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Ukuxhoza kanye nokuhlela ummbila kungaphakamisa inzuzo

Incwadi yeGrain SA
yabalimi abasakhulayo

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Ukuxhoza kommbila kusho uku-suswa kwembewu yommbila ekho-beni. Amafama amancane akwenza lokhu ngezandla uma sebesuse izikhwebu esitshalweni sommbila esesivuthiwe ngen-kathi kuvunwa.

Amafama amakhulu enzuzzo wona awenza lo msebenzi esebeenzisa imishini yokuvuna yesimanjemanje. Lena yimishini emikhulu, ewubuxhakaxhaka edlula emasimini amakhulu kube yiyona encodulayo, ehlubayo, ehlanzayo futhi ibuye igcine okwesikhashana emgqonye-ni wekhombayini, ngenkathi idlula emasimini ommbila.

Ukuvuna kwamafama amancane

Amafama akhiqiza kancane imvama akhi-

qizela ukudla kwasemakhaya kanti baya-kwazi nokudayisa okusalele uma isivuno sibe sihle ngalowo nyaka. Izifundiso eziphucukile kanye nokuqequesheka ekusetshenxisweni kwezindlela zesimanjemanje zokukhiqiza kusetshenxiswa izimila zommbila ezigenetically modified zisetshenxiswa nendlela efanele yokulawula ukhula, sekukwazi ukukhuphula isivuno kusuka ku-0,5% wamathani ihektha ngalinye kuya ku-6 wamathani ihektha ngalinye. Lokhu wukwanda okukhulu okusho umsebenzi omningi kanye nokuhlela ukuvu-na isilimo ngesikhathi esifanele.

Le ntuthuko isiyenze kwaba lula ukuthi amafama amancane akhiqize okungaphezu kwezidingo zabo zangemihla, ngalokho-ke bakwazi ukwabela umhlaba olingeneyo kwe-zinye izilimo ezifana nobhontshisi noma imifino. Ikhaya selingakwazi-ke ukuhlelela





UGOGO JANE UTHI...

Ubusika sebufikile, okusho okuthi amafama aseKapa wona asefshala izilimo zasebusika kanti akwezinye izindawo wona asevuna izilimo zasehlobo. Ngenhlanhla lena kube isizini enhle kakhulu, futhi nginethemba lokuthi cishe wonke umfama uzoba nesivuno esihle. Kuhle kakhulu ukubona izilimo ezinhle ezingavunwa inqobo nje uma amafama elandela zonke izinyathelo zakuqala ngokufanelekile – ukulungiswa komhlaba, ukulawulwa kokhula, ubuningi bezitshalo kanye nokucheleta.

Ngesikhathi esizayo ohlelweni lwethu sizoqila ekuhloleni izimali zokukhiqiza ezibolekwa amafama. Eminyakeni embalwa eyedlule besinethemba lokuthi uMnyango wokuThuthukisa kweZindawo zaseMakhaya nokuBuyisewa kweMihlabia kanye noMnyango weZolimo izoqhube ka ngokuhlinzeka amafama ngezimali zesibonelelo. Ngeshwa-ke akubanga njalo kona okuhole ekutheni amanyi amafama angakwazi ukuqhube kela phambili ngenkathi sisalinde usizo oluvela kuHulumeni. Uma sikhetha indlela yezimali zokubolekwa, amafama azoqala ukusebenza emihlabeni yawo ngesikhathi esifanele. Uma-ke engaba nenhlanhla yokuthola izibonelelo zezimali ezivela kuHulumeni, le mali yezibonelelo ingastshenzi selwa ukukhokha izikweletu zemali ebolekiwe. Ngale ndlela sizokwazi ukusiza amafama ukuba akwazi ukuzimela uma kuza ekukhiqizweni kwezilimo zabo.

Siphuma embukisweni obe nempumelelo enkulu wevikile NAMPO lokuVuna. Bengithokoze ngokwedlulele ukubona amafama asathuthuka ekhona kulo mbukiso. Kuhle ngempela ukubona zonke izimpahla kanye nezinsiza ezibekelwe imboni yezolimo. Kubalulekile ukuthi umfama abe nokuxhumana nalabo abaphethe kule mboni. Zihaqe ngabantu abazimisele ukukusiza ngokukwese ka nangezeluleko imbalu.

Nginifisela inhlanhla yodwa kule sizini yokuvana – sengathi isivuno singaba ngeseqile kunaloko ebenikulindele.

Ukuxhoza kanye nokuhlela ummbila kungaphakamisa inzuzo

ukukhiqiza ukudla okunqala okuyidayethi ezimelele. Ngale ndlela umndeni uzothokozela ukudla okumandi, okunomsoco noku-zimelele kulo nyaka ophambili.

Ummbilu uvunwa ngesandla bese nezikhwебу nazо zincodulwa esitshalweni zifikwe ezikhwameni ngenkathi amafama ehamba emigqeni bese zibekwa ekupheleni komugqa lwo. Uma kuhona izinqola ezdonswa yizinkomo noma izimbongolo zi-setshenzi selwa ukulanganisa izikhwama zezikhwебу ezivuniwe bese zihambisa lo mthwalo lapho uyolondwa khona.

Inkambiso yokuvuna

Ukuvuna kumele kuqale ngenkathi amadlebe noma izikhwebu seziqala ukulenga kanti namahlamvu nawo eseqala ukoma. Uku-vuna kumele kuqhubele lapho iningi lamahlamvu amakhoba ommbila liba phuzi kanti nesimo sezulu sesomile. Uma lina, izindawo ezithola imvula engatheni ngesikhathi soku-vuna, uma uthola ukuthi awukwazi ukuqoqa amakhoba phula isiqu ngaphansi kwesi-khwебу bese usiyekela silengle phansi.

Kwezinye izindawo izitshalo zommbila ziayunwa bese zinqwatshelwa ngesimo

sephiramidi esaziwa ngamastooks, bese ziyekwa lapho izinsuku ezingaba mbili ngaphambi kokuba kuvunwe izikhwebu. Izinsalela zezilimo zingasetshenziwa njengokudla kwemfuyo.

Kwezinye izindawo ikhakhulukazi ngo-kusetshenziwa kwezimila zesimanjemanje izikhwebu zizobe sezi lungelie ukuvunwa esikhathini nje esincane. Uma kunjalo-ke kuzokongiwa umsebenzi ngokuhlwitha izikhwebu ngqo ezitshalweni.

Ukomisa

Ummbilu ungonyiswa emasimini noma ngokunqwabelana izikhwebu kumapulati-fomu noma ubekwe endaweni yokulonda engena umoya owanele evalekayo ukuze izikhwebu ezivuniwe zivikeleke ekulinya-zweni yimvula.

Umfama noma umphakathi wamafama ungathenga umshini omncane okala umswakama noma kumukiswe isampuli lommbila kumphathi wesilo uma ikhona ukuze kukalwe umswakama walelo sampuli.

Ummbilu akumele neze ubi nomswaka-ma oweqile ku-14% ukuze ukwazi ukulondwa noma udaiyiswe. Izinhlamvu zingavunwa

Ukuxhoza ummbila ngomshini.





Ukuxhoza ummbila ngesandla.

phakathi kuka-18% no-26% kanti zizodinga ukuba zomiswe masinya ngaphambi kokuba ziyogcinwa. Imbewu yommbila egcinwe kuleli zinga izobola masinya. Ummiba ungomiswa okokugcina kopulastiki abamnyama noma amashidi epholihini asindayo emva kokuxhuzula uma kusakhiqizwa kancane. Ungandlali ummbila ekujuleni okudlula kwamaqakala kulelo shidi. Lokhu kuzosiza ukuba ummbila lo uthole ilanga kanye nomoya owanele. Izinhlamvu zingasuswa isikhathi nesikhathi ukuze kwebuleke lezi zinhlamvu ezingezansi nazo zome.

Ukuxhoza

Ummiba ungaxhozw ngezindlela eziningana okubalwa kuzo ukushaywa kwezikhwебу ezi-fakwe ngaphalathi kwezikhwama, ukushaywa kwezikhwебу ezbekwe phezu kwepulatifik yocwecwe lokhuni lapho izinhlamvu zommbila zizowela ocweweni lokhuni noma emshinini wokuxhoza. Lapho izivuno seziqala ukweqa amathani ayi-3,5 amathani ihektha ngalinye, amafama amancane noma umphakathi kumele

uqale ucabange ngokuthenga umshini omncane wokuxhoza. Uma umkhiqizo ukhuphuka khona emphakathini kanti futhi kunokuphathwa okufanele kwesilimo umshini lona ungashintshwa kuthengwe lowo ohlukanisayo ubuye usefe izinhlamvu ukuya ngamazinga ngenkathi ususa izinhlamvu lezi enzincane eziqhekekile.

Ukudayisa okuseleyo

Izinhlamvu ezonyisiwe futhi zahlanzwa zingagcinwa zisetshenziselwe ukudliwa emakhaya noma amafama ahlangane adayisele omakhelwane noma amabhizinisi afana nabagayi basendaweni abathenga ummbila omhlophe. Amafama afuyile afuna ukudla kwemfuyo wona azothenga ummbila ophuzi ngenxa yezinga eliphezelu lekherothini elungele imfuyo.

Uma ummbila uthengiswa kumele uhambisanе nemithetho yokulinganisa yezwe yokuhlela neyokupaka. Isampula lommbila wakho lizohlolwa kuya ngokuthi liphuma kusimila esiphuzi noma esimhlophe, impahlia

yangaphandle noma ukungcola, izinhlamvu noma iminyombo ephukile, iminyombo elinya-zwe yizinambuzane, iminyombo ebolile noma enezifo, umswakama ongu-14% futhi yahlo-lwa amazinga e-aflotoxin.

Imininingwane egcwele ngezilinganiso zokuhlela ingadanlodwa ku-inthanethi kanti futhi ikhona nasemthethweni wezilinganiso zemkhiqizo yezolimo wango-1990 (Umthetho iNombolo 119 ka-1990).

Njengoba kunethuba lomkhiqizo owengeziwe ngokusethenziswa kwezindlela zesimanjemanje zokukhiqiza, ukudayiswa kommbila owomisiwe, ohlukaniswe ngezinhlobo wahle-lwa kahle ungakhuphula inzuzo yekhaya ngo-kwenzenjalo iphucule izimpilo zamafama amancane ngomuso. ☺

I-athikhili ibhalwe ngumfama osethathe umhlalaphansi.



Vimbela ukuguguleka komhlabathi



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Umhlabathi wangaphezulu uyi-asethi ebaluleke kakhulu kumfama. Yiyona emupha ipulatifomu yemisebenzi yakhe yonke yezolimo. Yisendlalelo sebhizinisi lakhe. Umhlabathi unika imbewu ithuba lokuhluma, ikhule futhi ibuye ikhiqize.

Ngeshwa-ke silahlekelwa umhlabathi wethu wangaphezulu ngesivinini esikhulu. Unyaka nonyaka silahlekelwa yizigidi zamathani omhlabathi wangaphezulu, kakhulu ngenxa yokugugulwa umoya kanye nemvula. Njengomfama leli yiqiniso elithusayo ngoba phela izimpilo zethu zisencuphekweni. Kumele sihla-le njalo sibheka izindlela zokunciphisa lokhu kulahlekelwa. Le-athikhili izobheka indlela yokusebenza ngokungathili nokuthi isiza kajnani ekulondeni umhlabathi wangaphezulu.

Ngabe kusho ukuthini ukungathili?

Ngamagama alula nje, ukungathili kusho ukuthi umfama utshala ngqo emhlabathini engazange athile futhi. Lokhu kusho ukuthu umhlaba awulungiswa ngamageja, amadiski, amaripper noma ngamaphi amanye ama-implement angenelelayo emhlabathini ngaphambi kokutshala. Okubalulekile ngokungathili ukuba



Ikhombayni enhle endlala amakhasi ngokul-ingana ibaluleke kakhulu ukuze kungabikho isishumanqa sezinsalela esiqwabelene emhla-beni wonke lapho nalapho.



Izinkambiso zokungathili eMthatha.

kungaphazanyiswa umhlabathi kanti futhi nokugcina izinsalela zesilimo zamasizini adlu-le. Ziningi-ke izenzelelo kulothu. Esinqala kunazo zonke ukuthi kuncishiswa izinga lokuguguleka komhlabathi ngenxa yezinsalela kanye nezimo zeziqo eziyekwa ziphele ukuze zikwazi ukubopha umhlabathi wangaphezulu uhangane ungabaleki.

Ezinye izenzelelo zibandakanya:

- I-organic matter eyandile emhlabathini ibi-zwa ngamahlamu abolayo; la mahlamu agcine ayinhlabathi eyenziwe ngamahlamu abolile yona enhle kakhulu emhlabathi.
- I-organic matter yona-ke igquqquzelza izilokozana ezifana neminyundu zona eziba-luleke kakhulu.

ngokusebenzisa izindlela zokungathili



- Umhlabathi ukwazi ukugcina amanzi kanye namanyuthriyenti ngokwengeziwe, ngakholo ke kuba nethuba lokuba kungakhqizwa ezinye izilimo.
- Kuba nokuncipha kwamagreen house gasses, ikakhulukazi ikhaboni-dayoksayidi yona elimaza umoya.
- Kulawuleka ukhula kalula ngoba uma umhlabathi ungaphazanyiswa kunciphisa amathuba okumila kokhula.
- Ukungathili kndlala indima ekudliweni kwehaboni, lokhu-ke kusho ukuthi umhlabathi ufanelwa ukugcina ikhaboni ebuya emoyeni.

Imfihlo ekusebenziseni indlela yokungathili ngenkulu impumelelo ukuyizwisa ugala ngaphambi kokuba uyisebenzise epulazini lakkho. Kuzoba khona ukufunda uma usuyiqalile uze ufinyelele lapho usuthole okufanele indawo yakho wena kanye nendlela yakho yokulima. Kubalulekile futhi ukuqala emhlabeni omncane uze wazi ngokuphelele ukuthi isebeanza kanjani nokuthi uzisebenzisa kanjani izindlela zayo ngenkulu impumelelo. Kukhona okumbadlwana okumele ukwazi ukuze ubenohlelo oluyimpumelelo lokungathili.

1. Udinga *ino-till planter*. Lena ibalu-lekile ngoba yenzelwe ukusika izinsalela bese ivu-mela imbewu ukuba ingenelele emhlabathini ngaphandle kokuphaza-misa umhlabathi.
 2. Udinga iboom spray enhle. Lapho ubuzo-lawula ukhula njengenjwayelo ngaphambi kwesizini yokutshala usebenzisa izindlela zokuthila eziwayelekile, usuzochelela 'burn down' herbicide ukubulala ukhula ngaphambi kokutshala. Umfafazo lona uzmela igeja, idiski kanye nesikafolo.
 3. Udinga ikhombayni eyenzelwe ukwendlala amahlamvu kanye nezinsalela ngokuling-nayo emhlabeni lo ozolinywa. Lokhu kusiza uma kutshalwa ngoba iplanter izokwazi ukungelela emhlabathini wangaphezulu kalula nje kwensiwa ukuthi phela akunazi-shumanqa zezinsalela ezinqwabelene.
- Ukungathili ngenye nje yamatulizi assetshe-nziswayo ukuvimbela inkinga yokuguguleka komhlabathi wangaphezulu. Ziningi ezinye izindlela okumele thina njengamafama sizisebenzise emapulazini ethu ukuze sivimbele ukulahleka komhlabathi. Lokhu kubandaka-

Photo 1: Kubalulekile ukusebenzisa ino-till planter yona ezongenelela izinsalela zango-nyaka odlule, kuleli hlandla ukolweni.

Photo 2: Isibonelo sesembozo sezinsalela esihle esizosiza ukulonda amanzi futhi sibuye sinciphise ukuguguleka komhlabathi wangaphezulu.

nya kuko izindlela esizisebenzisayo zokulima emasimini ezilimo kuya ezinkambini zamadlelo zemfuyo yethu. Njengoba udaba lokuguguleka komhlabathi solwanda nje, kuyakhuthaza ukubona amafama amaningi edlala indima yokunakekela indalo ngezindlela abazisebenzisa kwezolimo emapulazini abo. ☺

**I-athikhili ibhalwe nguGavin Mathews,
Bachelor in Environmental Management.
Uma ufuna imininingwane egcweli
thumela i-imeyili ku-gavmat@gmail.com.**



UKUHAMBISANA NETHEKOLOJI ENTSHA – uma umculo ushintsha, kumele nomdanso nawo ushntshe

E zinye zezinkulomo ezivelele ezethu-lwe eNhlanganweni yakwaGrain SA yalo nyaka ibiyethulwa nguRob Dunlop, ngokwendabuko ongowlapha eNingizimu Afrika kepha usezinze eMelika. Usebenzela iMonsanto njengesikhulu setheknoloji yommbila eYurophu, eMiddle East, e-Afrika kanye nase-Asia.

Unikeze isithombe esihle sentuthuko ethokozisayo uma kuza kwezokwandiswa kwezitshalo kanti-ke lena yintuthuko ethokozisayo esizukulwaneni setheknoloji. Kungamele uhambe ufake izivikeli-zindlele ukuze ungezwa yonke imibiko embi ngezimbewu *ezigenetically modified*, ngakho-ke kubalulekile ukuthi thina mafama sithole lonke ulwazi ukuze sizwisise ngokuphelele ukuthi lesizukulwane esisha sebhayotheknoloji sisiphatheleni. Njengoba eseshilo uDunlop, akukhathalekile ukuthi imibiko embi ithini ngoba bona abasebenzeli ukukhulisa "ukudla okunguFrankenstein" okungavamile, kepha bazimisele ukuthola izindlala ezintsha zokondla inani labantu elandayo lapha emhlabeni omncane futhi nangaphansi kwezimo ezingezinhe.

Okwenza kube nesidingo esikhulu sokusebenzia itheknoloji entsha yisibalo sabantu esikhula ngesivinini (abantu abayi-200 000 bayengezekwa esibalweni sezwe usuku nosuku), ukushintsha kwasimo sezulu, isidingo semboni *yebiofuel*, isidingo sokudla okuthengenkayo, ingcindezi ekhula njalo ekutholakaleni kwamanzi kanye nokuvikeleka kokudla emhlabeni wonke jikelele. Noma zizingi lezi zinqinamba kepha umphakathi okhulisa izitshalo weneme kakhulu ngalo lonke leli khono elilethwa yibhayotheknoloji. NoDunlop naye uthi kusekuningi okuthokozisayo okuseza okuzonikeza amafama ithuba lokuzikhethela amathuluzi azobasiza emisebenzini yabo yokulima.

Manj-ke ngabe igenetic engineering yesilimo iyini na?

Kumele siqale sizwisise la matemu abalulekile:

Ibhayotheknoloji – Izinqubo zebhayoloji

ezisebenzisa iDNA bese ziylanganisa ngezindlala ezintsha.

Bacillus thuringiensis (Bt) – Lena yibhakthiriya ephila emhlabathini, futhi ivela ngokwendalo emathunjini ezibungu ezinye, imiyundu kanye nezimvemvane kanye naphezulu emahlamvini nakwezinye izinambuzane kanye nezindawo zamanzi. Izinhlobo eziningizale*Bt* zikhqiza amaphrotheni ekhristali anezimilo zama-*insecticide*, ngakho-ke isetshenziswa njenge*biological insecticide* kanye nasezilimeni *ezigenetically modified*.

UmmbilaweBt – Lonangummbila oshintshwe ngejini ye*Bt* kanti-ke umelana ne-*European stalk borer*.

iDNA – Siyazi sonke ukuthi izindlovu zizala izindlovana, izindlulamithi zona zizala izindlulamithana, kuhubeka njalo ngohlolo ngalunye Iwesidalwa esiphilayo. Kepha yingani kunjalo na? Impendulo ikumolekhuli ebizwa *ngedeoxyribonucleic acid (DNA)*, yona equkethe imiyalelo yebhayoloji eyenza uhlolo ngalunye Iwesidalwa Iwehluke. iDNA iqukethe imiyalelo edingekayo ukuze isidalwa esiphilayo sikhule, siphile futhi sikhiqize.

Igenetic engineering – Lena yinkambiso yokufaka ijini yangaphandle phakathi kwejinomu yesidalwa esihlukile.

Ijinomu – Ijinomu iyimpahla yejinethikhi yesidalwa *kumolecular biology* kanye namajinethiki esimanjemanje. Umzimba wakho we-nziwe ngamaseli ayikhulu, ayizigidi nezigidi. Enye nenye yala maseli inemiyalelo ephelele ukuthi amaseli akho enziwe njani, ingxenyne yalo kanye nezingxenyne zezingxenyne zowo. Leli qoqo lemiyalelo yijinomu yakho. Zonke izinto eziphilayo zinamajinomu. Amabhungane nawo anamajinomu amabhungane, wona okuyimiylelo ephelele ehlose ukwenza ibhungane. Amaklabishi nawo anamajinomu amaklabishi kanjalo namabhakthiriya ya nawo anamajinomu amabhakthiriya.

iRoundup® – *Iherbicide* ekwazi ukulawula ngokungakhethi izinhlobo zokhula ezimbawala





ezimila njalo ngonyaka nalezo eziphila iminyaka. *IRoundup* nayo izolimaza izilimo ezifana nommbila kanye nesoya zona ezi*Roundup* Resistant. *Glyphosate* yona iyisithako esinamandla.

IRoundup Ready® – Igama lasezimakethe elinikezwu izinhlobo ezithize zommbila, isoya, ukotini noma icanola *egenetically engineered* ukuba imelane neherbicide *Roundup*.

IGenetic Engineering Yesilimo – inkambiso

Inkambiso yecrop *engineering* ifaka kuyo ukuthathwa kwejini eyodwa noma amabili angaphandle bese efakwa kwijinomu yesinye isidalwa. *DNA* ithathwa esidalweni esithize, isibonelo ibhakthiriya nejini ethize ziyahlukaniswa bese zifakwa ngaphakathi kwamaseli estishalo. Ijini bese yona iyasetshenzwa-ke ifakwe ngaphakathi kwesitshalo esithize noma isilimo kusetshenzisa isibhamu sejini (*gene gun*) futhi kusetshenzwa namamicroscopic fibres. Lesi sthalo sesilimo sona-ke sibizwa nge*genetically modified organism (GMO)*.

Le *genetic engineering* iwuhibalo iwebhayotheknoloji njengoba isetshenziselwa ukukhulisa imbewu eyakhiwe ngendlela ethize. Izilimo zokuqala ezikhiquzwe kusetshenzisa ibhayotheknoloji bezikhiquzwa ngenhoso yokuba zivumelane namachemical herbicides noma zizikhiquzele amapesticides azo. Izibonelo ezaziwa kakhlulu zalezi zilimo yisoya e*Roundup Ready* noma ummbila *weBt*.

Izitshalo ezi*Roundup ne*Roundup Ready**

IRoundup yiherbicide enamandla ebulala izinhlobo eziningana zokhula kanti futhi yaziwa njengebroad spectrum herbicide. Isoya e*Roundup Ready* yisitshalo esigenetically modified esikhuliswa ukuba simelane ne*Roundup* ukuze kufe ukhula kuphela oluzungezile hhayi isitshalo. Ngaphambi kwale bhayotheknoloji izindlela zokulawula ukhula ezazikhona zesoya kwakuwukuvuna phakathi nemigqa kona obekunobungozi bokubulala izilimo. Kuthe lapho isoya e*Roundup Ready* iba khona amafama athola ithuba lokutshala imbewu evumelanayo bese echelela insimu yonke nge*Roundup* ukuze kufe ukhula kepha isilimo sona singathinteki.

Ummiba weBt

Le bhaktheriyamu yendalo ikhiquza iphrotheni yekhristalini enobungozi obukhulu kwezinye izinambuzane. Uma isinambuzane singadla iBt iphrotheni lena ikhubaza umgudu wokugaya ukudla bese kumele ziyeka ukudla kona okuholela ekubenzi zife ezinsukwini eziyi-1 - 5. Kuthe uma ososayensi bethola lokhu emi-

“
Uthe ukuvikeleka kokudla kanye nezivuno ezandile zizotholwa ngokufakwa kwamajinethiki, ukukhulisa kanye nolwazi ukuze kusizwe amafama enze izinqumo eziphusile ngesizini yokulima kungakhathalekile ukuthi umsebenzi abhekene nawo mkhulu noma muncane kangakanani na.

nyakeni yavo-1950 bakhanda isifafazo se-*insecticide*, bese ngawo-1990 ososayensi besebekhiqize izitshalo zommbila we*Bt* wokuqala besebenzisa *genetic engineering*. Bakhama amaphrotheni *eBt* awubuthi base bewafaka esitshalweni sommbila ukuze ummbila we*GMO* uzokwazi ukukhiquza le phrotheni enobuthi. *I-European stalk borer* yisinambuzane esibi kakhulu esitshalweni sommbila, ngakho uma umnyundu waso udlal isitshalo lesi ubuye udlal lobu buthi obukhubaza umgudu wokugaya ukudla bese sifa lesi sinambuzane. Ngokusetshe-nzisa kwale *genetic engineering* inzuzo eningi ebingabe ilahlekile isiyongiwa manje.

Lezi zilimo zebhayotheknoloji zeszuku-lwane sokuqala ezinezibumbeko ezimelana nama-*insecticide* namaherbicide zisetshenzisa kakhulu kulezi zinsuku kanti ama-GMO nawo adlala indima enkulu ohlelweni lokukhiquza ukudla kwemfuyo kanye nokudla kwabantu. URob Dunlop ukholelwa ekutheni ngokuthuthuka kwesayensi kuzoba nendlela entsha nesebenzayo yokukhiquza izimbewu zeszukulwane sesithathu nesesine. Ukushinstha kwesimo sezulu nokwentuleka kwamanzi kuzokwenza izivuno zehle emhlabeni wonke jikelele. Yingakho nje iMonsanto isiqatilie ukukhiquza ihayibridi entsha yommbila ebizwa nge*DroughtGard* eyonga amanzi ibuye imelane nesomiso. Uthe ukuvikeleka kokudla kanye nezivuno ezandile zizotholwa ngokufakwa kwamajinethiki, ukukhulisa kanye nolwazi ukuze kusizwe amafama enze izinqumo eziphusile ngesizini yokulima kungakhathalekile ukuthi umsebenzi abhekene nawo mkhulu noma muncane kangakanani na. Ngenyanga ezayo sizovakashela amafama asebenzisa ibhayotheknoloji ezinhlelwani zabo zokulima.

I-athikhili ibhalwe nguJenny Mathews, umbali wePula Imvula. Uma udinga imininigwane egcwele thumela i-imeyili ku-jenjonmat@gmail.com.



Ubuhle bokuchelela ilime

Umhlabathi uyingcebo yendalo enhle. Eqnisweni uma ngabe besinganayo le ngcebo ngabe akunampilo nhlobo lapha emhlabeni. Umhlabathi uyasiphilisa! Umhlabathi uyaphila, uyaphefumula kanti futhi ushintsha njalo. Uma utho lukhula, lumunca kumanyuthriyenti kanye namaminerali asemhlabathini, okwenza ushintshe.

Kubalulekile ukuthi siqonde ukuphica komhlabathi nalokho okudingayo ikakhulukazi kwezelimo lapho *mono-cropping* kanye nezinye izinhlelo ezi-namandla zijwayelekile kanti nalapho umhlabathi unganikwa ithuba elanele lokuphumula. Angeke saqhube ka njalo simunca amanyuthriyenti emhlabathini bese singasawabuyiseli ngandlela thize.

Izinhlobo kanye nezibumbeko zomhlabathi ziyejhlu ka kuya indawo nendawo. Kunezinhlobo ezinhlanu ezihlukene zomhlabathi ezitholakala lapha eNingizimu Afrika.

- **Imhlabathi eyisihlabathi** – ayibambi amanzi kahle, kepha ifudumele futhi kulu-lula ukusebenza kuyo uma kunomswakama owanele.

- **Imhlabathi esabumba** – igcina amanzi kahle kanti futhi inothile ngamanyuthriyenti, noma-ke inokuba inhlabathi esindayo uma kumele usebenze noma noma uthile.

- **Imhlabathi ehambayo** – igcina amanzi kahle kepha ayimihle ekugcineni amanyuthriyenti.

- **Imhlabathi ensundu egcwele izitshalo ezifile** – inothile nge-organic matter enezinga eliphezulu lamanzi.

- **Imhlabathi enosawoti** – igcwele usawoti kanti izitshalo zikhula ngokucotta kuyona le mihlabathi.

Umhlabathi ophelelisiye yilovo oyinhlanganisa yale zinhlobo ezintathu zemihlabathi (imihlabathi ehambayo, imihlabathi eyisihlabathi kanye na-leyo esabumba) ebizwa ngegadenzima. Igade-nzima livamise ukuba nsundu ngokombala futhi lisakudla. Ligcina amanzi kanye namanyuthriyenti ngendlela enhle kakhulu. Akusho-ke ukuthi liyohlala njalo linothile ngamanyuthriyenti! Lapho kutshalwa khona izilimo, amanyuthriyenti ayasetshenziswa. Kumele abuyiselwe ngandlela thize.

Yingakho kubalulekile ukuthi ngaphambi kokuba utshale usampule imihlabathi isizini nesizini. Kumele sibuyisele lokhu esikuthathile emhlabathini ukuze siqhubeke njalo sithole isivuno esihle. Enye yezilungiso okumele zenziwe zikhathi zonke ukuchelelw ka *lime*. Lokhu kuzolandela izinga lobumuncu emhlabathini noma *ipH*. *lime* isetshenziselwa ukunyuthralayiza izinga lobumuncu emhlabathini. Uma umhlabathi uyekelwa umuncu ngeke wakwazi ukumunca amanyuthriyenti emhlabathini. Ngakho-ke uma sifaka umanyolo omningi kunesilinganiso esifanele, kepha izinga lobumuncu bomhlabathi lona libe liphe-zulu kusho ukuthi izitshalo ngeke zahalomula ngo-kwanele kulowo manyolo ocheleliwe.

Amanyuthriyenti anhlobonhlobo adinga amazinga ahlukene e-alkhalinithi; kepha iningi liyakwazi ukuthatha amanyuthriyenti uma *ipH* yomhlabathi iphakathi kuka-4,5 kanye no-6. Izilimo ezinhlobonhlobo nazozivuma ngokungafani kubumuncu bomhlabathi nabo obuhlukile. Isoya kanye nobhekilanga zona ziyavumelana nemihlabathi emuncu uma ziqhathaniswa nezilimo ezifana nommbila. Lokhu kusho ukuthi zisengaba nesivuno esihle ngaphansi kwezimo zamazinga aphansi *epH*. Ummiba wona udinga izinga eliphezulu leNayithrojini. Udinga imihlabathi enezinga eliphansi kakhulu lobumuncu. Ngakho-ke kudingeka *lime* eningana uma kutsalwa ummbila ukuze yelekelele ngokumuncwa kweNayithrojini kanye namanye amanyuthriyenti abalulekile emhlabathini.

Ngabe ngiyitholaphi

lime futhi ngiyichelela kanjani?

Isinyathelo sokuqala esibalulekile okumele usithathe ngaphambi kokuba uthenge *lime* ukuba uhlole amasampula omhlabathi wakho ngokucophelela. Lokhu kuzoshu ukuthi udinga ukuchelela ngohlobo luphi *lime* kuya ngezidingo zomhlabathi wakho. Izinhlobo ezimbili ozozichelela kungaba yi*Calcitic* noma *Dolomitic lime*. Uma imiphumela yamasampula omhlabathi wakho ikhombisa ukuthi kunokwentuleka kweMagneziyamu, kudingeka uchelele nge*Dolomitic lime*. Kepha uma imiphumela yamasampula omhlabathi ikhombisa ukuthi umhlabathi useneMagneziyamu eyanele,



kepha untula ngakuKhalsiyamu kudingeka uchelele nge*Calcitic lime*. Lokhu kubalulekile ngoba isikhona vele iMagneziyamu eyanele emhlabathini. Angeke kwasa ngalutho ukuthi ubuye wengeze enye ngoba lokhu kuzomelana nokumunceka kwamanyuthriyenti abalulekile emhlabathini.

Ngenhlanhla kulula ukuthola *lime* kanti futhi ungathenga nakubadayisa abazimele ongabathola kumdayisi wakho kamanyolo. *lime* isibile; into nje engase ikhuphule intengo *lime* yizindleko zezithuthi. *lime* imvama idingeka ngamanani amakhulu, ngakho-ke kuzodingeka inqola ethwala imithwalo emikhulu. Kuyinto enhle ukuxoxisana namafama enakhelene nawo ukuze nizame ukwabelana ngezindleko zezinqola ezithuthayo.

Kuvamile ukuba kunganakwa ukuthi umhlabathi udinga *lime* ikakhulukazi ngenxa yokuxakeka. Ingingi lamafama likholelw ekutheni lingasebenza ngaphandle kokuchelela *lime*, kepha isilimo ngeke samila ngendlela efanele ngoba sidinga amanyuthriyenti afanele. Kuyinto enhle ukuthenga *lime* bese iyachelelw. Lokhu kungenzwi yilabo abawenza lomsebenzi ngenkontileka abanemishini efanele ukuze kongiwe nesikhathi phela. Kubalulekile ukukhumbula konke okutholakele ngenkathi kuhlwala amasampula omhlabathi ngoba ingingi lamanyuthriyenti lincike kwamanye ukuze asetshenziswe kahle yisitshalo.

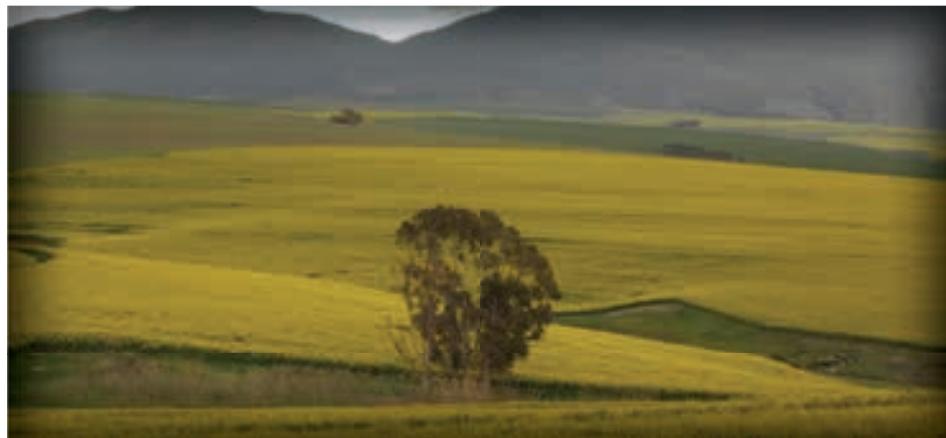
**I-athikili ibhalwe nguGavin Mathews,
Iziqu ze-Environmental Management.
Uma ufuna iminininingwane egcwele
thumela i-imeyili ku-gavmat@gmail.com.**





ICANOLA

– izinto ezibalulekile okumele uziqaphele ngalo Juni lona



Amasimu ecanola aseNtshonalanga neKapa.



Icanola esencane. Isithombe sivela kuDktl. Johann Strauss.



Amasimu ecanola aseNtshonalanga neKapa.

Icanola kumele ngabe isitshaliwe kusuke-la maphakathi nenyanga ka-Ephreli, kuya ekuqaleni kwenyanga kaMeyi. Khumbula ukuthi iviki neviki lokubambezeleka kokutshalwa kwe-canola kuya ngesikhathi esilindelekile sokuqala okuphakathi nenyanga ka-Ephreli, isilimo siba si-lahlekelwa amandla aso okukhiqiza isivuno esin-ni. Kubalulekile ukuthi phakathi nenyanga kaJuni uchelele okokuqala ngaphezulu ngenayithrojini. Kungaba-ke nesidingo sokufaka amapost-emergence herbicide.

Itop dressing yokuqala ichelwelwa ezinsukwini ezingama-30 kuya kuma-40 zokuhluma. Isilinganiso sona sincike ekutheni ngengakanani inayithrojini (N) eye yachelelwia ihambisana *netop dressing*. Kungachelelwia okwesibili ezinsukwini ezingama-60 kuya kwezingama-70 emvakokuhluma kwesilimo. Kepha konke lokhu kuncike kakhulu kusizini. Ngesizini eyome kakhulu ngeke kwaba nesidindo sokuba kuchelewwe futhi okwesibili. Khumbula ukufaka *isulphur carrier* ngaphakathi *lwetop dressing*, ngoba nakhu phela *isulphur* ibalele kakhulu ukuze *icanola* ikhule futhi ikhiqize. Ukulawuleka kokhula emvakokuthi luhlume, kuncike kakhulu ohlotsheni *lwecanola* etshaliwe. Uma kutshalwe isimila se-CL ungasebenzisa *iCysure* ukuvimbela ukhula lwamahlamvu abanzi olumila njalo ngonyaka, noma okunye kwalokhu okulandelayo: *iLontrel*, *iLomex*, *iGallant Super*, *i-Agil*, *iCo-Pilot*, *iPantera* noma *i-Aramo*. Uma ngabe kuyisimila se-TT ungasebenzisa noma ngabe yi-Atrazine noma *iSimazine* ukulawula ukhula. Noma kunjalo-ke le mikhiqizo emibili ingasetshenziswa kuphela ezmileni ze-TT. Uma kuyizimila eziwayelekile, ungasebenzisa na-noma ngeyiphi *iherbicide* yotshani noma yamahlamvu abanzi ebhaliswe *kucanola*.

Kubalulekile ukukhumbula loku okulandelayo njalo uma usebenzisa *amaherbicides*:

- Shintshanisa imikhiqizo ukuze ugweme ukumelelana kwesilimo *neherbicide* leyo oyisebenzisayo.
- Uba nethuba elihle kakhulu lokulawula ukhula uma uqala ukuchelela isimila siselula.
- Khumbula ukuhlanzisa *isprayer* emvakuchelela izilimo eziyizinhlamvu ezifana nokolweni, ngaphambi kokuba uchelele *icanola*, ikhakhulukazi uma ngabe ubusebenzisa ama-SU *herbicides*.
- Qinisekisa ukuthi isifafazi sikhalibhrethwe ngokufanele.
- Qaphela ukuba ungacheleli ngenkathi kuno-moya onamandla ngoba *iherbicide* ingagcine isibulale nezinye izilimo ezilapha eduze.
- Khumbula ukuthi amandla emikhiqizo okubulala aba phansi uma ukhula lungaphansi kwengcindezi (amakhaza, isimiso noma ukushisa) futhi lungakhuli ngamandla.

Nginifisela inhlahlha ngesizini yenu yokukhiqiza *icanola* futhi nikumbule lokhu: Phatha isilimo sakho ngokufanele bese uzoqiniseka ngesilimo esihle kanye nenzuo esiqinile. ↗

I-athikhili ibhalwe nguDktl. Johann Strauss,
uSosayensi: Izinhlelo Zokukhiqiza
Eziqinisayo, UMnyango weZolimo
waseNtshonalanga neKapa. Uma
ufuna iminininingwane egcwele thumela
i-imayili ku-JohannSt@elsenburg.com.

AbakwaGrain SA ba-inthavyuwa...uJafta Taso

UJafta Taso wasendaweni yaseSenekal esifundeni saseFreystata akasiye nje kuphela umfama osebenza ngokuzikhanda nangokuthembeka, kepha usephinde kabili isilimo sakhe eminyakeni emibili eyedlule. UJohan Kriel u-inthavyuwe uJafta enzela iPula/lmvula yakule nyanga.

Ngabe ulima kuphi futhi mangaki amahektha ovalimayo? Ulima ini na?

Ngilima endaweni yaseSenekal esifundeni saseFreystata. Uma sekuhlangene ngilima amahektha ayi-1 630 omhlaba. Ngitshala ummbila, ubhekilanga kanyenesoya, kantifuthingifuyenezinkomozenyama.

Ngabe yini ekuggugquze- layo/ekunika ugqozi?

Ngiggugquzelwa umsebenzi onzima futhi nonokuthembeka. Ngifuna ukuphumelela empilweni ngibe wutho olubalulekile. Ngifuna ukuqinisekisa ukuthi izingane zami zinekusasa kuleli li-zwekazi lethu.

Chaza amandla kanye nobuthakathaka bakho

Ngithola amandla kulabo abangesekayo. NginabakwaGrain SA, umqequeshi wami, umalume uFlip du Preez kanye namafama esibenzisana nawo, abenzozo kanye nalabo abasakhula, ukungisiza ngokungihola kanye nezeluleko ezinhle. Ngisebuthakathaka ngo-ba imishini yami midala kanti nemali yokuqala ukukhiquiza nayo kunzinyana ukuyithola. Nginenkinga futhi-ke yokusheshe ngithukutheli. Angizwani nje nhlobo nokusebenza ngokungazimisi.

Ngenkathi uqala ukulima sasingkanani isivuno sesilimo sakho na? Ngabe isivuno sakho singakanani manje?

Eningakusho nje kuphela ukuthi isivuno sami siphindaphindwe kabili eminyakeni emibili eyedlule. Isivuno sikabhekilanga wami sikhule kusuka ku-1,5 wamathani ihektha ngalinye kuya ku-1,9 wamathani ihektha ngalinye, kanti isivuno sommbila wami sona sesanda safika ku-4 wamathani ihektha ngalinye.

Ucabanga ukuthi ngabe yini ebe nomthelela kunqubekelaphambili kanye nesasasa lakho?

Uma ukwazi ukulalela izeluleko ezinhle, uthola ukueqeshwa okufanele bese uthola ukuvakashelwa njalo epulazini lakho kanti futhi wesekwe nangabantu abafanele uzokhula ube ngcono njalonjalo. Yilokhu uhlelo lokuThuthukiswa kwaMafama IwakwaGrain SA elikunika kona. Kepha kumele nawe usebenzise ulwazi lolu oluzuzile, uma ungenzi njalo ngeke Iwakusebenzela.

Ngabe uthole ingqequesho yiphi kuze kube namuhla? Ngqequesho yini ongathanda ukuqhubeka uyithole?

Ngiphothule la makhosi alandelayo: i-Introduction to Maize and Sunflower, i-Advanced Maize, iFarm Resource Management and Planning, i-On-farm Maintenance kanye neWorkshop Skills. Ngidina ukueqeshwa futhi nakuFinancial Management nakuLabour Relations.

Ngabe uzibona ukuphi eminyakeni emihlanu ezayo? Ungathanda ukuzuza ini na?

Eminyakeni emihlanu ezayo ngingathanda ukuzimela futhi ngingabi nasikweletu. Ngifisa ukuba ngumfama kanye nomuntu ongcono kunalokhu engiyikho khona manje. Uma kunjalo ngiyazi ngaphandle kokungabaza ukuthi impumelelo izolandela.

Ngabe ngesiphi iseluleko ongasinika amafama amancane asafufusa?

Ungalindi uHulumeni ukuthi azokusisa. Yenza into yakho. Thola abantu abazokweseka bese uyafunda kubona-ke. Buza imibuzo, lalela abanye abantu, hlobana namanye amafama bese usebenzisana nabo.

I-athikhili ibhalwe nguJohan Kriel,
UMqondisi wezeNtuthuko woHlelo
IwakwaGrain SA lokuThuthukiswa
kwaMafama. Uma ufuna
imininingwane egcwele thumela
i-imeyili ku-johank@grainsa.co.za.

Ukunciphisa ubungozi emijikelwezeni yezilimo zenzuzo



Ukncishiswa kobungozi kungabekwa njengokubonwa, ukubalwa kanye nokuhlawa kwalokho okungaqondakali kohlelo lokukhiquza olungaba nomthelela omuhle noma omubi ezinhlosweni ezmisiwe. Uma sekutholiwe lokho okungahle kube wubungozi, kuzobe-ke sekwaziwa futhi kuncishiswe, kubhekwe futhi kulawulwe lokho obekungaqondakali okungahle kube nomthelela emkhiqizweni noma enzuzweni.

Ukuhigizwa kwesilimo

Ukukhiqizwa kwesilimo kuyibhizinisi elinzima kakhulu elibhekene nezinselelo eziningi zokukhiqiza kanye nokungasimami komnotho okumele zibhekwe ikakhulukazi ngabalimi abakhiqiza izilimo ngaphansi kwezimo zalapha eNingizimu Afrika.

Umfama udinga amakhono amaningi emikhakheni eminingi yowlazi, efana nebhayolaji, i-agronomi, ulwazi Iwezemishini, ukuphattha kwabasebenzi, ukukhiqizwa kwestimo, uk-

nakelwa kwemfuyo, ukudayisa kanye nezomnotho, ukubala nje okumbadlwana, ukuze akwazi ukuba nebhizinisi lepulazi eliyisasasa. Wonke la makhono assetshenziswa emisebenzini eminingi nehlukene yokukhiqiza ebandakanyekayo ngesizini yokukhiqizwa kwsilimo unyaka wonke. Izinto ezibonwe njengalezi ezingahle zibe nobungozi kumele njalo zihlale ziqaishiwe uma sekuhlelewla isikhathi esizayo sokukhiqiza.

Uma uvuna izilimo zamanje kuyisikhathi esihle sokucabanga ngezifundo ezifundwe ngaphambilini ngesizini yokukhiqiza ukuze kuncishiswe ubungozi osebuboniwe noma obungahle buvele ohlelweni lwakho lokulima.

Eyona nto okumele kube yinhlosongqangi uma kuza ohlelweni olunempumelelo lokulima ukuhlelela ukuthola inzuso ephezulu kakhulu kepha kube nobungozi obuncane kakhulu ukuze kugwenye ukuba kungakhiqizwa isivuno esilindelekile kubuye kungatholwa futhi nenzozo enhle.

Izilimo okuyizona eziyimvama ekukhiqizweni kwezinhlamvu lapha eNingizimu Afrika

Umbekelolo kanye nephesenteji kokuphelele yezilimo ezikhqizwe lapha eNingizimu Afrika ibonakaliswa ku**Thebula 1**. Ulwazi lolu luqoqwe kuzilinganiso zezilimo zokugcina zeSAG/S.

Ithebulu 1: Umbekelelo kanye nephesenteji lezilimo ezinqala ezikhqizwa lapha eNingizimu Afrika.

Isilimo	Amanani omkhiqizo ngamathani ngyaka ka-2013	
	Amathani	% Umbekelelo
Isilimo sasehlobo		85,19%
Ummbilala	11,690,000	77,03%
Imbewu kabhekilanga	557,000	3,67%
Isoya	516,500	3,40%
Amakinati	46,900	0,31%
Amabele	62,620	0,41%
Ubhontshisi owomile	55,820	0,37%
Isilimo sasebusika		14,81%
Ukolweni	1,870,000	12,32%
Izinhlamvu ezibilsawayo	298,000	1,96%
Imbewu kawoyela wecanola	79,000	0,52%
Isamba	15,175,840	100,00%

Ithimba labahleli

GRAIN SA: BLOEMFONTEIN

Suite 3, Private Bag X11, Brandhof, 9324
7 Collins Street, Arboretum
Bloemfontein
► 08600 47246 ◀
► Fax: 051 430 7574 ◀ www.grainsa.co.za

UMHLELI OMKHULU

Jane McPherson

► 082 854 7171 ◀ jane@grainsa.co.za

UMHLELI UKWABA

Liana Stroebel

► 084 264 1422 ◀ liana@grainsa.co.za

IMIDWEBO, ISAKHIWO KANYE NOKUSHICILELA

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► 018 468 2716 ◀ www.infoworks.biz



IPULA IMVULA IYATHOLAKALA FUTHI NANGALEZI ZILIMI EZLANDELAYO:

Isizulu,

IsiBhunu, isiNgisi, IsiTswna, IsiSuthu,
IsiSuthu saseNyakatho, nesiXhosa.

Uhlelo IweGrain SA LokuThuthukisa amaFama

ABAQONDISO BENTUTHUKO

Danie van den Berg

Free State (Bloemfontein)

► 071 675 5497 ◀ danie@grainsa.co.za

Johan Kriel

Free State (Ladybrand)

► 079 497 4294 ◀ johank@grainsa.co.za
► Office: 051 924 1099 ◀ Dimakatso Nyambose

Jerry Mthombothi

Mpumalanga (Nelspruit)

► 084 604 0549 ◀ jerry@grainsa.co.za
► Office: 013 755 4575 ◀ Nonhlanhla Sithole

Naas Gouws

Mpumalanga (Belfast)

► 072 736 7219 ◀ naas@grainsa.co.za

Jurie Mentz

KwaZulu-Natal (Vryheid)

► 082 354 5749 ◀ jurie@grainsa.co.za
► Office: 034 980 1455 ◀ Sydwell Nkosi

Ian Househam

Eastern Cape (Kokstad)

► 078 791 1004 ◀ ian@grainsa.co.za
► Office: 039 727 5749 ◀ Luthando Diko

Lawrence Luthango

Eastern Cape (Mthatha)

► 076 674 0915 ◀ lawrence@grainsa.co.za
► Office: 047 531 0619 ◀ Cwayita Mpofyi

Liana Stroebel

Western Cape (Paarl)

► 084 264 1422 ◀ liana@grainsa.co.za
► Office: 012 816 8057 ◀ Melercia Kotze

Du Toit van der Westhuizen

North West (Lichtenburg)

► 082 877 6749 ◀ dutoit@grainsa.co.za
► Office: 012 816 8038 ◀ Lebo Mogatlanyane

Vusi Ngesi

Eastern Cape (Maclear)

► 079 034 4843 ◀ vusi@grainsa.co.za
► Office: 012 816 8070 ◀ Sally Constable

UKUNCIPHISA UBUNGOZI

Ukunciphisa ubungozi emijikelwezeni yezilimo zenzuzo

Njengoba kubonwa kuThebula 1, kuyabonakala ukuthi ukuncipha kokukhiqizwa kukakolweni omila ezindaweni ezomile endaweni ekhiqiza isilimo sasehlobo sekuholele ekubeni izwe lethu likhiqize kakhlulu izinhlamvu zasehlobo. Umkhqizo wesilimo sasehlobo usuwenza kufikela ku-85% wezinhlamvu zonke ezikhqiziwe uma kuqhathaniswa no-15% womkhqizo wezinhlamvu zasebusika.

Kuyabonakala ukuthi ummbila nguwona ohamba phambili ku-77% uma uqhathaniswa nezinye izinhlamvu.

Ezinye zezinto ezingahle zilethe ubungozi okumele uziqaphele

Izinto ezibalulekile uma kuza ekukhiqizeni okumele uziqaphele uma uhlelela ukunciphisa ubungozi bokuhlela ukukhiqiza isilimo somhlaba owomile zingafingqwa ngokulandelayo:

- Isimo sezulu esivamile endaweni yakho.
- Imvula ena isikhathi eside kanye nephethini yemvula engase ine epulazini lakho noma ohlelweni lwestilimo olwengeziwe.
- Uhlobo lomhlabathi kanye nokujula kwezipande okunamandla.
- Ukusetshenzisa kwengcebo yomhlaba kanye nepulazi okuphumelelayo nokuzimelele.
- Izindlela zokuthila okubalwa kuzo ukuthila okujwayelekile nokulondayo noma izindlela zokuthila ezisezingeni eliphansi.
- Izimila ezikhethwayo.
- Ubude besizini ukuze kutshalwe kahle.
- Izinga lemishini kanye nenhlanganisela efanele yamatraki kanye nama-implements ezovumela ukukhiqizwa kwestilimo okuza ngesikhathi futhi nokusebenzayo.
- Izinga lolwazi olunzulu ohlelweni oluhalanga-nyelwe lokulawula ukhula kanye nezinambuzane.
- Ukusetshenzisa komshwalensi wezilimo ngenhlosa yokuvimbela futhi nokugwema inhlekelele engalethwa wubungozi besichothono.
- Inhlaganisela yeziinhlobo zezilimo zasebusika nezasehlobo ezitshalwa ngokujikelezisa kwezilimo okuhleliwe ngenhlosa yokwenabesa ubungozi bomkhqizo nobezimali.
- Ikhono lokuhlelela phambili ukuze ukwazi ukuhlola izivuno zomkhqizo ngenhlosa yokuqinisekisa ukudayiswa kwestilimo ukuze uthole amanani amahle kakhlulu ezimakethe ngaleyosizzini.

Obunye ubungozi obungahlangani ngqo nomkhqizo singabala kubo ikhono lokuphatha, izinga lolwazi iwezelizimali ukuze kuhlolwe am-

gross margin ahlukene ahambelana nezinhlobo zeziinhlamvu zakho ohlelweni lwakho kanye nekhono lokuphatha abasebenzi abadingekayo emsebenzini omkhulu wokulima.

Ikhono lokukwazi ukuhlola izidingo zengomuso kanye nezinkambiso zamanani esilimo ngasinye esingakhiqizwa epulazini lakho, kubhekwa isioi sezulu kanye namandla omhlabathi, kuzoba nqala empumelelweni yangomuso yezemzimali zakho.

Enye nenyenyalobu bungozi obuphawulwenengnha kumele buhlukaniswe bese kubhekwa lapho kungaphuculwa khona uma kubhekwa insebenzo yangonyaka odlule. Umfama ngamunye uzokwazi izindawo lapho kumele aphucule kuzona indlela yakhe yokusebenza. Kungadingeka mhlawumbe ukuthi ubonane nochwephesheskulowo mkhakha ukuze ukwazi ukucubungula indawo ngayinye ngokwemininingwane.

Ukuhlelela ukujikelezisa kwestilimo

Amapethini emvula ene ngesizini edlule akhombise ngokusobala ukubaluleka bokujikelezisa isilimo uma kuhlelela ukukhiqiza isilimo senzuzo isikhathi eside.

Njengoba sibona kuThebula 1, lawo mafama asezindaweni ezikhqiza ngehlobo ezingafaki kuzo ukolweni emjikelezweni wokukhiqizwa kwestilimo wona angakhiqiza inhlanganisela yommbila, imbewu kabhekilanga, isoya noma amakinati. Uma izimboni zebiofuel sezingena ukukhiqizwa kwamabele kungabuye kufakelwe izibuko.

Uma ukolweni ukhokhelwa ngasendaweni yangakini ungfakwa emjikelezisweni wesilimo nalowo wamadleo ukuze kuncishiswe ubungozi bomkhqizo ohlelwe isikhathi eside.

Isiphetho

Ukucutshungulwa okuqaphile kobungozi endaweni ngayinye ebalulekile kanye nokutshalwa kwezilimo ezimbawla emjikelezweni wasehlobo nowasebusika kuzokwenza kube lula kuwena njengomfama ukuba wenabe ubungozi obhekene nabo futhi uqinisekise ukuthi ngokwezimali uzophila isikhathi eside.

*I-athikili ibhalwe ngumfama
osethathe umhlalaphansi.*

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