ukulima ngezinkukhu.



U-Hezekia Ndinda Mkhonza (66) ulima eHereford East esifundeni i-Albert Luthuli eduze kwase-Ermelo eMpumalanga. Emuva kokusebenza eSwazini iminyaka eminingi, wabuya lapha eNingizimu Afrika ngo-2009 futhi waqala ingade encane emuva kwendlu ekhaya lakhe, lapho watshala imifino/amaveji nommbila. Wazimisela kakhulu emuva kokujo-yina i-Grain SA ngo-2016. Ngokusizwa yiPhrogremu yokuThuthukisa abaLimi, isivuno sakhe sakhula sisuka emasakeni ayisihlanu noma ayisithupha ommbila ihektha kuya kumathani ayisithupha ihektha ngalinye. Ufuna ukukhula njengomlimi futhi unethemba lokuthi uyothenga ugandaganda nama-implimenti ngo-lunye usuku.



A man stands in a maize field, wearing a dark long-sleeved shirt and blue trousers. He is positioned in front of a dense stand of maize plants. The caption describes his involvement with i-Grain SA and various government programs for smallholder farmers.



ABAKHETHIWE



UMoniwa Badge Skosana
eWitbank, Mpumalanga (New Era Commercial farmer).



U-Go Serema eLichtenburg,
eNyakatho neNtshonala (i-Smallholder farmer).

Lama-subsistence farmers akhethwa:



U-Winile Patience Hlongwane
eLoskop, KwaZulu-Natal.



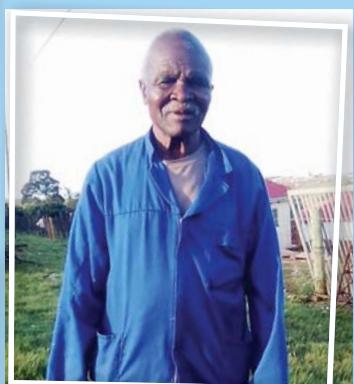
U-Abraham Mankge
eLydenburg, eMpumalanga.



UNontuthuzelo Mbele e-Mount Ayliff, eMpumalanga neKapa.



UZanele Nkosi eNewcastle,
KwaZulu-Natal. ■



ITHIMBA LABAHLELI BEPULA IMVULA.

Ukulawula ukhula lwasebusika ngempumelelo

KUBALULEKILE

UKHULA LONYAKA LWASEBUSIKA UKHULA OLU-NGAQHUMA EKWINDLA FUTHI LUPHILE UBUSIKA BONKE. LOLU KHULA LUYAQHUBEKA NOKUVUTHWA, LUQHAKAZE IZIMBALI LUBE NEZINHLAVU ENTWASAHLOBO FUTHI LUFE EHLOBO.

I-Fleabane (*Conyza spp*) ne-ragwort (*Senecio consanquineus*) yisibonelo sokhula olunamaqabunga amakhulu njalo ngonyaka. Ukhula lwasebusika luguqukela kahle ezimeni zasebusika futhi ngalokho lungasebenzisa amanzi amaningi empilweni yazo. Entwasahlobo, imvula incane. Ukhula lwasebusika liyaqhubeka nokomisa inhlabathi kangangokuba ukuqhuma kwembewu yesilimo kuyabambezeleka.

Ezindaweni lapho ukhula lwasebusika luminyene khona, isilimo sikhula kancane kakhulu noma singamili nhlobo. Ukhula lonyaka lwasebusika lungaphinde lubeyikhaya lezifo ezaahlukene njenge- *Sclerotinia sclerotiorum* (*sclerotinia stalk rot* kabhontshisi isoya), izinambuzane ezifana ne-cutworm ne-nematodes anomthelela omubi esivunweni sesilimo sasehlobo esilandelayo.

UKULAWULA UKHULA LWASEBUSIKA

Izibonakalo jikelele okufanele uzikhumbule ngokulawula ukhula lwasebusika lonyaka a:-

- Ukhula ukhula, mhlawumbe ukuluhlakula noma ngekhemikhali, kufanele kwensiwe ngaso sonke isikhathi ukuze kuthi ukhula lungaqhakazi futhi luthele izithelo.
- Ukhula uluyinkinga kufanele luhlonzwe ngaphambi kokuthi kukhethwe i-herbicide, ngoba kuyaphela iyawazi ukulawula ukhula olusohlwini kulebuli yayo.
- Kubalulekile ukuqaphela noma ngabe yimaphi ama-ifekthi ezinsala (isikhathi lapho ama-herbicide azobe esasebenza enhlabathini) e-herbicide ekhethiwe ukuvikela umonakalo esitshalweni esilandelayo, ngisho noma kutshalwe ezinyangeni eziningi emva kokufakwa kamma-herbicide. Isibonelo esijwayelekile umthelela we-atrazine-based

herbicide njenge-atrazine, ngokujwayelekile assetshenzisa ukulawula ukhula olunamaqabunga abanzi emmbileni. Lolu hlobo lwame-herbicide luhlala izinyanga eziningi enhlabathini futhi angalimaza izilimo ezinamaqabunga abanzi ezilandelayo ezifana nobhontshisi isoya.

- Ngaphambi koku-aplaya ama-herbicide, i-knapsack i-tractor boom sprayer kufanele ikhalibhrethwe ukuqinisekisa i-reythi yokufakwa okuqonde ngqo.
- Ama-herbicides kungcono afakwe okhuleni luseluncane (olungaphansi kuka-10 cm ukuya phezulu noma ngokwemiyalezo yelebuli), ngoba ilahlekelwa ngokunye ukusebenza kwayo ezitshalweni ezindala. Ukhula oludala luzodinga ukuthi kufakwe kakhulu ngokwerythi, futhi noma kunjalo izinga lokulawula ngeke lusebenze njalo.

Ukulawulwa kwe-fleabane ne-ragwort

Ukulawula i-fleabane (ufiga 1) ne-ragwort (Ufika 2) kungaphumelela ngokuhlakula kancane nokufakwa kwe-herbicide ezitshalweni ezisencane, nezincane kakhulu ngasekupheleni kukaMashi noma ngasekuqaleni kuka-Ephrili. Kodwa, njengoba izilimo zasehlobo zisakhona emasimini uma lolukhula luqala ukuqhuma, ukusetshenzisa kwe-herbicide kungaba yinkinga.

Ukfakwa kwama-herbicides phakathikolayini (kuqondiswe) kuse-tshenziswe i-knapsack sprayers ezindaweni ezincane nomai-drop arms ezindaweni ezinkulu kungenze ka ngalesi sikhathi. Abakhiqizi abanezi-futho zogandaganda eziwayelekile bangawkazi ukufaka la-ma-herbicide emva kokuvuna, ngesikhathi sezikwazi ukungena emasimini.

I-ragwort ingasabalala emva kokuvuna ne-systemic herbicide efana ne-glyphosate noma i-contact herbicide efana ne-paraquat. Ngokuba khona kwe-fleabane, ukulawula okusebenza kakhulu kuphumelele jikelele ngengxube ka-glyphosate combine ne-herbicide yesibili ngolunye uhlelo lwsinyathelo esifana ne-2,4-D noma i-atrazine, kuye ngokulandeleta ngesilimo sasehlobo (umthelela wezinsalela).

Abalimi bavumelekile ukuba baxhumane no-Dr Craven ku-018 299 6346 uma befuna iminininingwane.

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I-fleabane plants isayezithombo ne-rosette phase (A) nokuqhakaza (B).



B



10



Izinyathelo ezibalulekile ZOKUGCINA INHLABATHI INEMPILO

UKWENZA AMASAMPULI ENHLABATHI YISISEKELO SEMPUMELELO KOMANYOLO BONKE NEZINCOMO ZOMCAKO PHECELEZI *LIME* ZOKUKHULISA ISIVUNO NENZUZO. UMA AMANDLA ENHLABATHI, AMASAMPULI ENHLABATHI NOKUHLAZI-YWA YILEBU IMIPHUMELA YAMANYUTHRIYANTI IKHONA, KUNGANQUNYWA NGEPROGREMU YOMCAKO OMUHLE NOMA UMANYOLO.

IZINDELA

Uma amasampula enhlabathi angensiwanga ngokufanele, imiphumela ngeke ikhombise isimo esisenhlabathini futhi ngenxa yalokho isivuno esikhulu ngeke sitholakale. Ngenxa yebhande lokufaka umanyolo nangenxa yokuthi izindlela zokulima ngokuvamile azivuhlanganisi kahle umanyolo enhlabathini, amanyuthriyanti ngokuvamile awasabalaliseki ngokufanele enhlabathini. Ngakho ke kubalulekile ukuba amasampuli enhlabathi athathwe ngendlela efanele.

Nazi izibonakalo ezibalulekile okufanele ucabange ngazo:

- Ukwethembeka kohlaziwa kwenhlabathi kuncike ekutheni amasampuli enhlabathi athathwe kanjani ensimini.
- Uma insimu iqukethe inhlabathi engaphezulu kohlobo olulodwa, isampuli yenhlabathi kufanele ithathwe ohlotsheni ngalunye lwenhlabathi ngoba amandla esivuno engahlukana phakathi kwezinhlollo ezahlukene zenhlabathi.
- Kufanene kuthathwe amasampuli *e-topsoil* ne-subsoil. Amasampuli *e-topsoil* athathwa kusukela ku- 0 mm kuye ku-150 mm, kanye na-masampuli *e-subsoil* kusukela ku-150 mm kuye ku-600 mm.
- Oyedwa owenza isampula ku-50 ha onke kufanele kwanele, kodwa amanye amasampuli angcono.
- Isampuli ngayinye kufanele iqukathe okungenani ama-subsamples angama-20 athathwa nomaphi iyuniti yonke ensimini yonke noma ohlotsheni lwenhlabathi.
- Ama-subsamples kufanele ahlanganiswe ngokufanele ngaphambi kokuba kuthathwe isampuli efanele.
- Asikho isidingo sokuthatha ama-subsample angaphezulu kwamahlu-nu kuyuniti yenhlabathi ngayinye uma uma kuthathwa amasapuli *e-subsoils*.
- Esimweni se-precision farming, amasampuli athathwa kwi-grid esivele ihlonziwe phecelezi predetermined grid – inhlabathi efanayo yisampuli eyodwa ku-5 ha ngayinye izobe yanele, kodwa ngokwejwayelekile kudingeka isampuli eyodwa noma amabili ngehektha.
- Ukwenza amasampuli ngobuhlakan yinqubo lapho izindawo ezithile

zikhethelwe ukwenza amasampuli ukuze kuhlaziwe izinkinga ezithile. Imifanekiso yeSatellite, idatha yokuqapha isivuno kanye nokuhlola bukhoma kuyasetshenziswa ukhlonza amasayithi okufanele kuthathwe kuwo amasampuli.

Izindlela ezahlukene zamasampuli enhlabathi zishicilelw kwi-Agriculture Research Council's (ARC's) Uhlahlandlela ngemininingwane yoMbilu phecelezi i-Maize Information Guide. Zama ukuluthola lolushicilelo, njengo luqukethe ulwazi olukhulu.

Xhumana nobadayisi bakho bakamanyolo ngaphambi kokuba uthathe amasampuli futhi uqinisekise ngale ndlela.

UKUTHATHA AMASAPULI ENHLABATHI

Amasampuli enhlabathi kufanele athathwe emva kokuvuna nangaphambi kokuba kwensiwe umsebenzi wokuqala wokuthila. Amasampuli amelete u-300 mm ibhande elibanzi kolayini bezilimo kuhlaziwa ngokwehlukile, phakathi kolayini njendoba kuchaziwe ebuden bukalayini kuka-900 mm **kuFiga-1**.

Isamba, kuthathwa amasampuli ayisihlanu – amathathu uphambane nolayini bese amasampuli amabiliuthathwe phakathi kolayini.

Ama-subsample kolayini abaphambanayo (■): Amasampuli amathathu athathwa ngokuphambana kukalayini ukuze ibhande likamanyolo nalo lignene kusampuli. Amasampuli amathathu amelete ibhande lika-±300 mm.

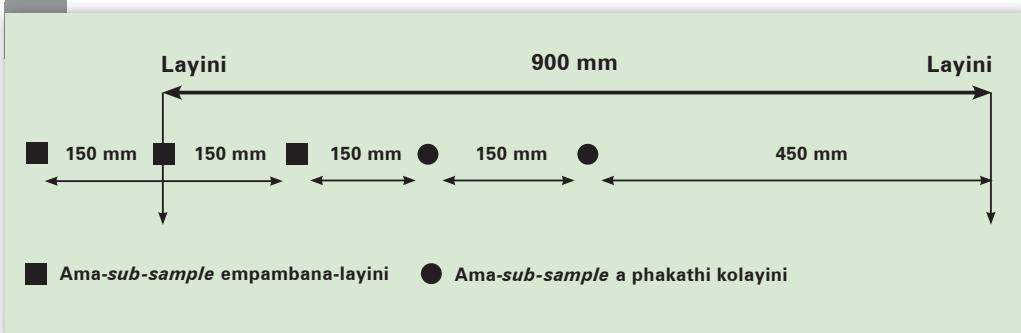
Phakathi kolayini be-subsamples (●): Amasampuli amabili athathwe kulendawo. Isampuli eyodwa yenhlabathi ithathwe ngqo phakathi kolayini ababili (u-450 mm kusukela kulayini kuya kulayini ebuden buka – 900 mm). Isampuli yesibili yenhlabathi ithathwe ngqo phakathi kolayini abaphambene i-subsample (■) ne-subsample (●) (u-300 mm kusuka kulayini wesitshalo phakathi kolayini abaphambene i-subsample (■) ne-subsample ephakathi kolayini (●) (u-300 mm ulayini wesitshalo kalayini owubude buka-900 mm).

- Qinisekisa ukuthi kusetshenziswa ithulusi elifanayo ukuthatha amasampuli.
- Ukuhula kokudepha – u-0 mm kuya ku-150 mm, u-150 mm kuya ku-300 mm no-300 mm kuya ku-600 mm – kufanelwe kwensiwe isampuli.
- Inqubo yokwenza amasampuli iphindwa ka-5 ku- 50 ha eyuniti yenhlabathi.
- Amasampuli ayisihlanu ka-0 mm kuya ku-150 mm amasampuli kuxutshwe ngokufanele ne-subsample eyodwa kuleyo ngxube ukuze kuyohlaziwa. Kulandelwa inqubo efanayo ku-150 mm kuya ku-300 mm kanye namasapuli ka-300 mm kuye ku-600 mm.

Amasampuli enhlabathi kufanele aphathwe ngendlela efanele. Amasampuli kufanele omiswe ngomoya noma aqandiswe kakhulu uma kudi-

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Indlela yokwenza amasampula ezimo ezinezinsalela zamanyuthriyanti ne-esidi yenhlabathi akasabalaliswa ngohlobo olulodwa.



ngeka ukuhlaziya kwe-naythrojini (N) futhi uma amasampuli angeke adilivwe elebhu esikhathini esingamahora angu-24. Kuzo zonke, amasampuli akufanele ebekwe ngqo elangeni. Isisindo senhlabathi esiphakathi kuka-500 g no-1000 g siyadinge ka kusampuli ngayinye ezohlaziya.

UKULAWULWA KWE-ESIDI ENHLABATHINI

I-esidi ibonakala emniningwaneni etholakala emniningwaneni yesampuli yenhlabathi futhi ingabonakala nasezifundweni zeprofayile yenhlabathi. Urukhiqizwa kommbila ne-oilseed kuvinjwa yisimuncwana semhlabathi kuphela ngesikhathi amazinga obuthi bama-elementi afana ne-aluminium (Al) nemanganisi (Mn) akhona futhi akusho ukuthi i-pH iphansi.

Ubuthi be-Al ikakhulu bufananiswa ne-esidi yenhlabathi, ngaleso sikhathi ke ubuthi be-Mn akuamise ukuba ne-esidi yenhlabathi – nakuba zonke izindlela zobuthi benhlabathi – nakuba zonke izinhlobo zobuthi kwesinye isikhathi kungazenzakalela.

Ubungozi bobuthi be-Al emmbileni buba khona kuphela uma i-pH (KCl) ingaphansi kuka-4,5 noma I- pH (H_2O) ingaphansi kuka-5,5. Ubuthi be-Al bunqunywa i-reshyo ye-Al ne-hydrogen (H), kuye kusamba sephotheziyu (K), i-calcium (Ca), i-magneziyu (Mg), ama-ions. Le reshyo, ubekwe njengephesenti, yaziwa njenge-esidi egcweli phecelezi acid saturation.

Ukulahlekwa kwesivuno kuzokhula njengoba ukugcwala kwe-esidi kukhula ngaphezelu kuka-20%, njengoba ukumunceka kwamanzi nama nyuthriyanti ngakho-ke kuyavaleka. Asikho isivuno sokusahlamvu esilindeleka ukuba sifinyelele ku-80% lapho kugcweli i-esidi. Ngaphansi kwezimo lapho ubuthi benzeka kukho kokubili i-Al/ nobuthi be-Mn, ubuthi be-Mn buzokwehliswa ngokwanele uma inhlabathi imenenjwa ngaphansi kuka-20% wokugcwala kwe-esidi.

Umcako usesenziswa ukulungisa i-pH kanye namazinga okugcwala kwe-esidi. Isidingo somcako sihlose ukufinyelela emazingeni okugcwala

kwe-esidi ephakathi kuka-0 no-15%, ukunikeza i-buffer ekutheni kungaphi-ndeki isimuncwana nobuthi be-Al.

Kodwa, ukumenenjwa kokugcwala kwe-esidi engaphansi kuka-15% kufanele kucatshangisiswe. Ukuhakwa komcako, okungaphezelu koku-dingekayo, ukwehlisa ukugcwala kwe-esidi, isibonelo kuye ku-0, kuyinquo bo ebiza kakhulu.

Ngakho ke kubalulekile ukunquma kuze kufike ekujuleni okungakanani kwe-esidi yenhlabathi nokuthi kufanele

kujule kangakanani ukuyehlisa ngaphambi kokuba kubalwe ireythi yomcako ne-gypsum.

IZINHLOBO ZOMCAKO

Umcako i-dolomitic ne-calcitic ikhona emakethe. Isimo se-Mg yenhlabathi yisona esizonquma ukuthi ngabe i-dolomitic noma i-calcitic iyadingeka.

Umcako i-dolomitic iyanconywa ngokuhambisana ne-calcitic ngesikhathi isimo se-Mg yenhlabathi siphansi i-(<40mg kg⁻¹) noma ingaphansi uma kuqhathaniswa nesimo se-Ca, ngaphandle uma isimo se-Mg singahlangabewza ngokusetshenziswa kwe-Mg equukethe oma-nyolo. Qhathanisa izindleko zemithombo yemicako eyahlukene. Cela umdayisi kamanyolo akusize.

Kudingeka i-spreader somcako okhalibhrethwe ngokufanele ukuze ufake umcako. Ngaphandle kwekhwalithi, okwenziwa umcako enhlabathini kuncike kakhulu ekuhlanganiseni nenhlabathi ngokufanele. Lokhu kuphumelela ngokuthi kuqalwe nge-disking, bese kulandeli-swa ngokulima noma ukuripha okujulile phecelezi deep ripping. Uma kungenzeka, umcako kufanele ufakwe uhlanganiswe okungenani ezi-nyangeni ezimbili ngaphambi kokuhlwanyela ukujinisekisa ukuthi okwenziwa umcako kuphutholiwe ngesikhathi kutshalwa. ■



**U-PIETMAN BOTHA,
UMELULEKI OZI-
MELE KWEZOLIMO**

Qala ngokuphepha

NHLOSO ENKULU YEZINGUBO ZOKUVIKELA EZOKUVIKE-LA ABASEBENZI NGESIKHATHI BENZA IMISEBENZI YABO. UMQASHI KUMELE AHLANGANISE IPHOLISI YEZINGUBO ZOKUVIKELA FUTHI AXOXISANE NGAYO NABASEBENZI.

- Zonke izingubo zokuvikela kufanele zithengelwe inhloso ethile. Abaqashi kufanele banike abasebenzi izingubo zokuvikela ezihambe-lana nobungozi ababhekene nabo.
- Abasebenzi kuyaphoqa ukuba banikezw ezingubo zokuvikela. Umqashi angabanikeza izingubo zokuvikela mahhala noma anikeze abasebenzi imali yezingubo ukuze bakwazi ukuzithengela bona izi-ningubo zokubavikela.
- Uma umqashi ebanikeza izingubo zokuvikela, zihlala zingeza-khe. Uma umsebenzi eyekela ukusebenzela leyo nkampani, ingubo yokuvikela kufanele iphindiselwe kumqashi.
- Izingubo zokuvikela zisetshenziswa kuphela endaweni yokusebenza

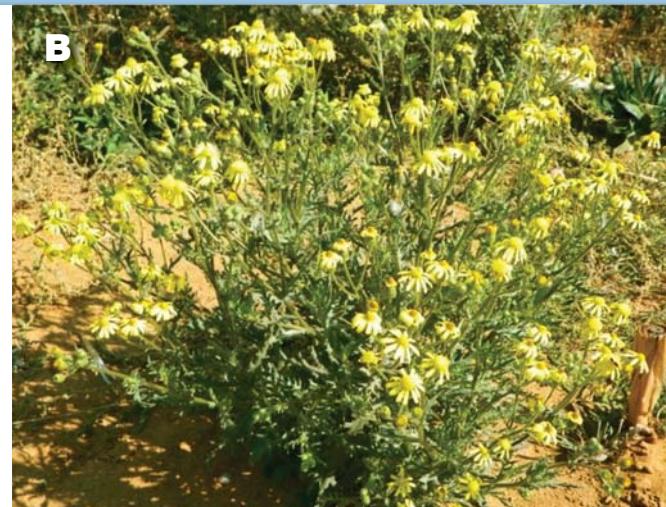
futhi azisetshenziselwa ezinye izinhloso. Abasebenzi kufanele bana-kelekele izingubo zabo. Kodwa, uma izingubo zokusebenza ziguga futhi sezingasawenzi umsebenzi wazo, umqashi kufanele azishintshe.

- Abasebenzi kufanele babheke ama-filter ama-maskhi athile oku-vikela njalo. Ukusebenza kwalawo mamaskhi kuyancipha uma edlulelw yisikhath.
- Umsebenzi osebenza namakhemikhali, kufanele ezinye izingubo zokuvikela ngaphandle kwezingubo azigqoka ngokuvamile. Abaqashi kufanele babe nendawo okuhlanzwa kuyo izingubo zokuvikela (zamakhemikhali) ezingahlanzwa mahhala, njengoba abasebenzi akufanele bahlanze izingubo zokuvikela ezinamakhemikhali ekhaya.
- Umqashi naye kufanele abe nendawo okuzogcinwa kuyo izingubo zokuvikela ikhiywayo namathuluzi asetshenziswa e-workshop. ■

**U-CHARL SAAYMAN, UMELULEKI WEZEMPILO NOKUPHEPHA
KWAMEGA HEALTH AND SAFETY**

Ukulawula ukhula lwasebusika...

2 *Isitshalo se-ragwort isencane (A) futhi isiqlikaza izimbali (B).*



Okubalulekile: Kuzohlala kubalulekile ukuba abalimi bayazilandela izincomo ezikumale-buli omkhiqizo ngokwemigomo yokhula oluthile olungalawuleka, isilimo (izi) okurejistwe kuzo ama-herbicide, ireythi yesilinganiso esingasetshenziswa noma yiziphi izinsalela zama-herbicide ezingaba khona. Abalimi kufanele baxhumane nomeluleki othembekile wezamakhemikhali ukuba babasize ekukhetheni i-herbicide eseberenza kakhulu esidingo sayo esifanele nokukhombisa ukuthi kufanelekafawa ireythi yesikalo engakanani. ■

**U-DR MARYKE CRAVEN,
UMCWANINGI OMKHULU,
I-ARC-GRAIN CROPS**



Zazi izinambuzane zakho: I-FALL ARMYWORM

KUBALULEKILE UKUTHI ABALIMI BANGAHLONZA IZINAMBZANE UKUQINISEKISA UKUTHI ZILAWULEKE ZISAQALA NGA-MATHULUZI AFANELE.

I-Fall armyworm (*Spodoptera frugiperda*) yangena eNingizimu Afrika ngo-2016, nemiphumela yokubhuqabhuqa izitshalo ezihlala kuzo ezizithandayo, ummbila ne-sweetcorn.

Zanyakaza kakhulu ebusuku nasentathakusa, futhi zicasha kakhlukazi ezinsongezini zesitshalo noma phakathi kwamashidi amaqqabunga emini. Amaqanda azalelwaa ngamaphasela ahlukene asukela emaqandeni angu-50 kuya kwangama-300 futhi embozwe ukhwekhwe noboya obusezmibeni we-moth. Okuqala amaphasela ambalwa awubulembu futhi embozeke onke, eqhathaniswa namaphasela okugcina angaba nqunu noma abe nokhwekhwana oluncane.

Emva kwamalanga amabili kuya kwa-mathathu, iningi lamaqanda lichamusela kanye kanye. I-life cycle ye-Fall armyworm incike emazingeni okushisa futhi iphothuleka ngesikhathi esifushane emazingeni okushisa aphezulu, okungukuthi eNingizimu Afrika aphakathi kwe-zinsuku ezingama-24 kuya kwezingama-40.

Ukuhlasela kokuqala ngokuvamile kwenzeka kungaqaphelele, njengoba isibungu esincane phecelezi i-larvae sidala umonakalo esitshalweni esincane, sidala kakhulu ensongezini yesitshalo

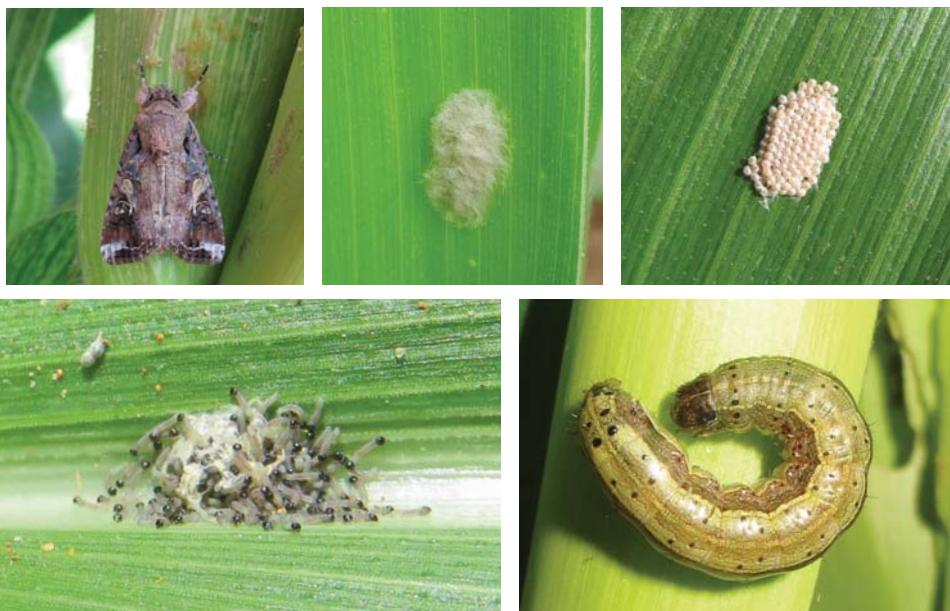
futhi sidale 'amasafitela' amancane. Njengoba isibungu sikhula, kuvela izindlela zokusihlonza izimpawu ezifana namabala amanyama ku-segment yesishiyagalombili, ibhande elibanzi eliphashile kwakheke namabala amnyama akha i-trapezoid kwi-segment ngayinye, i-upside-down umbala okhrimu i-Y-shape phakathi kwamehlo nephethini eyinethi yamehlo.

Isibungu esikhulu sidla u-80% wesamba sonke sokudla esikudlayo ngezinsuku ezimbawwa zokugcina zokukhula. Uma ziya esikhwebini, kulandela ukungaqhumi kahle futhi kube nomkhulu umonakalo kuze kufike esigabeni sokuqina kwezinhlavu.

Izinnhlavu eziyisitaki ze-GMO, ukulashwa kwezinhlavu kanye namakhemikhali ahlukene abhalisiwe okulawula akhona ongakhetha kuwo ukulawula i-fall armyworm. Ukuthungatha i-moths nokubheka i-pheromone traps kungashoukuthi i-moth izoshesha indize, ikhombisa ukugcwala nosayizi.

Ukuhlolola insimu njalo ezinsukwini ezintathu kuya kwezine kubalulekile ukubona amaphasela amaqqanda, isibungu encane noma umonakalo 'ifasitela'. Uma lokhu akubonile, umkhiqizi kufanele asheshe ukuthathela izinyathelo ngoba isibungu esidala kunzima ukusilawula, ikakhulu-kazi uma sesingene esikhwebini.

Uma ufuna imininingwane, vakashela ku-www.croplife.co.za/KnowYourPest_FAW.



Izimpawu eziyizinkomba zokuba khona kwe-fall armyworm emmbileni. ■

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IsiZulu, IsiNqisi, IsiTswana, IsiSuthu, nesiXhosa.

Articles written by independent writers are the views of the writers and not that of Grain SA.

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Iphrogrammu eguqula izimpilo



Farmer
Development
Programme

Umbiko

Ukwabelana ngolwazi nokwakha amanethiwekhi

USUKU Iwabalimi phecelezi *farmers' days* luyasiza ukwakheni amanethiwekhi. Mibili imihlomulo ebalulekile yokubamba i-farmers' days u-1) ukwedluliselwa ulwazi no-2) kunweba amanethiwekhi okweseka abalimi. I-Grain SA ifasilithetha le misebenzi yokwakha i-webhu yokuxhumana ezungeze abalimi yokwesekwa okungeziwe.

I-farmers' days yisikhatha sokuhlangana ndawonye kwabaliu ukuzokuza, ukubona nokufunda kwabanye nakochwepheshe. Kuphinde kunekeze ithuba lokubona okuhle, okubi nokungcolile ekukhombiseni noma amaplot ethrayeli. Ubhubhane luyayimisa imihlangano efuze leyo kodwa kamuva kuyenze ka ubuka kusizwe kakhulu imisebenzi enjalo mayelana nokwakha nokunkika amandla okuthuthukisa umphakathi ekulimeni.

Ngo-Ephreli ibe yisithupha **imicimbi yesithupha ye-farmers' day** yethu-lwa yethanyelwa abalimi aby-400. Abanjewla kulezi zindawo ezilandelayo:

- E-Louwsburg (13 no- 26 Ephreli)
- E-Mbombela (13 no- 22 Ephreli)
- E-Kokstad (20 Ephreli)
- E-Dundee (21 Ephreli)



Lalibalele nge-farmers' day eyayibanjelwe eLouwsburg.



Imenenja kwezentuthuko esifundeni u-Luke Collier wayephethi i-farmers' day eColana esigodini i-Mount Frere.



I-farmers' day eyayibanjelwe e-Zyverfontein eLimpopo kwi-Grain SA study groups kwayisithupha ngomhlala ka-14 Ephreli yathanyelwa ngempumelelo.



I-farmers' days eMbombela yacebisa abalimi ngolwazi oluthokozisayo.

Ubuhle nobubi ezinsukwini ZOKUNA KWEZULU

ISIZINI yokulima ehlobo ka-2021/2022 ibe namaginqinginqi ngenxa yokwenyuka nokwehla. Kwaba ngokukhulu ukukhululeka okusho ukuthi akusafanele kube selokhuku kusingwa umkhanya ngexhala kubhekwa amafu emvula. Esikhundleni salokho abalimi kwadingeka babhekane nemigwaqo esiphenduke imifula yamanzi noma ubikibiki lodaka, nemigodi emigwaqeni phecelezi-potholes esephenduke imigodi ejulile eyingozi.

USolomon Masango, omunye wabeluleki babalimi esifundeni i-Louwsburg, wavakashela umlimi uNtombizethu Shongwe futhi ubikilwe: 'omunye wabalimi abelulekayo esifundeni i-Louwsburg, ivakashele umlimi uNtombizethu Shongwe futhi wabika: 'Onke amasimu aba manzi kakhlulu emva kwemvula' Siwahlolile amasimu kodwa kwamanye kumanzima kakhlulu ukufinyelela kuwo ngenxa yobumanzi. Sibhekene nenkinga ngenxa yokuthi izitshalo seziqala ukuhluma, kubukeka kwangathi kusentwasahlobo. Abalimi abakwazi ukwenta utho ngenxa yezimo zokuba manzi. Asazi ukuthi sizoyivuna kanjani imikhiqizo yethu. Nami njengomeluleki anginaso iseluleko. 'Singathandaza kuNkulunkulu kuphela.'

Umeluleki waseFreystata u-Johan Roux wavakashela omunye welungu leSigungu seGrain SA, uMaseli Lethuka, olima esifundeni sase-Qwa Qwa. Nakhu ke akubikile: 'Ipulazi lathola imvula elinganiselwa ku- ±90 mm nesichotho. Umlimi wawubika ukuthi umonakalo owenzive yisichotho futhi usalindele uhlolo. Ummbila usuyavuthwa futhi uma isimo sezulu sivuma uzovunwa ngase-kupheleni kukaJuni'. UJohan naye wavakashela umlimi uTshepo Mofokeng naye owabika imvula engu-95 mm. 'Umhlaba umanzi kakhlulu futhi kunodaka kodwa ummbila usuyaqala ukoma kahle'.



Imigwaqo eya epulazini lika-Paulos Tshabalala eFreystata yayisemanzi kakhlulu futhi ushelela ngo-Ephreli, okwenza kwa nzima ukufinyelela epulazini.



Umlimi uTshepo Mofokeng wabekana nezinselelo eziningi ngezinga eliphezulu lemvula kulo nyaka.



Amanzi agcwele yonke indawo! amasimu omlimi wase-Dundee uJohn Ngwenyai asemanzi kakhlulu nokuvuna kusazoba inselelo. ■