



GRAIN SA  
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# PULA IMVULA

## Lawula ukhula ukuze ulonde umswakama womhlabathi

*Iglyphosate kusoya emvakokuba iqhume.*

**ININGIZIMU AFRIKA YINDAWO EYOMILE FUTHI EN-  
GAKHIQIZI KAHLE. IMVULA KULE NDAWO YETHU INA  
EZINDAWENI EZIPHAKEME LAPHO KUKHIQIZWA KHONA  
IZILIMO NEHLOBO NASEBUSIKA UNYAKA NONYAKA. IM-  
VULA KULEZI ZINDAWO INA MAPHAKATHI KUKA-400 MM  
NO-900 MM NGONYAKA. INDAWO LENA EKHIQIZA ISIL-  
IMO SASEHLOBO EMPUMALANGA NESIZINDA SEMVULA  
KA-400 MM ITHATHWA NJENGENDAWO EFANELE UKU-  
KHIQIZA IZILIMO EZIMILA EMHLABENI OWOMILE.**

Umkhiqizo kakolweni wasebusika uye waletha imali eningi ngawo-1950 kuya ko-1980 kule ndawo eyaziwa ngezilimo zasehlobo. Ngenxa yokuthi ukolweni ubungeke wakhiqizwa ngehlobo ngaphandle kokuthi kungenwe ezindlekweni ezinkulu, ngawo-1980 amafama anquma ukukhiqiza izilimo zehlobo ezinjengombila, obhekilanga, amabele nesoya. Lokhu bakwenza ngaphansi kohlelo lokujikelezisa olubizwa ngerotation system.

Umkhiqizo wasebusika kakolweni wancishiswa ngaleyo ndlela, amafama amaningi ase eqala ukukhiqiza izilimo zasebusika nezasehlobo. Lokhu kwaholela ekutheni umhlabathi owawusuphelelwa ngamandla okukhiqiza usetshenziswe njengamadlelo, okusho ukuthi amafama aqala manje ukufaka imfuyo njengengxene yomkhiqizo wawo.

Enye yezinto ezaholela ekukhiqizweni kukakolweni ebusika ngalezo zinsuku wulwazi olwatholwa lokonga umswakama ngenkathi kuna izimvula zasehlobo ukuze usetshenziwelwe izikhathi ezibucayi zesomiso.

Lokhu kwenzeka ngokuba kulawulwe ukhula kusetshenziswa amakhemikhali. Ngokwenzenjalo umhlabathi wakwazi ukumunca amanzi amaningi uwamuncela emathunjini awo ukuze ongeke.

Ukulondolozwa noma ukongiwa komswakama kubaluleke kakhulu ekukhiqizweni kwesilimo esilandelayo ngokushesha uma isilimo sasebusika noma sasehlobo sesivuniwe. Lapha siyabona ukuthi ukolweni oyesilimo sasebusika ukhiqizwa ngaphandle kwemvula ngezikhathi zasebusika.

### Ukukhiqizwa kwezilimo zasehlobo

Indlela esetshenziswa ukonga umswakama ebusika, yiyona ndlela futhi ebalulekile nengasetshenziswa ukonga umswakama emvakokuvuna ehlobo ngezikhathi zoMashi kuya kuJulayi. Kanti kufika ku-Okthoba unyaka nonyaka ezimileni zasehlobo ngenkathi umhlaba ungakatheli.

Umswakama otholwe ezimvuleni zehlobo uyongeka emathunjini omhlabathi ngenkathi kuphulwa umhlabathi emathunjini ezikhathini zokuphela kukaJulayi kuya ekuqaleni kuka-Agasti. Umhlaba lona uphulwa kusetshenziswa amathayini.

Incwadi yeGrain SA  
yabalimi abasakhulayo

## FUNDA NGAPHAKATHI!

- 4 > Yazi isitshalo sakho sommbila – amazinga okukhula (Ingxenywe yesi-2)
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## Ugogo Jane uthi...

Uma ufunda lesi siqeshana, uzobe usuqedile ukutshala, ukuchelela nokuhlwanyela umhlaba wakho usulindele nje ukuthi uzitike ngezithelo zomsebenzi wakho onzima wezandla owenze ngehlobo. Kuzo khona izindawo lapho izilimo zizoba zinhle kakhulu, kanti – ke ezinye zizobe zithole imvule encane noma eningi kakhulu. Yikho-ke ukulima lokho!

Nkathi zonke zonyaka kumele sikhumbule njalo ukuthi njemefama sisebhizinisini, ngakho-ke kusemqoka kakhulu ukuthi siphathe konke okuphathelele nenkambiso yepulazi ngobukhulu ubuhlakani. Kubalulekile ukuphatha ezezimali, abasebenzi, imishini, ezokudayisa, imfuyo kanye nayo nayo yonke impahla yemvelo onayo. Akukho okungazenzakalela ebhizinisini okusho ukuthi kumele wenze izinzame, sebenza wenze okuhlelele, buyekeza osukwenzile bese ubuya uhlela futhi. Yindilinga engapheli ebuyekezeke njalo.

Silindele manje ukuza kobusika kanti-ke kumele sicabanga kanzulu ngemfuyo yethu nokunakekelwa kwayo ngokudla njengoba amakhaza esendleleni. Khumbula ukuthi ezindaweni lapho izimvula ziye zabambezeleka khona angeke kube notshani behlathi obanele ebusika. Izilwane zinakekelwa yithina, ngakho-ke kumele siqinisekise ukuthi ziyadla. Uma ngabe ubungakenzi amalungiselelo afanele kungcono ukuthi uthengise ezimbadlwa zazo kunokutshi uzibuke zibulawa yindlala noma isomiso.

Sinethemba lokuthi amanani ezilimo angeke akhuphuka noma ehle, nokuthi nizothola umvuzo omuhle ngendima eniyidlalile ekukhiqizeni nasekuqinisekiseni ukuthi umhlaba unokudla, ekugwemeni ububha nasekwakheni amathuba emisebenzi. Ingathi nonke ningabusiseka emizameni yenu yokondla nkwembathisa isizwe.

## Lawula ukhula ukuze ulonde umswakama womhlabathi

Lesi sinyathelo sokulungiswa komhlaba singaqinisekisa ukuthi ukuhlwanyela kokuqala okubekelwe isilimo sehlobo kuqhubekela phambili ngesikhathi esifanele ngaphandle kokuba kulindwe izimvula zokuqala zikaNovemba kanti kweminye iminyaka zinokufika emvakwesikhathi esilindelekile.

Isidingo sokuba kumiswe kancane ukutshala izilimo zasehlobo ngesikhathi esifanele, singebe khona inqobo nje uma kungasetshenziswa izindlela ezifanele zokulungisa umhlabathi kanye nendlela efanele yokubhekana nokhula.

### Izimo zomhlabathi ezimelana nokongeka komswakama emhlabathini

Kubalulekile ukuba kubhekwe izimo zomhlabathi ezenza kungabi lula ukuba umhlabathi wonge umswakama. Uma ngabe ukulawulwa kokhula kuyiyona ndlela okubonakala efanele isetshenziswe, kubaluleke kakhulu ukuba kwaziwe ukuthi nhlobonzi yomhlabathi, ikhakhulukazi umhlabathi wangaphezulu osetshenziselwa izilimo efamu lakho.

Imihlabathi yakhiwe yizingxube ezahlukene zenzhlanganisela engenhla, kanti-ke yehlukaniswa kuya ngenani lesihlabathi, udaka noma ubumba oluqukethwe.

Inani lamanzi emhlabathini nalo liya ngesilinganiso sesihlabathi, udaka noma ubumba oluqukethwe kumaleya ahlukene izimpande zesilimo noma zokhula okumele zingenele kuwo esikhathini sonyaka.

Uma izinga lamanzi emhlabathini seliingene lisesimeni esigculisayo emvakwezimvula, amanzi angamuncwa yisitshalo aziwa njenge*plant available water*. Ngokomthetho lamanzi ayingxenye yamanzi angagcinwa yilolo hlobo lomhlabathi.

Amanzi angagcinwa wumhlabathi ogcwele isihlabathi wu-40 mm imitha ngalinye, umhlabathi osabumba wona ugcina u- 80 mm imitha ngalinye, kanti umhlabathi osadaka wona ugcina u-150 mm imitha ngalinye.

Asithathe ukuthi mhalwumbe izimpande zesilimo zikhula emhlabathini ojwayelekile ku-1m ubudepho, sithathe namaleya omhlabathi isitshalo esimila kuwona; umhlabathi ungagcina u-135 mm noma ngaphezulu we*plant available water*.

Uma kuqhathaniswa nemvula yonyaka yama-650 mm, amanzi agciniwe enza ama-20% kuya ku-25%, kanti futhi enza umehluko phakathi kokukhulisa isilimo ngempumelelo noma ukwehluleka nhlobo ngonyaka owomile, kuya namaphethini emvula ngalowo nyaka. Lesiphethu samanzi singasiza isitshalo ukuba siphile kuze kune imvula ngokuzayo. Ngakho-ke, amafama kumele ababele ukwonga lo mswakama njengoba ulusizo olukhulu.

### Ukulawulwa kokhula ukuze kongiwe umswakama

Ukulawulwa kokhula ezinhlelweni ezahlukene zokulima ngenye yezinto ezibalulekile ohlelweni lokonga umswakama.

Ukhula yileso sitshalo esingafuneki lapho kukhiqizwa isilimi esithile. Iisibonelo, ubhekilanga omila emhlabeni wommbila ungathathwa njengokhula kumbandakanya nezinye izitshalo ezimila ngokwemvelo.

Kufana nezinye izitshalo, ukhula nalo lusebenzisa umswakama omningi womhlabathi luwuphefumulele emoyeni uma lukhula. Lokhu kungaholela ekungcipheni kwesivuno sezilimo ngo-50% uma kunesomiso.

Olunye lokhula olujwayelekile olumila njalo onyakeni kanye nezilimo lungasebenzisa isilinganiso samanzi aphindwe kathathu ukukhiqiza ikhilogramu nje lesilimo esomile kuhle kwezilimo ezijwayelekile. Isibonelo, izinhlobo zepigweed (*irooimisbredie* noma *i-amaranthus*) zingasebenzisa amalitha angama- 630, bese iwhite goosefoot (*iwithondebossie* noma *ichenopodium*) isebenzise amalitha ayi-1 700 uma umhlabathi uphefumula ukukhiqiza ikhilogramu eli-1 lotho olomile ngaphezu komhlaba.

Uma siqhathanisa, amalitha amanzi adingekayo ukukhiqiza ikhilogramu eli-1 lotho olomile ngaphezu komhlaba wezimila ahamba kanje: amabele u-670 wamalitha, ummbila u-770 wamalitha, ukolweni u-1 160 wamalitha, ubhekilanga u-1 400 wamalitha, i-oats u-1 300 wamalitha bese kuthi isoya u-1 400 wamalitha.

La manani okusetshenziswa kwamanzi asho ukuthi amalitha ayizigidi ezingu-2,3 e*plant available water* ihektha ngalinye iphefumulelwa emoyeni ukuze kukhiqizwe isilinganiso sezinhlamvu zesilimo sommbila ezingamathani ama-3.

Yingakho-ke kubaluleke kakhulu ukugcina imvula eba khona Ngezikhathi zoMashi kuya ku-Okthoba ukuze kuqinisekiseke ukuthi imvula edingekayo ngaphambi kokutshala ingcane. Lokhu kuzonceda ukuba ukutshala kuqale ngesikhathi, kungabambenzeleki yizimvula eziza emvakwesikhathi.

Amafama aluka izinsalela zezitshalo kakhulu, noma angazange athine ukuze kuqaquluke umhlabathi uthole umoya ngesikhathi onyakeni awakwazi ukutshala ngesikhathi. Lokhu kubaluleke ikhulu ngesikhathi sokukhiqiza isoya, lapho ezinye izitshalo zincama ukutshalwa ngo-Okthoba noNovemba ezindaweni eziphakeme.

Ehlobo, ngesikhathi lapho ukhula lumila khona kakhulu, ezinyangeni zika-Agasti lapho kune mimoya eminingi kuya ku-Okthoba okuyinyanga eshisayo, isilinganiso sokhula sokuphefumulela amanzi sibalelwa ku-5 mm kuya ku-15 mm ngosuku. Wonke umswakama owongiwe ungaphela ezinsukwini eziyi-9 kuya kwezingama-27.



*Iglyphosate ethelwe u-1,5 wamalitha ihektha ngaphambi kokuhlwanyela isoya.*



*Imiphumela ikhombisa ukulawulwa kokhula okunempumelelo kusetshenziswa inhlanganisela yamakhemikhali axutshwe ngesulcotrione ne-atrazine emva-kokuhlwanyela. Istubble mulch tyne ihlinzekwe kanye kuphela ngo-Agasti ngaphambi kokuba kutshalwe.*

Esigabeni sokuqala sokukhula kwesilimo, yilapho kuba khona nomncintiswano omkhulu phakathi kwesilimo nokhula zilwela umswakama okhona emhlabathini, ikakhulukazi umsoco nezakhamzimba.

Ukhula luvame ukusinciphisa kakhulu kakhulu isivuno emavikini amabilli kuya kwamathathu okukhula kwesilimo.

### Ukuphatha kusetshenziswa imishini

Kule ngxoxo engenhla kuyacaca ukuthi kubalulekile ukulawula ukhula ukuze kugcinwe umswakama osemhlabathini. Ukhula lungalawuleka ngokufanele ngokusebenzisa amakhemikhali noma izindlela ezivamile zokunakekela umhlabathi.

Sekucacile ukuthi izindlela zokunakekela nokulungiselela umhlabathi zingasetshenziswa ukulawula ukhula kanti futhi kuvundise nomhlabathi ongaphezulu. Lokhu kushaya izinyoni ezimbili ngetshe elilodwa ngoba kulawuleka ukhula bese kugcinwa nomswakama womhlabathi ngasikhathi sinye.

Uhlelo lokulungisa umhlabathi ngenhloso yokuwunakekela lungaphothulwa ngokusebenzisa inhlanganisela yamastubble *mulch tyne* namasweeps noma inhlanganisela yokunakekela umhlabathi namakhemikhali alawula ukhula.

Isikhathi sibaluleke kakhulu ohlelweni lokulungiselela umhlabathi nokusebenzisa amakhemikhali ngenkathi umhlaba ungakalinywa. Uma umhlabathi uzolungiswa kube ngu-200 mm kuya ku-250 mm westubble *mulch tyning* noma *ideep ripping* ezimileni zasehlobo, kumele kube uJulayi singakafiki isikhathi sokukhiqiza. Lesi sikhathi singaguqulwa ukulungisa umhlabathi lapho kutshalwa khona obhekilanga noma isoya masinya nje kuqedwa ukuvunwa, ngaphandle kokuthi izinsalela zezitshalo zisazosetshenziswa okwesikhashana. Umhlaba wommbila uvunwa kamuvana, ngakho-ke ukulungiswa kwawo nakho kungaqala kamuvana, kungajahwa.

Khumbula ukuthi imfuyo ingawugqisha umhlabathi ezinyangeni zozasebusika uma ngabe izinsalela zezitshalo zisetshenziswa umhlabathi usemanzi. Kaningi-ke, ezinye izindawo zinokuthola imvula ephakathi kuka-25 mm no-50 mm ngoJulayi. Uma ngabe umhlabathi ugqishelene kakhulu kungalindeleka ukuba amanye amanzi agelezele emifuleni angazinzi emhlabathini.

Sekutholakele ukuthi *ichisel operation* ingaholela ekulahlekeni komswakama ongange-12,5 mm, bese isweep share operation yona iholele ekulahlekeni kwe-4 mm yomswakama emhlabathini ongaphezulu. Kubalulekile ukuhlolisisa ukuthi ngabe udinga ukwenzani ukuze uqale ukulungisa umhlaba wakho ngendlela efanele kanye nokulawula ukhula ngokunempumelelo.

Kubalulekile futhi ukugcina izinsalela eziningi ngokwanele phezulu komhlabathi, nokukhumbula ukuthi ngisho nangechisel operation enamphoyinti aqondile, u-25% wezinsalela zangaphelu uyangenelela njalo uma kuhlakulwa. *Amatandem disc implements* abekwe ku-150 mm wona-ke angahlanganisela u-90% wezinsalela zesitshalo. Ngokwenzenjalo umhlabathi usala unqunu futhi usengozini yokugqishelwa nokukhukhulwa amanzi nomoya. Izinsalela zezitshalo phezu komhlabathi zisiza ekug-

cineni umhlabathi upholile. Ngaleyo ndlela umhlabathi awomi, amanzi emvula awagelezi, kanti-ke nokhula alumili kalula.

Ngenkathi kusetshenziswa amathayini, kungaba yicebo elihle ukucela loyo omqashele ukuvuna ukuthi asebenzise isisiki sezinsalela ukuze kusikwe izimila zibe yizinqamu ezimfushane. Lokhu kusiza ngenkathi kuzolinywa uma ngabe kukhona izinsalela ezingasetshenziswa kusilimo esilandelayo.

*Amacrop rotations* ahleleke kahle asiza ekunqandeni ukunqwabelana kwezimbeni eziningi zokhula, futhi kulawule nezinhlango zokhula ehlobo nasebusika ngezikhathi lapho kungakatshalwa.

### Ukuphatha kusetshenziswa amakhemikhali

Ziningi izingxube zamakhemikhali ezingasetshenziswa kanye nohlelo oluphelele noma olungaphelele lokulungisa umhlabathi ngesikhathi umhlabathi ungakahlwanyelwa. Lezi zingxube zingasetshenziswa futhi njengesandulela-sitshalo ngesikhathi sokutshala nanoma sekutshaliwe. Indawo nendawo yokutshala kanye nomfama ngamunye unendlela thizeni eyahlukile ayisebenzisayo efanele isimo sakhe sokulima.

Kubalulekile njalo ukuba ubonane nosolwazi kwezamakhemikhali ngaphambi kokuba usebenzise ikhemikhali nanoma yiliphi.

Ukusetshenziswa kweglyphosate (Roundup) kungaba yisikhali esihle kakhulu kuhambisana nommbila oguqulwe *trans genetically* kanye nezinhlango zesoya nje *preplant weed control* emvakokuthina ngoJulayi, lapho izinga lokushisa lomhlabathi nelmoya ligququzele ukukhula kokhula ngo-Okthoba. Uma kutshalwe izinglobo zesilimo eziguqulwe *genetically*, kuzodingeka kuchelelwe futhi ngeglyphosate emvakokutshala ukuze kulawulwe ukhula olungamila emvakokutshala.

Amanye amakhemikhali angasetsheniselwa ukulawula ukhula ngenkathi kungakahlwanyelwa yi *Gramoxone ne-Paraquat*. Lawa amakhemikhali anganayo iglyphosate, amanon-glyphosate based chemicals. Izithombe ezingenhla zikhomba osekusebenze ngempumelelo.

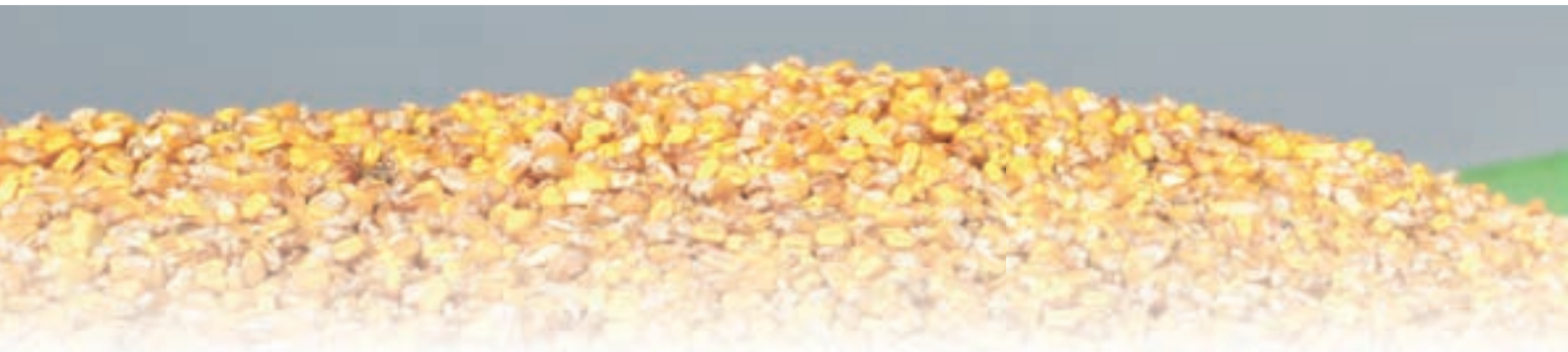
Imvula ene emvakokuvunwa kukasoya ibingu-30 mm phambilini nasemvakwestubble *mulching*, no-20 mm kufikela nasemvakokuhlwanyela, bese kwengezelela ngo-16 mm ezimileni esezitshaliwe.

Isilinganiso seglyphosate samalitha angu-1,5 ihektha sibiza cishe uR70 wamakhemikhali odwa, bese kuthi ingxube ye *non-glyphosate chemicals* esetshenziswa ukulawula ukhula ezitshalweni zombila yona ibize uR320 ihektha.

Njengoba kubonwa kusoya, inhlanganisela yokugcina izinsalela phezu komhlabathi kanye nokulawula ukhula ngendlela efanele ngenani elihle, nokugcinwa komswakama ofanele womhlabathi kufinyelelwe ngempumelelo.

Imiphumela ekhonjise ezithombeni ezingenhla ikhombisa ukulawulwa okuyikona kokhula, kuhlanganisa namakhemikhali aqukethe *isulcotrione ne-atrazine* emvakokutshala. Kwenziwe *istubble mulch tyne* operation eyodwa ngo-Agasti ngaphambi kokutshala.

### UMNIKELI KUPULA/IMVULA



# Yazi isitshalo sakho sommbila – amazinga okukhula (Ingxenye yesi-2)

**KwiPULA/IMVULA YANGOJANUWARI KA-2013, SIYE SAHLOLA AMAZINGA OKUKHULA ESITSHALO SOMMBILA. ENGXENYENI YESI-2 SIZOHLOLA AMAZINGA OKUKHULA ESITSHALO SOMMBILA ESIGABENI SOKUTHUTHUKA KOMNYOMBO.**

## R1 – Ukusikika (*Silking*)

Manje isitshalo sommbila sesinezinsuku ezingama-The **55 kuya ku-66 sihlumile**. Amasilika asewabonakala kanti-ke sekuzoqala nokuqhola. Amasilika akhula abe ngamasentimitha ama-2 kuya kwama-3usuku nosuku. Izinhlamvu zeqhola ezehla ngesilika bese zichamisela iqanda, ziveze umnyombo.

Kuthatha izinsuku ezi-2 kuya kwezi-3 ukuze wonke amasilika asekhambeni elilodwa lommbila avele bese eqholeka. Lesi yisikhathi esibucayi esitshalweni, kanti futhi kubalulekile ukuba isitshalo singahlukumezeki ngesikhathi sokuqhola. Umthelela wokuhlumezeka kungaba wukuncipha okukhulu kwezithelo ngesikhathi sokusilika.

## R2 – Isilonda

Lesi sigaba senzeka emvakwezinsuku **eziyi-10 kuya kweziyi-14 emvakokusilika**. Iminyombo emisha imhlophe kanti ibukeka njengezilonda ezin-

cane esikhwebini. I Isikhwebu sizobe sesicishe safinyelela esilinganisweni saso esiphelele, bese amasilika aseqala ukoma abe luthuthu. Iminyombo ingena esigabeni lapho ikhula khona ngokushesha, lapho izimbewu seziqala ukugcwala. Sekuqala ukuba nesitashi ngaphakathi kweminyombo.

## R3 – Ubisi

Emvakwezinsuku ezingama-**20 zokusilika, iminyombo izoqala ukuba phuzi esikhumbeni sangaphandle**, kepha izohlala njalo inoketshezi olusabisi, okuyitashi esgcwalisa umnyombo. Manje unyombo usunamaphesenti angama80 omswakama. Iningi lemnyombo isiyakhula, amaseli wona ayanda kanti nesitashi naso siyaqokelelana.

Ubisi lubonakala kahle e esikhwebini sommbila ophuzi. Kulesi sigaba abenzi besileji (*silage*) baqala ukuhlola umkhiqizo ukuba ngabe usulungile. Kulesi sigaba umthelela wokuhlukumezeka awubi namandla atheni, kepha umkhiqizo ungancishiswa yinani lemnyombo ekhula kahle, kanti nesisindo esiphelele somnyombo singathinteka. Izimpande zona azisakhuli kufana nakuqala.

## R4 – Inhlama

Emvakwezinsuku ezingama-**26 emvakokusilika** iminyombo ingena esigabeni sobunhlama lapho ingaphakathi lomnyombo lishuba libe



Amazinga okukhula esitshalo sommbila esigabeni sokukhula komnyombo.



## References

Grain Fill Stages in Corn by Bob Nielsen,  
Pest and Crop July 2007, Purdue University.



sanhlama. Izinga lesitashi liyakhuphuka bese umswakama ngaphakathi komnyombo uncipha, kuthi eminye yeminyombo ikhombise izimpawu zokuhuzuka lapho ifa khona ezihlokweni.

### R5 – Ukuhuzuka

Lesi sigaba siqala ezinsukwini ezingama-36 emvakokusilika, kanti cishe zonke izinhlamvu zibonisa izimpawu zokuhuzuka. Izinhlamvu lezi ezomayo ziba noqweqwe oluqinile ngaphezulu. Lo mugqa omhlophe owaziwa njengomugqa wobisi (*milk line*) noma umugqa wesitashi (*starch line*) ukhuphukela phezulu ohlamvini bese luyakhula. Izinga lomswakama ezinhlamvini usuyehla manje, ususemaphesentini angama-55% kulesi sigaba. Yonke iminyombo kumele ibe isihuzuke ngokwanele ezinsukwini ezingama-48 emvakokusilika, kanti iminyombo isikhulile manje.

### R6 – Ukukhula komzimba

Emvakwenzinsuku eziphakathi kwama-55 kuya ku-60 emvakokusilika iminyombo izobe isifinyelele esisindweni sokoma esiphezulu. Ulayini wesitashi uzobe usufinyelele esiqongweni somnyombo, kanti futhi lapha umnyombo uyobe usukhule ngokwanele. Ukuvuna kwesileji kumele ngabe kuqale ngaphambidlana kepha kuzobe kungakabi yisikhathi esifanele sokuvuna ukuba kusadingeka ukuba kome. Amahlamvu kanye namaqabunga azoqala ukuba nombala thizeni kanti isiqu sona sizobe njalo siluhlaza. Izinga lomswakama amaphesenti angama-20kuya ku-26, kanti-ke nezinhlamvu zisadinga ukuba zome ukuze zilungele ukuvunwa. Lokhu kwenzeka lapho sekufinyelele ezingeni lomswakama elingamaphesenti angama-14, lapho-ke amasilo azobe eselungele ukwamkela isivuno esizobekwa.

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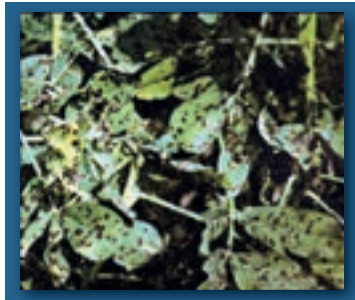
# Izimbewu zikawoyela nezamaphrotheni

## Phathrola isilimo sakho samakinati ungazuthi uyiphoyisa

**KUKHONA IDLANZANA LEZINAMBUZANE NEZIFO EGATHELELA ISILIMO SAMAKITANI, ZIPHAZAMISE ISIVUNO ESIHLE, ZINTSOTSHE NENZUZO YAKHO. UMLIMI NGAMUNYE KUMELE ATHATHE ISIKHATHI SOKUHAMBA PHAKATHI NEZITSHALO NGESIKHATHI SOKULIMA, EQINISEKISA UKUTHI AKUKHO ZINAMBUZANE NOMA IZIFO NA.**



Amachashaza ansundu emaqabungeni azungezwe yindilinga ephuzi, awuphawu lokuchazaleka kwamasishane.



Ukugqwala kuba yiqoqo lamachashaza asawolintshi ngombala aqala avele endaweni ephansi lapha eqabungeni bese landa liba yiqoqo lamachashaza abomvana.

Ukuphathrola ngalendlela kusho ukuthi izinkinga zizobonwa futhi zitholakale masinya ukuze kwazeke ukuthi ngabe ungakanani umonakalo eseziwenzile. Umlimi-ke useyosebenzisa lolu lwazi ukuthola usizo kosolwazi ukuthi angayixazulula kanjani le nkinga!

Izifo zamakinati zivame kakhulu ukulimaza amaqabunga noma amaphodi, ngakho-ke hlola ngokucophelela ensimini. Izinambuzane ezifana nomuh-lwa nazo zingahlukumeza isilimo sakho samakinati. Ukuya nge-ARC-Grain Crops Institute yasePotchefstroom, izifo ezivame kakhulu kusewukuchaphazeleka kwamaqabunga amasha neSclerotium stem rot. Zombili lezi zifo kunzima ukuzilawula, kanti zibonakala kakhulu lapho isimo sezulu sifudumele nomhlaba umanzi.

### Izifo okuyizona ezijwayelekile

#### **Ukuchashazeleka kwamaqabunga kwamasishane nokwasemuva kwesikhathi**

Ukuchashazeleka kwamasishane kubonakala ngamachashaza ansundu emaqabungeni. Lamachashaza avame ukuzungezwa yindilinga ephuzi. Lesi sifo singabonakala emvakwezinsuku ezingama-30 emvakokuhlwaneyela. Kuba neqoqwana loboyana obuyisiliva ngaphezu kweqabunga, elibonakala nje uma usebenzisa ingilazi yokubuka ngexxa yobuncane balo.

Ukuchashazeleka emvakwesikhathi akuvamile. Amachashaza aba wumbala onsundu ocishe ube manyama. La machashaza atholakala ngaphansi kweqabunga. Lezi zifo zamaqabunga amakinati zenziwa yizinhlobo ezimbili zefungi. Zombili ziphila kahle lapho kunomswakama khona. Umphumela walesi sifo kuba ukuwa kwamaqabunga okuholela ekulahlekelweni ukudla kwezilwane, njengoba la maqabunga asetshenziswa njengokudla kwezilwane.

Uma ubheka ukushintsha kwesimo sezulu ngokukhula ukucophelela, uzokwazi lapho kumele usiqaphele lesi sifo ngoba siphila lapho kunomswakama khona. Yana kusolwazi wamakhemikhali akuyalele ngomuthi ofanele, ongawusebenzisa ukuchelela insimu yakho.

#### **Ukugqwala emakinatini**

Ukugqwala akusilungelanga isilimo samakinati ngoba iholela ekuncipheni okukhulu kwesivuno, ikakhulukazi uma ngabe isilimo besesihlaselwe yilezifo ezimbili zokuchashazeleka kwamaqabunga.

Ukugqwala kuvela njengeqoqo lamachashaza asawolintshi abizwa ngamapustules, avame ukuvela kuqala engxenyeni ephansi yeqabunga. Lamachashaza ayanda ke abe bomvana abe eseyiqoqo elibizwa ngamaspores. Amaqabunga ahlaselwe yilesi sifo wona awavamile ukuwa, kepha ayashwabana, ome noma esanamathele esitshalweni.



Izitshalo zonke ziyachaphazeleka uma izimo zivuma, zifudumele futhi zinomswakama. Ukuheleza komoya noma iconsi lemvula. Ngisho ne-sinambuzane sisuka esitshalweni esithize siya kwesinye, lokhu konke kuyasandisa lesi sifo. Kukhona-ke amakhemikhali anzelwe ukumelana nalesi simo. Ngakho-ke uma ususiqaphelisisile ezitshalweni zakho, xhumana nosolwazi ukuze uthole ukwelulekwa ngekhambi elifanele.

### **Izinambuzane ezijwayelekile**

#### **I-afidi**

Ama-afidi avame emakinatini amnyama, amanye ansundu ngombala. Angu-1,5 mm kuya ku- 2 mm ngobude. Lesi yisinambuzane esiyingozi kabi. Asipheleli nje ekumunceni amanzi esitshalo, kepha saziwa futhi ngokuthwala amanye amagciwane afana *nerosette virus* disease. Iyinkinga enkulu kubakhiqizi bamakinati ngoba inciphisa isivuno samakinati. Ibonakala ngamaqabunga anamabala, ajijekile futhi angenasimo, kanti nesitshalo naso sibukeka singakhulile kahle.

Umkhuba lo we-afidi wokumunca amanzi esitshalo uholela emaqabungeni abolayo bese eyawa. Isitshalo angeke sakhula kahle, kanti namaqabunga nawo alahlekelwa umbala wawo esimeni esibucayi. Ama-afidi adla nanoma eyiphi ingxenye yesitshalo – amaqabunga, iz-

iqu nezimpande. Isitha se-afidi umagogo. Uma ama-afidi angancishiswa kuza omagogo abanengi abazozitika ngama-afidi. Kepha-ke uma ngabe esemaningi okwesabekayo ama-afidi, thola izeluleko wazi ukuthi kumele usebenzise liphi ikhambi.

#### **Umuhlwa**

Umuhlwa wande kakhulu ezindaweni ezomile. Umuhlwa uhlasela izilimo emazingeni wonke okukhula. Uhlasela kakhulu izimpande. Ukwelashwa kwembewu ngaphambi kokuba ihlwanyelwe kungasiza ukuvimba lesi sinambuzane, kepha lapho isifo sesisiningi kungasetshenziswa amakhemikhali ukusilawula ngendlela efanele. Ukuya nge-ARC-Grain Crops Institute, umonakalo oehlwa umuhlwa uba mubi kakhulu lapho isikhathi sokutshala sesiphela sekulungiselelwa ukuvuna. Ngalesi sikhathi isomiso naso sidlala indima ekugquzeleni lesi simo.

Uma ngabe ufuna ukukhulumisana ngezikhatho zakho mayelana nezinambuzane kanye nezifo zamakinati, ungaxhumana noNksz. Alana Pretorius noma uNksz. Lorraine Solomon e-ARC-Grain Crops Institute. Xhumana nabo ku: (018) 299-6100.

**JENNY MATHEWS, UMNIKELI KUPULA/IMVULA**

***Hlasela ngamandla ushabalalise lamasela amancane ngobukhulu ubunonyinco.***



# Hlola impumelelo noma ukwehluleka kwesilimo sakho

**UMSEBENZI OBALULEKILE KAKHULU WOKUMENENJA WEFAMA UKUQAPHA NOKUHLOLA. LAPHO ISILIMO SESIKHULA, KUMELE KUHLOLWE IMPUMELELO NOMA UKWEHLULEKA UKUZE KUNGAPHINDWA AMAPHUTHA ESIKATHINI ESIZAYO.**

Kumele sizibuze le mibuzo elandelayo:

- Ngabe ngiwafinyelela amagoli ami na?
- Ngabe ngenza izinto ngobunoncinyo futhi nangendlela eyonga imali ngokufanele na?
- Ngabe bengenxa izinto ngendlela eyiyo na?

Umbuzo obalulekile okumele sizibuze wona ukuthi: Ngabe ngikuthathele ekhanda loku okulandelayo?

## **Ukukhetha insimu – Ngabe ngisebenzise insimu efanele ukutshala isilimo sami?**

Obhekilanga baqhuma kahle ezinhlotsheni ezakhekene zomhlabathi kanye nezimo ezahlukene, kepha insimu kumele ikhethwe ngokukhulu ukucophelela. Ngabe ngiye ngenza *icrop rotation* na? Amathuba ezifo kanye nokhula ayanda ngaphansi *kwemono-cropping*, abuye anciphe ngaphansi *kwecrop rotation*. Obhekilanga bayazwela kakhulu *kumaresidual herbicides* asetshenziswe ezikhathini ezedlule ngoba uyisilimo esinamaqabunga abanzi. Ngakho-ke kubalulekile ukwazi umlando wefield *herbicide* esetshenzisiwe. Obhekilanga bamila kahle kakhulu ngaphansi *kweresidual fertiliser* yezilimo ezedlule – ikakhulukazi ummbila noma aman-dongomane – ngakho-ke kuwumqondo omuhle ukwenza *icrop rotation*.

## **Umhlaba wembewu (iseedbed) – Ngabe umhlaba wembewu ulungiswe ngokufanele na?**

Obhekilanga akumele batshalwe emhlabeni osanda kulinywa ngoba badinga umhlaba oqinile obulinywe ebusika, wadiskwa waphulwa ngaphambi kokuh-

lwanyela. Obhekilanga bamila kahle emhlabeni *ochisel-ploughed* noma *ovi-bro-flexed*, ngoba lemhlaba yembewu ivame ukuqina kunomhlaba olinyiwe.

## **Ubudepho bokutshala – Ngabe ubudepho bufanelekile na?**

Izimbewu zikabhekilanga zitshalwa emhlabeni oongajulile. Uma ngabe umhlabathi uwubumba kakhulu, izimbewu zitshalwa ku-25 mm, kanti uma umhlabathi uyisanti izimbewu zitshalwa ku-50 mm.

## **Inani lembewu – Ngabe isizinda sami sinjani?**

### **Ngabe isilinganiso somshini wami wokulima siqondile na?**

Kumele usebenzele ukulima izitshalo ezingama- 35 000 ihektha ngayinye.

## **Ukwehlukaniswa kwembewu – Singakanani isikhala phakathi kwezitshalo? Ngabe umshini wami wokulima unedepth control mechanism enhle? Unamapress wheels na?**

Izinto zokusebenza kanye nesilinganiso kumele kuhambisane ukuze kuqinisekise ukuhlungana okuhle kwembewu nomhlabathi (*seed-to-soil contact*).

## **Ngabe umshini wami wokulima ulungiswe kahle na?**

### **Ngabe umlungisi womshini wokulima uye wahlola ukuthi amaplates ahlanzekile na?**

Izilimo zakudala nezinsalela zokhula zivimbanisa amaplates omshini wokulima, zivimbezele nokwabeka kwembewu ngendlela efanele.

## **Ukuvela kwembewu – Ngabe angakanani amaphesenti okuvela kwembewu?**

Obhekilanga kumele babe duse ndpoted ezinsukwini ezi-3kuya kwezi-4 emvakokutshalwa ukuze kuxegiswe umhlabathi njengoba izimbewu zigqishelana.







### ***Kube khona uqweqwe na? Ngenzeni ngalo?***

Uqweqwe phezu komhlabathi luvame ukuveza ukungalingani noma izikhala. Izimvula ezinkulu nalezi ezina ngamandla ngaphambi kokuba izimbewu zihlume zingaholela ekutheni umhlabathi ube noqweqwe okungeke kube lula ukuba izimbewu ziluphule. *Iduisendpoot* iyakulungisa lokhu.

### ***Isivinini ngenkathi kutshalwa – Ngabe zingakanani izikhala phakathi kobhekilanga emugqeni?***

Abanye abashayeli bayashesha uma behlwanyela imbewu okwenza imbewu 'igxume' okubonakala ngezikhala ezingalingani emigqeni. Isivinini esamukelekile ngesiphakathi kwamakhilomitha ayi-6 kuya ku-8 ihora. Ngabe ngimfundisile loku umshayeli wami wewegandaganda na?

### ***Ukuthela umquba – Ngabe ngithathe amasampuli omhlabathi ngesikhathi? Ngabe ngiye ngakunaka ukuhlaziywa komhlabathi? Ngiwuthele kanjani umanyolo?***

Obhekilanga basebenzisa izakhamzimba ezisemhlabathini ngendlela efanele ngenxa yezimpande zabo. Ukuhlaziywa komhlabathi kuqinisekisa ukuthi umquba uthelwa ngendlela efanele ukuvimbela izindleko ezingadingeki. Ngabe ngiye ngafunisisa izimpawu ezikhomba ukwemuka komsoco? Ukuswelakala kwenayithrojini kuholela ekutheni amaqabunga abe wumbala oluhlaza oluthuthu. Amaqabunga aphantsi esitshalweni wona ayafa. Ukweswela ifosforasi kubonakala ngezimpawu zokukhula okungenelisi. Obhekilanga badonsa inani elikhulu

***Lo mbhalo okhethekile ubekhona ngenxa yomnikelo ovela ku-Oil and Protein Seeds Development Trust.***

lephotheziyamu emhlabathini, kodwa umhlaba wethu ugcewele iphotheziyamu, ngakho-ke ukuhluzwa komhlabathi kuyadingeka ukuze wazi noma kunesidingo sokuyifaka na.. *Amamicro elements* aziwa ngamabaron *nemolybdenum* abalulekile ukuze obhekilanga bathele ngokwenelisayo. Kepha-ke kunokwentuleka kwalokhu emhlabathini wethu, ikhakhulukazi ezindaweni zasempulanga nezwe.


### ***Izinambuzane – Ngabe izinambuzane zidala umonakalo muni na? Ngiwuqaphele nini na?***

*Iwireworm* kanye *necutworm* zona zinobungozi kobhekilanga, bese ebusika zinobungozi kuzinsalela zezitshalo emasimini. Ukwelashwa kwembewu kunciphisa amathuba okulimamala kwembewu, kepha izilimo kusalindelekile ukuba ziqashwe ngaphansi kweso elibukhali ngoba umuthi obulala izinambuzane (*insecticides*) ungahlanganiswa namakhambi abechelela izitshalo emvakokutshala.

### ***Ukhula – Ngabe oluphi ukhula olukhona? Ngabe inzame zami zokulwisana nokhula ziyasebenza na?***

Amanye amafama athanda ukudiska ikhambi lezitshalo emhlabathini ngaphambi kokutshala. Uma kungenjalo *ipre-emergent herbicide* ifafazwa masinya emvakokutshala. Amaviki ayi-6 okuqala abaluleke kakhulu ngona obhekilanga abakwazi ukuqophisana nokhula olunamandla. Izithelo zingandiswa ngokugcina amasimu enganakhula kulesi sigaba.

### ***Isiphetho***

Ukubheka njalo nokuhlola kuwukuthola ulwazi nokuhlaziya izinkinga ukuthola okumele kugcinwe ngendlela efanele noma okumele kushintshwe ukuze kwenziwe izinto kangcono ngokuzayo. 

UJENNY MATHEWS, UMNIKELI KUPULA/IMVULA

# Yazana... noWhermit Dirks

**KULEEPULA/IMVULA YALENYANGA SIZOTHOLA ITHUBA LOKWAZANA NO-WHERMIT DIRKS. YENA UYIFAMA ENDAWENI YASEGENADESHOOP eNTSHONALANGA neKAPA. UWHERMIT UNGUMLIMI KAKOLWENI, IZINHLAMVU, AMALUPHINI KANYE NEZIMVU.**

## Ngabe mangaki amahektha owalimayo kanti futhi akuphi?Ulima ngani na?

Ngilima ukolweni, izinhlamvu, amaluphini kanye nezimvu emhlabeni ongama-600 amahektha endaweni yaseGenadeshoop eNtshonalanga neKapa.

## Ngabe yini ekugqugquzelayo?

Nginothando lokulima kanye nothando lwemvelo, kanti futhi ngizizwa ngibusisekile ukusebenza efamu nsukuzonke. Ubudlelwano enginabo noMdali wami nabo buyangigqugquzela futhi bungikhuthaza kakhulu, kanti bungiqhubela phambili.

## Chaza obona kungamandla noma ubuthakathaka bakho

Ngithanda ukulima nendalo. Kanti-ke ngiphiwe ngasekuphatheni izimali futhi ngithanda nokusebenza nezilwane. Ngingasho nje ukuthi lokhu esengikubalile yikona okungamandla ami. Kanti-ke ubuthakathaka bami wukuthi ngesinye isikhathi ngiyaye ngisheshe ukuthukuthela.

## Ngenkathi uqala ukulima ngabe isilimo sakho sasithela kangakanani na? Ngabe manje isilimo sakho sakho sesithela kangakanani na?

Kuqala isilimo sami sikakolweni sasiba ngamathani angama-220 bese kuthi esamaluphini sona sibe ngamathani angama-50 (okulinganisela kumathani angama-1,5 ihektha). Okuhle-ke ukuthi kulo nyaka sikwazi ukuthola isithelo samathani angama-460 kakolweni kanye namathani angama-170 ezinhlamvu (okulinganisela esibalweni esingamathani ama- 2,5 ihektha). Amaluphini wona adayiselwe ukweluka.

## Ucabanga ukuthi ngabe yini ebe nomthelela kungqubekela phambili kanye nempumelelo yakho?

Inqeqesho ehamba phambili engiyithole kwaGrain SA, kanye nesibonelelo sezezimali engisithole eMnyangweni weZolimo kube wusizo olukhulu kimina.



## Ngabe kuze kube yimanje nqeqesho yiphi oyitholile na, kanti-ke ungathanda ukuqhubeka uqeqeshelwe ini na?

Ngiphothule izifundo zokuthuthukiswa kwamafama okuthiwa phecelezi yi *Farmer Development course* ephathelene nokuhlunga umhlabathi, kanti-ke ngisengathanda ukwenza izifundo zokuphathwa kwefamu kanye nabasebenzi okuyi *Farm Management* kanye ne *Personnel Management*.

## Ngabe uzibona ukuphi eminyakeni emihlanu ezayo?

Ngingathanda ukuba nelami ifamu, imishini kanye nezinto zokusebenza.

## Yisiphi iseluleko ongasinika amafama asafufusa?

Sebenza kanzima, sebenzisana nomqeqeshi wakho futhi uzimisele ukufunda!

**TOIT WESSELS, PROVINCIAL UMQONDISI WEGRAIN SA FARMER DEVELOPMENT PROGRAMME**



# Uhlelo lwamafama lokunikezela- na ngezintambo kozoqhuba ifamu

**UMFAMA NGAMUNYE, KUNGAKHATHALEKILE UKUTHI IPULAZI LAKHE LIN-  
GAKANANI UZOFIKA ESIKHATHINI LAPHO AZOBHEKANA NENSELELO YO-  
KUTHI NGUBANI OZONAKEKELA IPULAZI LAKHE NOKUTHI UTSHALOMALI  
LWAKHE LUZOQHUBKA NJANI NA UMA SEKUFIKA ISIKHATHI SOKUTHI  
ATHATHE UMHLALAPHANSI, NOMA-KE KWENZeka ESESHONILE.**

Iningi labanikazi bamapulazi ngisho nezimfolomane imbala eziphethe isikhundla esiphezulu ekuhanjiseni kwepulazi ayaye akuzibe ukulungiselela lesi sikhathi esibucayi esizoqinisekisa ukuthi ifa lomndeni wabo lilondekile. Uma kungazange kwenziwe amalungiselelo ahlelekile isikhathi sisekhona mayelana nalowo ozothatha izintambo mhla kunesidingo, kuwama ukuqhuma izimpi emndenini. Lokhu kungezwani kungathatha iminyaka emvakokugula noma ukushona komnikazi wepulazi.

Umqondo oqukethe kule-athikhili ogxile kumapulazi azimeleyo ngokomthetho. Akubhekanga amalungiselelo angenziwa ukuthola umhlaba osendaweni engaphansi kwamakhosi. Laba abakhonza ngaphansi kwamakhosi invamisa kuyaye kubhungwe bese kuthi inkosi nabeluleki bayo banqume ukuthi indodana endala ziyona ezolandela ezinyathelweni zikayise epulazini.

Amalungiselelo okunikezela ngepulazi abandakanya ukudlulisela ubunikazi ngokusamthetho, kanye nokuphathwa kwepulazi ngulowo okhethiwe. Uhlelo lokulandelanisa luzokwenziwa ngendlela yokuthi wonke amalunga omndeni ayabonelelwa futhi kuqinisekise nokuthi ibhizinisi liyakhula liqhubekela phambili.

Ukuhlelela ukudlulisela izintambo kungabhekwa futhi njengendlela yokuhambisana nezimo ezishintshayo ezidinga wonke umndeni ubandakanywe. Sibala kukho ukuhlelela ukudluliselwa kolwazi, amakhono, umsebenzi wepulazi, ukuphatha kanye nobunikazi bebhizinisi lomndeni phakathi kwabadala (abathatha umhlalaphansi) nalabo abasha (abadluliselwa izintambo).

Ukuhlelela lokhu kuvame ukuzitshwa ngoba kuthathwa njengomsebenzi omkhulu, kanti-ke futhi kuvame ukuba nezingxabano nokungaboni ngaso linye phakathi kwamalunga omndeni. Kuyavama-ke ukuthi labo abomndeni abasebenza khona epulazini benza imisebenzi ethizeni bacabange ukuthi ipulazi leli vele lizoshiywa ezandleni zabo. Kepha-ke iningi liyamangala uma sekufundwa iwili, ikakhulukazi uma lowo okumele ashaye isabelo eshona engazilungisanga izinto ngokohlelo.



Kuvamile-ke uma kwenzeka kanjena ukuthi labo abasele bomndeni bagcine sebepheqelekile ukudayisa ipulazi lelo ukuze kukhokhwe izikweletu, noma kuxazululwe lempi esibheduke phakathi emndenini.

Kungcono ukuqala lolu hlelo lowo ongumnikazi wepulazi esaphila. Lokhu kungaba nomthelela omuhle ngoba laba asebekhulile bangakwazi ukuphumula babuke izithelo zomsebenzi wabo omuhle ziqhubeka njalo ezandleni zalaba abasha. Abasazihluphi ngenkambiso yosuku nosuku yepulazi, kepha bona njengabantu asebeneminyaka yolwazi bavela nje ukunika usizo kanye nezaluleko lapho kudingeka khona.

Uma kusheshwa kuqalwa ngamalungiselelo, wonke amalunga omndeni azokwazi ukunika imibono, bese lowo okumele enze isinqumo usengakwazi-ke ukuthi enze isinqumo esifanele.

Kuyaxwayiswa ukuthi uma sekuqaliwe ngalolu hlelo, kumenywe nommeli obhekana ngqo nezamafa ukuze adwebe wonke amaphepha omthetho afanele. Iwili ingenziwa ngendlela yokuthi ibandakanye konke kanti futhi ihambise yonke imiphumela yezingxoxo zomndeni ngokucacile nokuqondakalayo.

## Uhlelo lokulungiselela

Izigaba ezimbili ezisemqoka zokwenza lolu hlelo zingahlulwa izingxenywe ezimbili. Isigaba sokuqala sifaka onke amalunga omndeni. Kulesi sigaba lowo ophethe uzobe ebhunge ngayo nomndeni, wacabanga kabanzi ngayo, wacwaninga okungenziwa, wahlela, kwavunyelwana futhi kwakhethwa ngezindlela ezifanele ezingalandelwa ukuze konke kuhambe ngendlela. Isigaba sesibili sona esomthetho. Kubhalwa phansi noma kuqoshwe isinqumo esithathiwe ngohlelo lokunikezelana kwepulazi.

## Umhlango wokuqala

Uma lowo ongumninipulazi noma bonke abaphethe sebevumelene ngokuqhubekela phambili ngalolu hlelo, lowo oyilunga lomndeni onothando lwebhizinisi lepulazi nekusasa lalo kumele abandakanywe kumalungiselelo onke. Ngesinye isikhathi, ukuya ngobudlelwano bomndeni, kungadingeka umlamuli owazi ezomthetho ozokweluleka ngemiphumela yezinqumo ezithize ezithathwayo. Kubalulekile ukuthi lowo mmeli noma umeluleki amenywe kusaqalwa ukwenziwa amalungiselelo.

Kubalulekile ukuthi wonke umuntu anikwe ithuba ukuba aveze uvo lwakhe. Kumele kuqondwe ukuthi ilunga ngalinye lifuna ini kanti kukwazi ukubonelelwa izindingo zalo ngokufanele. Lezi zidingo zingashintsha uma umsebenzi walelo lungu ushintsha kanye nesimo sakhe somndeni sishintsha.

## Izinto ezibalulekile ohlelweni lokunikezelana

Uhlelo lokinikelana lubandakanya ukunikezelana ngemisebenzi ezindaweni ezintathu ezibalulekile. Lezi zibandakanya umsebenzi wezandla wamihla ngemihla, ukuphatha kanye nokwenza izinqumo ngenkambiso yepulazi kanye nobunini bempahla yepulazi ngamalunga athile.

Uma umnikazi wepulazi eya ekhula kulula ukuba adlulisele umsebenzi wezandla wenziwe ngabanye abantu. Kepha-ke akuvamile ukuba lula ukunikezelana ngomsebenzi obandakanya inkambiso yepulazi nokwenziwa kwezinqumo. Lokhu kuletha izingxabano eziningi, kanti akukho lula ukuthi umuntu omdala ayekelele nje noma esibona isidingo.

Ukuze umninipulazi akwazi ukunikezelana ngepulazi kundodadana, umkhwenyana, indodakazi noma imenenja eqashiwe kuthatha iminyaka yokusebenzisana nokwakha ubuhlobo bokuthembana. Umndeni nalowo ongumnikazi wepulazi bayaye bahlale phansi babheke ukusebenza



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IsiSuthu saseNyakatho, IsiXhosa.

**Sizimisele ukukhipa incwadi enhle  
kakhulu. Uma ufi sa ukuxoxa ngokuphakathi  
noma ngendlela kubhaliwe ungathintana  
noJane McPherson.**

## Uhlelo lwamafama lokunikezelana ngezintambo kozoqhuba ifamu

kwalowo okhethiwe ukuthi ngabe uwufanele na lo msebenzi, unalo na ulwazi kanye namakhono afanele ukuqhuba leli bhizinisi ngempumelelo. Uma benelisekile kuthathwa isinqumo.

Uma izintambo sezinikeziwe kulona omusha, kumele athole ukuqeqeshwa, anikwe namakhono adingekayo ukuze asebenze ngempumelelo. Lolo sizo nokuqeqeshwa uzo-kuthola kulabo abanolwazi. Kuvamile ukuthi abantwana bomnipulazi noma abalingani babo bomshado bakhethe ukuphatha imfuyo kunemishini noma ukulima. Abanye bangakhethe ukusebenza nezimali, umsebenzi we-ofisi noma ukubhekana nezisebenzi.

Kudingeka ukuthi lowo ozophatha ipulazi aqeqeshwe iminyaka eyela kweyishumi ukuze athole ulwazi olungenelele ngenkambiso yepulazi ngisho nezezimali imbala. Indawo nendawo lapha eNingizimu Afrika inezinselelo ezihlukile uma kuza emikhizweni. Ulwazi lokuphatha kanye namakhono afanele atholakala nje kuphela ngokusebenza phakathi ebhizinisini lelo lepulazi umuntu ulazi.

### Izinto okumele ziqashelwe kusuka ekuqaleni

Ngaphambi kokuhlela ukunikezelana, kumele kuvumelwane ukuthi inhloso yomndeni ukunikezelana ngebhizinisi lepulazi ngendlela efanele esizukulwaneni esizayo. Uma wonke umuntu evuma, labo okubonakala ngathi bazofanelwa yilo msebenzi kumele babe yingxenyeyezingxoxo nezinqumo zonke.

Into ebalulekile inhlaziyo ephelele yezezimali zamanje nezekusasa zebhizinisi leli lepulazi. Imibandela yezezimali nokuthi kubhekwe ukuthi ibhizinisi lingaqhuba njani ngokuzayo inika ulwazi lokuthi amalunga amangaki omndeni angabonelelwa nakweliphi izinga lempilo. Lapha kungavela uma kungadingeka amanye amalunga omndeni athole eminye imisebenzi ngaphandle kwepulazi ngoba lingeke lenelisa wonke umuntu.

Ezezimali ngesinye isikhathi zenziwa nzima wukukhuphuka kwenani lomhlaba ngokuhamba kwesikhathi, uma uqhathanisa nendlela imali engena ngayo epulazini. Ukudluliselwa kobunini bempahla ihlanganisa ukuthengwa kwaleyo mpahla yilaba abancane, noma ukuphanga ngempahla kwalaba abadala kulaba abancane.

Ithebula lesikhathi lenkambiso kumele yenziwe futhi icace bha kuwo wonke umuntu othintekayo. Ezinye izinto okumele zenziwe kungaba zamasinya noma ezinye zithathe iminyaka.

Uhlelo lokunikezelana ngepulazi kumele lubhalwe phansi, lwaziwe, luqondwe futhi luvunywe nguwo wonke othintekayo.

### Okuqokethwe wuhlelo lokunikelana

Lezi zimiso ezilandelayo zibalulekile futhi ziyadingeka ukuze uhlelo lubhalwe phansi ngokusemthethweni. Isifinyezo esisemthethweni (*i-executive summary*), isiquatho sebhizinisi, isu lohlelo, isu lomhlalaphansi lwalabo abakhishiwe ebhizinisini, ubuphathi, ulawulo, kanye nohlelo lokunikezelwa komsebenzi, ezezimali zamanje nezakusasa, okuzokwenziwa kanye nenkambiso; kanti-ke konke kumele kulandelwe amaphepha afanele.

Okubalulekile ngenkathi kwenziwa onke amalungiselelo ukuthi kuzodingeka imali engakanani na, yiziphi izinsiza ezikhona kanye nezindlela ezahlukene zokuthola imali leyo edingekayo ukuqhuba lo msebenzi. Lolu hlelo kumele lubonelele izikhalo abantwana abanazo ezingeke zangena ebhizinisini lepulazi. Ifa labo lingaba yimali evela kumapholisi omshwalensi.

Ezinye izinto okumele zibhalwe phansi futhi zicace ukuqeqeshwa nokuthuthukiswa kwalowo noma labo abazothatha izintambo, amashaneli okuxoxisana acacile kanye nesu lokubhekana nezinqinamba ezingavela kusasa kungasizo zepulazi kuphela.

Konke loku okungenhla kumele kulungiswe kulandela imithetho yamanje yezwe engamele amawili, ezezimali, ukunikezelana ngempahla kanti futhi ihambisane nemithetho yentela yezwe.

Kungagwenywa izindleko eziningi uma konke kuhlelwa kahle kulandelwa imithetho neyentela imbala.

Kungabhekwa ukushintsha ibhizinisi ngokomthetho ukubandakanya wonke othintekayo. Ama-lunga asebenzayo, opatina noma amashareholders angahlomula enzuzweni yomsebenzi, amadividends noma ukukhula kwenzuzo ngokuhamba kweminyaka.

Njengoba sibona, ziningi izindlela zokuthola izisombululo futhi zehlukahlukene. Kepha-ke zidinga ukuthi wonke othintekayo abe sobala, acace ukuthi ufisani na, kanti futhi kube nezingxoxo eziphelele ngawo onke amathuba akhona phakathi kwalabo abazobe beyingxenyeyepulazi.

### Isiphetho

Uhlelo olucatshangisiwe lokunikezelana lungagwema izingxabano zomndeni, futhi luqinisekise ukuthi konke okulindelekile kanye nezibonelelo zekusasa zigcinelwe ngisho nezizukulwana eminyakeni eminingi ezayo.

**I-ATHIKILI IBHALWE YIFAMA  
ESELITHATHE UMHLALAPHANSI**