

PULA INVULA

Incwadi yeGrain SA
yabalimi abasakhulayo

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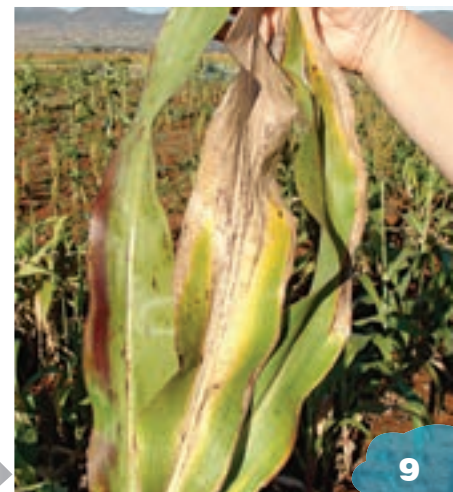
Ukuba umlimi ophumelela phambili kungaba into enzima

Izindaba zepolitiki ezihambelana nomhlaba zisazothatha isikhatha eside ngaphambi kutholakale isinqumo esizojabulisa bonke. Lapha kuleli phrogramu lokuthuthukisa abalimi abasakhulayo lethu asinandaba nezinto ezihambelana nepolitiki – thina singabalimi abafisa ukusiza abanye abalimi bakhule babe abalimi abangcono.

Siyaqonda ukuthi abanye abantu banomhlaba omkhulu, abanye banomhlaba omncane. Kwezinye izindawo kungcono ukukhiqiza ukudla okuzinhlam-

vu futhi kwezinye izindawo kuzotholakala ukudla okuningi, kwezinye akungeke kutholakale umvuno omningi. Kani ngi abantu abafuna usizo basishayela ucingo noma basithumela umlayezo. Ngaphambi sikwazi ukubona ukuthi sizokwazi ukubasiza, kufanele sithole imininingwane elandelayo:

- Ukuphi umhlaba wakho?
- Ungakanani umhlaba/ipulazi lakho?
- Kungani ungumnini waleyo ndawo – kungumhlaba womuzi wonke, wabantu bonke (uwuthenge ngosizo olutholakale kumaphrogramu ePLAS noma eLRAD anikezwe Umnyango WezoMhlaba)?



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Unkz Jane uthi...

I Sikhathi sikaDisemba sesifikile futhi unyaka uyaphela. Ngikholwa ukuthi utshale zonke izitshalo uqonde ukuzitshala ehlobo futhi ukuthi zimila kahle. Ungakhohlwa ukubheka izilokazane nezifo – emva komsebenzi wakho omkhulu awungeke uthande ukulahlekelwa umvuno wakho ngoba isilwanyana esincane sidale ingozi.

Besinobusiso lo nyaka ukuthola imali kuMaize Trust ukusebenzisa lonke iphogramu lethu. Enye imali siyithole kuWinter Cereals Trust, iSorghum Trust neOil and Protein Seeds Development Trust. Ngaphandle kwalezo zimali besingeki sikwazi ukusebenzisana nabalimi abasakhulayo nokubasiza ukuze sikwazi ukukhiqizela umhlaba wethu ukudla nakusasa.

Izifundo zokuqeqesha nezifundo nezinhlangano zeziqumbi zokufunda zizophinda ziqale futhi ngoFebruwari – qinisa ukuthi uthole iphogramu ehhovisini eliduze nawe. Lawa mahhovisi niyawazi: eZeerust, eNaspoti, eFilidi (Vryheid), eLadybrand, eKokstad naseMthatha. Si-vule ihhovisi elisha eBelfast (Mpumalanga). UNaas Gouws ungumaqondisi wethu omusha lapho, simfisela isikhathi eside sokusebenza kule phogramu lethu nokwezwana nabalimi abasakhulayo abasathuthukayo. Kukhona abanengi abahlangane naye naye ngoba wayesebenza ngokuqeqesha abanengi abalimi ngesiZulu nangesiNdebele.

Thina sonke sinifisela uKhisimusi othulile obusisiwe, futhi nibe nonyaka ozayo (2012) ogcwele ngokudla (umvuno) okuzinhlamvu.



Ukuba umlimi ophumelela phambili kungaba into enzima

- Unakho ogandaganda neminye imishini?
- Ungumlimi olima sonke isikhathi (awunawo omunye umsebenzi)?

Lapho sinayo yonke imininingwane engaph- ezulu singabona ukuthi singabasiza kanjani.

Kukhona abanengi abantu abathi bafuna ukuba abalimi. Kodwa uma sibheka izinkulungwane zamahektheli ezisezandleni zomuzi wonke nalowo mhlaba ophinde wanikezwa kulabo abalimi abasha bese sibona ukuthi lowo mhlaba awusetshenziswa kahle ukukhiqiza ukudla. Siyabona futhi ukuthi ukulima kungaba into enzima. Uma ufisa ukuphumelela kahle ekulimeni kufanelel wenze okulandelayo:

- Into eyodwa ebaluleke kakhulu yilokhu: kufanele uzinikele ukulima. Sibone kaningi ukuthi abalimi abangalimi sonke isikhathi abaphumeleli – ukukhiqiza ukudla okuzinhlamvu kudinga ukunaka sonke isikhathi. Kufanele ube ilunga lephrogramu lokuthuthukisa abalimi – yiya ezinhlanganweni zezifundiso, izinsuku zabalimi, izifundo zokuqeqesha, njll.
- Kufanele futhi ukwazi ukulima emhlabeni lapho uzokwazi ukukhiqiza ukudla okuzinhlamvu.
- Ipulazi lakho lifanele libe endaweni lapho imvula nohlobo lomhlaba kuzohambelana nokukhiqiza ngendlela ezoletsa inzuzo (umhlaba ongashonile nemvula encane akusizi ukulima nendlela ezoletsa inzuzo).
- Uma indawo lapho ufuna ukulima khona incane, awungeke udinge imishini, kodwa ngokwejoyalekile kufanele ubenazo izinto njengogandaganda neminye imishini.

Lokhu kuyinkinga enkulu ngoba lezi zinto ziyadula futhi iminyango kagavumente ayivami ukusiza abalimi abakhombisile ukuthi sebakhulile ekulimeni.

- Kufanele kube khona imakethe lapho uzothengisa umvuno wakho.
- Kufanele kubekhona izinto zokuqhubekisa ukulima kwakho ('i-infrastructure'), isibonelo: eKapa Mpumalanga (Eastern Cape), ezindaweni eziningi awukwazi ukutshala ukolo ngoba ayikho imishini yokuvuna, awekho amatreyilera ukuntlansipota umvuno, awekho amasayilo akwazi ukuthatha umvuno omningi futhi ayikho indawo yokomisa umvuno (khumbula ukuthi sivama ukuvuna ukolo ehlobo futhi sitshala ukolo ezindaweni lapho kuna khona ehlobo, ngakho-ke kufanele sikwazi ukomisa umvuno wethu).

Sifisa ukusiza noma ngubani umuntu onomhlaba omuhle, onomhlaba omuhle futhi osendaweni lapho imvula ina kahle ukuze abe umlimi okhiqiza ukudla okuzinhlamvu. Masizame ukusebenzisa wonke umhlaba olele nje, ongalinywa – lapho lezo zindawo ziphakamisiwe zikhiqiza ngendlela efanelekile bese singaxoxa ngokwabela abalimi abasakhulayo amupulazi akhiqiza ukudla ngokwamanje. Maingakholwa: Abalimi bafuya isizwe". Abalimi bayisikhathi sethu esizayo!



UJANE MCPHERSON, UMPHATHI WEPHROGRAMU LEGRAIN SA LOKUTHUTHUKISA ABALIMI ABASAKHULAYO

Ubumuncu bomhlabathi nokubaluleka kokufaka umcako

UMHLABATHI OMUNCU UTHOLAKALA EZINDAWENI EZININGI FUTHI BUDALA IZINGOZI EZINKULU LAPHO KUFIKA ISIKHATHI SOKUVUNA. IZIMPANDE EZINGAMILI KAHLA KUYINTO EHLUPHA KAKHULU LAPHO UMHLABATHI OMUNCU. UBUMUNCU KOMHLABATHI KUBONAKALA KAHLA LAPHO IZIMPANDE ZIMFUSHANE ZINEZIPHUNZI FUTHI AZINAZO IZIMPANDE EZIPHILILE.

Lapho izimpande zivinjwa ukumila kahle izitshalo zifehleka masinya ngoba izitshalo azikwazi ukudonsa amanzi nalapho umhlabathi umanzi. Ukudonsa kwaN naP nakho kuyehla ngoba azikho izimpande ezikwanele futhi ukusweleka kokudla kuzobonakala ngesimo sezitshalo. Konke lokhu kuthi ulahle umanyolo nemali ngoba awuzange uthole umvuno ofanelekile, umvuno uyehlo njalo.

Kukhona umehluko ngaphakathi kwezinhlobo zezitshalo ngoba ezinye ziyakwazi ukumila emhlabathini omuncu. Ummbila uphatheka kabi ngomhlabathi omuncu kodwa ubhontshisi owomile nama 'cowpea' angamila kahle. Kukhona indlela eyodwa esebenzayo ukuvimba ubu-

muncu: faka umcako emhlabathini wangaphezulu.

Ukucwaninga kukhombisile ukuthi ukufaka umcako emhlabathini omuncu kuyinto ebalulekile kakhulu lapho sifuna ukukhiqiza ukudla okuningi. Siyazi ukuthi isaka elilodwa lomcako lishibhile uma sikulinganisa nentengo kamanyolo, kodwa kaningi kudingeka umcako omningi ukushintsha ubumuncu emhlabathini. Isibonelo: indawo elingana na 10 m x 10 m (100 m²) ingadinga isaka elilodwa noma amasaka amabili omcako kodwa izodinga kuphela umanyolo olingana ne 2 kg. Lokhu kusho ukuthi ukufaka umcako kungadula amaphandleni nakubalimi abazilimela bona ngoba kukhona izindleko zentilansipoti nokungenisa umcako emhlabathini. Kodwa ukufaka umcako kubalulekile lapho ufuna ukwandisa umvuno emhlabathini omuncu. Ukuthela umanyolo kuphela ukwandisa umvuno akungeke kusize emhlabathini omuncu kabi.

Umcako awudingeki njalo ngonyaka. Emva kokufaka umcako odingekayo ngendlela efanelekile akungeke kudingeke umcako omunye ngeminyaka emihlanu elandelayo.



Ukufaka umcako emhlabathini omuncu kuyinye indlela yokukhiqiza ukudla okuhle okuningi.

Ubumuncu bomhlabathi nokubaluleka kokufaka umcako

Iyodwa indlela yokuthola umcako odingekayo: thesta umhlabathi. Ama-sampula omhlabathi afanele athathwe emasimini athile nasezindaweni ezithile bese kufanele athunyelwe ukuhlolwa/ukuthestwa. Umphumelelo walawo mathesti uzokhombisa ukuthi kudingeka umcako ongakanani kuleyo naleyo nsimi.

IThebula 1 likhombisa ukuthi kuzodingeka umcako ongakanani ukuthela endaweni engakanani.

Uma ufuna umcako usebenze kahle, kufanele usakaze umcako ngokufana kuzo zonke izindawo ensimini. Emva kwalokhu kufanele ungenise umcako emhlabathini ngokusebenzisa igeja elinamadiski noma igeja nje. Lapho umhlabathi umuncu kabi kufanele ufake umcako izinyanga nezinyanga ngaphambi kokutshala ukuze ukcako uzokwazi ukuphendula ubumuncu okukhona. Ngokwejoywayelekile umcako ufakwa amaviki angu-6 noma 8 ngaphambi kokutshala.

Lapha umuntu egula, yena uzokuya kudokotela. Udokotela uzomhlola bese uzomnikeza umuthi ofanelekile ukwelapha lowo muntu. Likhu kucishe kufane nomhlabathi. Thumela isampula elaborotri ukuthola ukuthi kudingeka ini ukusindisa umhlabathi wakho. Umhlabathi uyinto ephilayo, udinga amanzi, ukudla nomoya. Uma ubheka umhlabathi wakho kahle, umhlabathi uzokunikeza umvuno omuhle.



IThebula 1: Inani lokuthela elifanelekile endaweni ethile.

Inani lomcako ehktheleni	Ubukhulu bendawo ezokwazi ukwembeswa ngumcako ongu-50 kg
2 t/ha	250 m ² (16 m x 15,6 m)
4 t/ha	125 m ² (11 m x 11,4 m)
6 t/ha	83 m ² (9 m x 9,2 m)
8 t/ha	63 m ² (8 m x 8 m)
10 t/ha	50 m ² (7 m x 7 m)
15 t/ha	33 m ² (6 m x 5,5 m)
20 t/ha	25 m ² (5 m x 5 m)



Ukufaka umcako emhlabathini omuncu kuyinye indlela yokukhiqiza ukudla okuhle okuningi.

Izitshalo zasebusika eziyizinhlamvi

Ukuzilungisela ukuvuna ukolo ngonyaka ozayo

KUKHIQIZWA UKOLO ONINGI EFREYISTATA **LAPHO** IMVULA **INA 625 MM** **NOMA 875 MM. 20% KWALOKHU KUNA NGOKUSUKA KWA**APHRELI **KUYA KU**SEPTEMBER. **IMVULA AYINI KAKHULU** NGALESOSIKHATHI **FUTHI** **ASAZI UKUTHI KUZOKUNA, KANJALO-KE UKOLO UTHEMBE UMSWAKAMO** **OKUSEMHLABATHINI OKUNGALONDOLOZWA EMHLABATHINI EKUGCINENI** **KOHLOBO NASEKWINDLA.**

Amanzi

Amanzi/umswakamo kuyinto ebaluleke kakhulu laho sifuna ukukhiqiza ukolo emasimini omile lapho kuna khona ehlobo. Uhlobo lomhlabathi nezindlela zokulima zihambisana nenani lomswakamo ozolondolozwa emhlabathini. Lokhu kubalulekile ezindaweni lapho kungani ngesikhathi izitshalo zimila, zizothola amanzi kuphela olondolizwe emhlabathini ukuze zimile.

Isimo somhlabathi

Amanzi womhlabathi ulondolozwa ezikhaleni ezingaphakathi kwezakhi zomhlabathi, zicishe zifane nesponji. Uma lezo zakhi zincane nokh-wakhiwa zazo ziyafana, izikhala zizobancane futhi amanzi azobanjwa ngamandla emhlabathini. Lapho izikhala zinkulu amanzi angatholakala kalula lapho isitshalo siwadinga.

Ukwaluka komhlabathi kuhambelana nobukhulu nesimo sezakhi

somhlabathi. Isihlabathi sinezakhi ezinkulu nezakhi ezingafani ngok-wakhiwo, kanjalo kukhona izikhala ezinkudlawana phakathi kwazo. Umhlabathi ofana nesidaka unezakhi ezincane ezifana ngokwakhiwo futhi zinamathelana kalula. Isidaka simunya amanzi kancane kodwa isitshalo sifanele sisebenze kakhulu ukudonso lawo manzi emhlabathini. Izihlabathi inezikhala ezinkulu phakathi kwezakhi, kanjalo amanzi angageleza masinya emhlabathini – bese umhlabathi ungoma masinya. Esidakeni amanzi awakwazi ukungena kalula, futhi kunzima ukumunya lawo manzi ukuze izitshalo zimile kahle. Akufanelanga utshale ukolo emhlabathini onesihlabathi noma isidaka esiningi kakhulu.

Ukuqondana nokukhiqiza ukolo

Ngokwejoyalekile kukhona izindlela eziningi ziningi zokulima nokutshala ukolo ezindaweni ezithile. Ukulima ngegeja (ngekhuba) kudala ipani eliqinile lapho igeja lifika khona (phansi emhlabathini). Lapho kwenziwa khona umsebenzi ocishe ufane nokushanela ukuze umhlabathi (insimi) unlingane zonke izindawo ungadala futhi uhla (ungqimba) oluqinile olufika ku-10 - 15 cm ngokujula emhlabathini. Kubaluleke kakhulu ukuvithiza lolu hla ngaphambi kokutshala ngokusebenzisa zinto ezifana neripha. Umsebenzi lo uzokwenza ukuthi izimpande ezimila emuva kwesikhathi zizokwazi ukungena kuzo zonke izindawo emhlabathini zidle zithole futhi amanzi alondolozekile lapho phansi.



Ukuzilungisela ukuvuna ukolo ngonyaka ozayo

Ukuphatha umswakamo (amanzi) emhlabathini

Umhlabathi unamandla ukulondoloza amanzi ezikhaleni ezincane ezikhona ngaphakathi kwezakhi zomhlabathi. Lawo manzi alondolozwayo avama ukufika ngemvula yasekwindla naleyo yasentwashlobo. Emva kokuvuna kufanele umhlabathi uqekiswe ukuze imvula evama ukufika ngale sikhathi izokwazi ukungena emhlabathini ilondolozwe ukuze izitshalo zonyaka ozayo nazo zisizakale.

Ngokwalekile singasho ukuthi ukuqekisa nokuphendula umhlabathi kwenza ukuthi izimbewu zokhula nalezo zezitshalo ezivuniwe zithintana nomhlabathi omanzana bese ziqala ukumila. Zonke izitshalo zokhula ezimila ensimini elungiselwa ukutshala ukolo ziyisitha salowo kolo ngoba zizokudla ukudla okukhona okudingekayo lapho siphinda sitshala futhi zizodla namanzi asemhlabathini. Ngakho-ke kubaluleke kakhulu ukuthi lapho kuzotshalwa khona ukolo kungabi khona ezinye izitshalo kuleyo nsimi ngaphambi kokutshala ukolo omusha (leso sikhathi singasuka kuApreli noma Julayi, kodwa akufani kuzo zonke izindawo, izinhlobo zezitshalo nesikhathi kutshalwe ngaso ngayaka odlule).

Ukulungisa nolima umhlabathi

Ukulungisa umhlabathi kuyinto ebaluleke kahulu lapho sifisa ukukhiqiza ukolo. Futhi kuyinto edula kakhulu. Lapho ukulungisa komhlabathi akuzange kwenziwe kahle, awungeke ukwazi ukulungisa lelo phutha emva kokutshala izimbewu zakho.

Kukhona izinto ezimbili ezibalulekile lapho sikhuluma ngokulungisa umhlabathi: ukungena kwamanzi emhlabathini nokulahleka nokukhoth-

wa komswakamo namanzi. Kanjalo inani lomswakamo emhlabathini libalulekile lapho kulinywa ukukhiqiza ukudla okufana nokolo – akufanelekile kulahleke amanzi emoyeni. Kanjalo-ke kufanele umhlabathi wangaphezulu (± 5 cm) uqeke uma kukhona izinhlanga eziningi. Lokhu kuzokwenza ukuthi amanzi angene kalula emhlabathini futhi awangeke akhotheke kalula ngumoya. Ekuqaleni lokhu kukhotheke kwenzeka masinya kodwa kuyehla masinya.

Lapho kungalinywa khona (*min-till*) izinhlanga zezitshalo eziningi zisala ensimini futhi kusetshenziswa amakhemikeli ukubulala ukhula. Lokhu okusalayo ezinhlangeni zidala ukudla kwemvelo emhlabathini futhi kuvimba ukuhebhuka komhlabathi ngamanzi nomoya. I-min-till isho ukuthi kusetshenziswa imishini ezifana namaripha ukuqekisa umhlabathi wangaphezulu. Ngoba kusala izinto eziningi emhlabathini izitshalo eziphinda zitshalwa zidinga amapulanta akwazi ukusika lezi zinhlanga ukungenisa izimbewu emhlabathini.

Njalonjalo abalimi bafuna izindlela zokulima nokukhiqiza ezizobalethele inzuzo enhle, nesinye isikhathi nabo abazi ukuthi bayazifuna. Ngoba ukulima nokulungisa umhlabathi ngaphambi kokutshala kuyadula, kungaba into engcono ukuyibheke futhi le ndaba ukuze uzokwazi ukwehlisa lezi zindleko zokukhiqiza. Ngaphambi kokubheka ezinye izindlela zokulungisa amasimu kuzobangcono ukuthi umlimi athole kahle ukuthi zifuna ukuyaphi lezi zindlela. Ekugcineni lokhu ukushintsha kufanele kulethe isimo esikhombisa ukuqhubeka nokuhle (inzuzo enhle).

**IMINININGWANE ITHOLWE KUGRAIN SA
INTRODUCTION TO WHEAT PRODUCTION MANUAL**



UWilliam Matasane, uJannie de Villers noKoos Mthimkhulu osukwini lwabalimi eHebron.

Ubudala bakho bulusizo noma into ejiyezayo lapho kutshalwa ukolo?

ININGIZIMU AFRIKA IBHEKENE NEZINKINGA EZINKULU MAYELANA NOBU-DALA BABAKHIQIZI. ABAKHIQIZI ABASALIMAYO, ABANOLWAZI, AMAPULAZI NAMAKHONO SEBADALA BONKE. MASINYA NJE BAZONYAMALALA EKU-LIMENI BASHIYE ISIKHALA ESIKHULU. THINA ASIBONI UKUTHI LE NKINGA IZOXAZULULWA KALULA. INGXYENYE YEZINDAWO LAPHO LOKHU KUBON-AKALA KAKHULU KUSEMAPHANDLENI LAPHO KUSETSHENZWA NGUMUZI WONKE – ABANTU ABASHA ABALIMI.

Ukwala ukushintsha

Ngokwaleka, lapho uguga ubamba izindlela ozijwayele. Kaningi sizwa abantu bathi, “Ngokwakudala besenza kanje, kwakusebenza kahle!” Kuyiqiniso ukuthi ukushintsha kwenzeka ngosuku nangosuku. Ukuguga kwandisa ukwala uku-shintsha. Kunzima kubantu abadala ukushintsha indlela baphila ngayo – kuy-abjabulisa ukwenza izinto ngendlela ebayijwayele. Izindlela zokulima zishitsha njalo, masinya futhi – sekusetshenziswa amakhekeli ukubulala ukhula nezifo, kulinywa ngendlela ebizwa ngokuthi ‘no-till’, kusetshenziswa izimbewu zeGM manje abanye abalimi abadala bathi kunzima ukushintsha.

Izingozi

Abalimi abadala bathola ukuthi kunzima kakhulu ukufaka imali emsebenzini lapho kungavela izingozi. Ukuvikela “umnotho” wabo kubalulekile ngoba abasenamandla kakhulu. Basathanda ukudla ngoludala abfuni ukuzama izinto ezintsha. Okunye okungenzeka yilokhu: abafana babo bafuna ukuzama itheknoloji entsha nokuthatha izinyathelo ezingaletha ingozi futhi bafuna ukubhekana nokuqhudela kwanamuhla. Lokhu kungadala ukulwa ngaphakathi kwabadala nabasha bese kaningi umfana omusha uyasuka epulazini, akasalimi.

Silamula kanjani?

Indawo eyinduduzi izoba khona njalo futhi bonke abantu banayo leyondawo (*comfort zone*). Lapho uyaduduzisa, uyathokoza. Isibonelo, uma usebenzise igeja sonke isikhathi uzofuna ukuqhubeka ukusebenzisa igeja, awungeke ufune ukusebenza ngezinye izinto ezintsha nangezindlela ezintsha.

Lapho abakhiqizi bafika eminyakeni engu-55 sebvama ukufuna leyo nduduzo. Lesi yisikhathi sokuyeka imisebenzi emikhulu, sokuhlala phansi ukuze abasha (abafana) baqhubekele phambili ngebhizinisi lokulima. Kodwa umkhiqizi akakwazi ukuthath umhlalaphansi uma kungekho muntu ozoqhubeka ngebhizinisi lakhe. Ngokwamanje sibona ab-

alimi abanengi abadlulile ku-70 kodwa basalima, basakhiqizela umndeni wabo ukudla ngoba akekho omunye ofuna ukulima.

Lokhu kwenzeka kakhulu ngoba alikho isu lokuhambisa ukulima kubadala kunikezwe kubasha. Abantu abasha abathandi kakhulu ukulima kube indlela yokuphila ngoba kunomsebenzi onzima olukhuni futhi inzuzo incane.

Ukulima kwayekwa kwakungasanakwa lapho kukhethwa umsebenzi wokuziphilisa

Lokhu kwake kwenzeka ngeminyaka ya-1960. Kodwa ugavumente wabona ukuthi kwenzekani kwase kwafundiswa abafundi abanengi bafundiswa ukugcwalisa leso sikhala. Inzuzo eyayithokala ekulimeni yaphakama kwase kwaqhubeka kangcono. Ngokwamanje kudingeka ukuthi senze umsebenzi omkhulu ukubhekana nale nkinga futhi. Uma singabhekani nale nkinga, sizobhekana nabakhiqizi abangafundanga abangenawo amakhono.

Izikole zezokulima

Izikole eziningi ezifundise izinto zezokulima zivaliwe ukuze abafundi bafunde okunye njengezifundo eziphakeme (*academic*). Kunzima kakhulu ukuvula izifundo zezokulima futhi. Ukulima kufanele kufundiswe lapho abafundi basebancane ukuze abantwana bathole uthando lokulima bese bakhethe ukuyo-sebenza khona lapho baqeda ngesikole.

Umsebenzi wasepulazini

Ukuba isisebenzi epulazini akulula – ukulima kudinga usebenze amahora amaningi, kaningi futhi kudingeka usebenze izinsuku ezingu-7 ngeviki (njen-



Ubudala bakho bulusizo noma into ejiyezayo lapho kutshalwa ukolo?

gokusenga). Lokhu akuhambelani nepolitiki noma ukubandlululela (*discriminate*) – kuwo wonke amazwe ukusebenza epulazini kungumsebenzi olukhuni othatha isikhathi eside. Abaningi abasebenzi basemapualzini basukile baye emadolobheni ngoba bacabange ukuthi bazothola izindlu/amakhaya. Abakhiqizi bese bacindezelwe ukusebenza ngemishini, manje sekulahleke amathuba okusebenza amaningi. Into ebalulekile ngokwamanje ngudalisa imisebenzi – imisebenzi ingadalwa ekulimeni kodwa kufanele siqonde kahle ukuthi ukusebenza epulazini kubiza ukukhuthala nesikhathi eside sokusebenza.

Siyilungisa kanjani le nkinga?

Izikole (ukufundiswa)

Kudingeka ukuthi sibuyisele izifundo zezokulima ukuze abafundi bakwazi ukukhetha ukulima uma befuna. Ngale ndlela amakhona angakhuliswa anganikezwa kubanye.

Ugavumente

Sidinga ipolisi/umgomo obhalwe kahle okhanyayo (ozosebenza) esiqephu

sezokulima. Sinawo lowo mgomo, kodwa siyahluleka ukuwusebenzisa.

Abalimi abancane bangaqinisa ukulima

Akufanele ukuthi kubekhona umhlaba ongalinywa. Amapulazi amancane asebenza kakhulu ukuqinisa ukulima eSouth Africa. Abantu abangenawo umsebenzi bangazidalisa impilo ezindaweni ezincane zomhlaba – ukunikeza wena nomndeni wakho ukudla kuyisidingo ongasisebenzisa ngokulima ezindaweni ezincane.

Inkambo elungileyo emsebenzini

Isizwe saseSouth Africa siphendukile asisakhiqizi. Inkambo elungileyo ifanele inikezwe kubantwana lapho basebancane. Thina sesishintshile, sicabanga ngamalungelo (*rights*) ethu kuphela – khumbula ukuthi ilungelo elilodwa lidinga futhi isibopho. Uhlelo lamagranti namampensheni kuqale ukusiza labo abangenalutho, kodwa ngokwamanje abantu bathi kungcono ukuthola igranti bese akudingeki basebenze usuku olulodwa.

UJAN DE VILLIERS, UMKHIQIZI OTHATHE UMHLALAPHANSI

Ukubaluleka kokuthenga izimbewu ezinhle ezifakazeliwe

UMA USIBHEKA KAHLE LESI SITHOMBE SIKAKOLO OCISHE UVUTHWE, UZOBONA UKUTHI LO MLIMI UBE NENKINGA ENKULU. KUKHONA IZINHLOBO EZIMBILI ZIKAKOLO (MHLAWUMBE NEZINYE FUTHI) EZITSHALWE KULE NSIMI – OLUNYE UHLOBO SELUFUNA UKUVUTHWA KODWA OLUNYE LUSELUHALAZA.

Lokhu kudala inking – uma uvuna ukolo ovuthiwe ukolo ongakavuthwa uzogayeka emshini bese izimbewu azingeke ziphume zihlanzekile. Lapho ukuze ukolo oluhlaza uvuthwe, bese ukolo ovuthwe kuqala uzowela emhlabathini ulahleke.

Lokhu kuyisibonelo nje ukukhombisa ukubaluleka kokuthenga izimbewu ezifakazeliwe – kufanele wazi ukuthi uthengani uma ungazi, ukuphatha kwepulazi lakho kuzongena engozini!

UJANE MCPHERSON, UMPHATHI WEPHROGRAMU
LEGRAIN SA LOKUTHUTHUKISA ABALIMI ABASAKHULAYO

Lo mbhalo okhethekile ube khona ngenxa yomnikelo kwi-Winter Cereals Trust.



Izinhlobonhlobo zikakolo ezitshalwe ensimini eyodwa.

Kufanele wazi isimo sokudla okusemhlabathini wakho



Imibala eyahlukene emakhasini ezitshalweni zombila ikhombisa ukusweleka kokudla okunikeza amandla.

BHEKA ISITHOMBE SAMAKHASI OMMBILA – UZOBONA IMIBALA EMININGI EYAHLUKENE – LOKHU KUSHO UKUTHI KUKHONA UKUSWELEKA KOKUDLA OKUNIKEZA AMANDLA. LAPHO UQONDE UKUTSHALA ISITSHALA ESITHILE ENSIMINI ETHILE, NJALO SITHI THATHA AMASAMPULA OMHLABATHI NGAPHAMBI KWESIKHATHI UQONDE KAHLE UKUTHI SINJANI ISIMO SOKUDLA EMHLABATHINI KULEYO NSIMI.

Umhlabathi lapho lo mmbila watshalwa khona unokwesweleka okuningi. Kuyabonakalo kulesi sithombe akuzange kufakwe umanyolo ofanelekile. Amakhasi afanele abe luhlaza afane onke.

INayithrojeni (N)

- Inayithrojeni liyinto ebalulekile ekudleni kwemvelo.
- Inathrojeni liyadingeka ukuze isitshalo sikwazi ukumila kahle futhi kuzisa okulandelayo:
 - Umbala oluhlaza;
 - Ukumila kwamakhasi nezinhlanga;
 - Ikhwalithi lokudla okungukudla kwakhasi;
 - Ukukhula kwezimbewu zokudla okuzinhlamvu.

IFosforasi (P)

- Ifosforasi liyinto ebalulekile ukudleni kwemvelo.

- Ifosforasi liyadingeka ukuze isitshalo sikwazi ukumila kahle futhi kuzisa okulandelayo:

- Ukumila masinya kwezimpande;
- Kusiza umvuno uvuthwe masinya;
- Ukukhula kwezimbewu;
- Ukumila kwamaseli amasha – lokhu kusho ukumila kwesitshalo.

IPothasiyumi (K)

- Ipothasiyumi litholakala kakhulu kulezo zindawo ezimilayo njengezinhlanga.
- Ipothasiyumi lidingeka lapho isitshalo sifuna ukumila nokuphila futhi lisiza okulandelayo:
 - Ikhwalithi lomvuno;
 - Izinhlanga ezinamandla;
 - Ukumila kahle, masinya;
 - Ukwakhiwa kwezimbewu;
 - Lisiza izitshalo ukulwa nezifo, ukubanda nokoma;
 - Ukusebenzisa amanzi kahle.



UJANE MCPHERSON, UMPHATHI WEPHROGRAMU
LEGRAIN SA LOKUTHUTHUKISA ABALIMI ABASAKHULAYO

Ukuthola isitha sesihlava sohlanga

NGAPHEZULU KUKHONA IZITHOMBE EZIMBILI EZIKHOMBISA ISIHLAVA EMMBILENI. LEZI ZITHOMBE ZIFAKWE LAPHA UKUNIKHUMBUZA UKUTHI NIFANELE NISIFUNE LESI SITHA ESINCANE.

Isibungu lesi singadala ingozi enkulu embileni wakho, ngakho-ke kufanele usiqaphele njalo – ngokwejoyalekile siqala ukuhlupha ngo-Januwari njalo ngonyaka. Izihlava zivama ukufika nokufika, zingaphinda ziphinde futhi ngesikhathi ummbila umila.

Abantu abanengi batshala izimbewu zombila ezineBT egameni lazo – lezi zimbewu zithuthukiswe kakhulu ukulwa nesihlava sohlanga – izibungu azikwazi ukuphila lapho zidla lolu hlobo lommbila. Siyazi uku-thi lezi zinhlobo zombila ziyaduladula, kodwa kungakusiza ekugcineni ngoba uzonga/uzosindisa umvuno wakho.



Isithombe sikhombisa isihlava emmbileni.



UJANE MCPHERSON, UMPHATHI WEPHROGRAMU LEGRAIN SA LOKUTHUTHUKISA ABALIMI ABASAKHULAYO

Kuwayilense

Qaphela amaphrogramu alandelayo adlule wena ungalalelanga. Kukhulunywa ngazo zonke izinto ezihambelana nabakhiqizi abasakhulayo.

Iwayilense	Usuku	Kukhulunywa:	Isikhathi
Radio Qwaqwa	ULwesine	UJohan Kriel	19:00 - 20:00
Radio Mafikeng	ULwesine	UTonie Loots	19:30
Zululand FM	UMgqibelo	UJurie Mentz	06:10
Ligwalagwala FM	ULwesine	UJerry Mthombothi	05:10
Umhlobo Wenene FM	ULwesibili	ULawrence Luthango	04:30
Alfred Nzo FM	UMsobuluko	Ulan Househam	19:00 - 20:00



Igeji elisebenza kahle lingakuqongelela imali eyinkulungwane

UMA UFISA UKWAZI OKUNYE OKUHAMBELANA NENJINI, IGEJI ELILINGANISA UKUSHISA NOKUKHOMBISA UKUSHISA KWENJINI, UHLELO LOKUPHOLISA INJINI NE 'THERMOSTAT' LIKAGANDAGA, UMBHALO LO UZOKUNIKEZA LEYO MINININGWANE.

Injini

Injini iyinto enezinto ezahlukene ezihlanganiswe ngendlela othile mayelana nohlelo oluthile. Injini yakhiwe ukunikeza amandla asebenzela thina lapho kuvuthiswa idizili/upethroli. Kukhona izakhi eziningi enjini yakwamanje kodwa zonke zisiza ukuthi injini esebenze kahle.

Ngokwamanje kodwa singacabanga ngenjini njengento eyenzo ukuthi thina sithela into evuthisa umlilo endaweni ethile bese sithola amandla aphuma kwenye indawo. Lokho okuvuthisayo kuyavutha lapho kucindezelwa, sonke siyazi ukuthi uma into isha inikeza ukushisa nokufudumala.

I'*Internal combustion*' isho ukuthi kuvutha ngaphakathi, kanjalo-ke injini eyenza lokhu ithatha lokho okuvuthayo ikuvuthise phakathi. Ngamazwi amfusha: injini ifana nebhakete lapho sihlanganisa khona lokho ukushayo nomoya bese siyakokhela kuvuthe. Lesi sihlanganiso sikhukhumalisa masinya ngokushesha lapho sivutha bese sicindezela ukuphuma. Lokhu ukucindezela kusetshenziswa ukuhambisa isakhi senjini bese ekugcineni kuhambisa wonke umshini. Ngokumfusha singathi ukuthi injini kuyinto eshintsha amandla ento efudumele (eshisayo/evuthayo) ibe amandla yemishini esebenzela thina.

Igeji elilinganisa ukushisa kwenjini

Leli geji lilinganisa ukufudumala kwenjini. Uma injini ishisa kakhulu kungadaleka ingozi kuleyo njini. Lapho ubona ukuthi ukufudumala kwenjini kuyakhuphuka, kufanele ucishe ugandaganda masinya ngaphambi injini ilimale.

Kanengi emasimini sibona amageji alinganisa ukushisa aphukile, awasebenzi kahle – lokhu kungadaleka ingozi enkulu ngoba uma igeji lingasebenzi kahle, awungeke wazi ukuthi injini izolimala kakhulu. Ukulungisa injini elimale ngale ndlela kungabiza R50 000 ukuyilungisa. Amageji lawa anga-

tholakala emashobehbeni lapho kuthengiswa amasperi (izikhi zemishini) ngemali encane. Kungavimba wena ukukhokha amarandi ayinkulungwane.

Uhlelo olupholisa injini

Uhlelo olupholisa injini kugandaganda lwenza izinto ezimbili:

1. Luvimba injini ifudumale kakhulu:
 2. Luhambisa inani ekhile lokufudumala lapho injini isebenza kahle.
- Ukufudumala kakhulu kungashisa izakhi zenjini masinya. Ukufudumala kuyadingeka lapho injini iduma, kodwa emva kwalokhu injini esebenzayo ivama ukwenza ukufudumala okuningi kakhulu. Lapho-ke uhlelo olupholisa injini lusiza ukuthwala nokususa ukufudumala okuningi kakhulu. Ukulinganisa ukufudumala kwenza ukuthi injini isebenza kwenani lokufudumala elifanelekile ukwenza umsebenzi othile. Emva kokudumisa injini kufanele ifudumale masinya.

Izinhlobo zezinhlelo ezipholisa injini

Ngokwamanje izinhlobo ezombili ezisetshenziswa ezinjini zakwamanje:

- Ukupholisa ngomoya – umoya uhamba phandle nangaphakathi kwenjini ukudonsa ukufudumala.
- Ukupholisa ngokufana namanzi – amanzi ahambe enjinini ukudonsa ukufudumala.

Ukupholisa ngomoya kusetshenziswa ezinjini ezincane nasezinjinini zezindiza ngoba kunzima ukuhambisa umoya kuzo zonke izindawo ezifudumalayo enjinini enkulu. Izindawo ezikwazi ukuvuleka nezinto zokufutha nama'blower' asiza ukuhambisa umoya kuzo zonke izindawo.

Ngokwejwayelekile kusetshenziswa amanzi okupholisa injini. Lapho kubanda kakhulu, kuthelw i-'*anti-freeze*' ukuvimba amanzi aphenyuke abeyisithwathwa. Amanzi ajikekeleza ngaphandle kwamasilinda nesihlalo samasilinda. Lapho ukufudumala kuphuma, kudonswa amanzi, bese amanzi ayageleza aya ku'*rediyetha*'. Lapho-ke umoya ufufutheka kurediyetha upholisa amanzi ashisayo ukuhambisa ukufudumala kwenjini emoyeni. Bese amanzi aphinda abuyele enjinini ukuyodonsa okunye okufudumele.



Igeji elisebenza kahle lingakuqongelela imali eyinkulungwane

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Lemininigwane yenziwe ngabakwa Maize Trust.

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IPULA IMVULA ITHOLAKALA NGALEZI ZILIMI EZILANDELAYO:

IsiZulu,

IsiNgisi, IsiBhunu, IsiTswana, IsiSuthu,
IsiSuthu saseNyakatho, IsiXhosa.

Uhlelo lokupholisa olusebenzisa amanzi

Uhlelo olusebenzisa amanzi lungaba nalokhu okulandelayo:

- Irediyetha nesivalo esikwazi ukuvimba ukucindezela.
- Ifeni nebande lefeni.
- Iphamphu lamanzi.
- Ibhantshi lenjini lapho kuhamba khona amanzi.
- Isilinganiso sokufudumala – i'thermostat'.
- Into epholisa uwoyela wenjini.
- Amaphayiphi ahlanganisa konke lokhu.
- Okufana namanzi noma lokho okupholisayo.

Irediyetha liyasakhi elibalulekile lapho kusetshenziswa amanzi ohlelweni lokupholisa injini. Kulapho ukushisa okukhona kuanjiswa kuphume kuye ngaphandle emoyeni. Futhi libamba amanzi akwanele ukuze asebenze isikhathi eside lapho kudingeka.

Iphamphu lamanzi

Iphamphu lamanzi lihambisa amanzi ohlelweni lokupholisa. Iphamphu lidonsa amanzi ashisayo enjinini bese liwafutha aphume ku'irediyetha' bese ayaphola. Ezinye izinjini zinemithambo ezihambisa okupholisayo ezindaweni ezishisayo njengamavelvu, ezinye zihambisa okupholisayo kumavelvu'seat' nakumavelvu'seat' lapho umoya oshisayo uphuma khona (exhaust). Iphamphu livama ukuba inhlobo ebizwa ngokuthi 'centrifugal', singasho futhi ukuthi loku kuyinhliyo yohlelo olupholisa injini. Lapho iphamphu ihluleka ukuhambisa lokho okupholisayo, ukufudumala akususwa enjinini bese kungadaleka ingozi.

Isilinganiso sokufudumala (thermostat)

Lokhu kuyivalvu elisebenza ngokufudumala (ngokushisa). Kulinganisa ukuhamba kwalokho okupholisayo kurediyetha ukuze injini isebenze ngokufudumala okufanelekile. Lesi silinganiso siphatha ukufudumala kwenjini ukuze isebenze kahle. Lokhu kudingekile ukuze injini ikwazi is-

ebenze ngendlela efanelekile.

Ezinye izinjini ezinkulu zisebenzisa amathemostata amabili ukuphatha ukufudumala. Umsebenzi wawo uyafana nalapho kusetshenziswa ithemostata eyodwa ukuphatha ukufudumala kodwa angasiza lapho kusetshenzwa kakhulu. Kudingeka nje amandla amancane nje ukupholisa lapho umsebenzi ulula, noma ilanga; ishisa.

Ngesikhathi sokuqala sokuduma, ithemostata lenjini livalekile. Imphomphi ihambisa amanzi kancane emaceleni kwenjini.

Kanjalo injini ivama ukufudumala masinya ize ifike lapho ikwazi ukusebenza kahle, bese ithemostata iyavuleka. Lapho-ke okupholisayo okushisayo kusuka eninini kuye kurediyetha bese kuyabuyela futhi.

Okupholisayo

Okupholisayo kuyinto njengamanzi ahamba phakathi kohlelo lokupholisa, kuthwala ukufudumala okusenjini kukwendlulise kurediyetha bese kuya phandle emoyeni. Emva kwalokhu okupholisayo kuyaphinda kungene ukuyolanda ukufudumala okunye.

Ukuphatha uhlelo lokupholisa

Ukuphatha uhlelo ngendlela efanelekile kubalulekile uma sifuna injini egijima kahla.

Ukufudumala kakhulu kuyingozi enkulu, kungadalwa lokhu okulandelayo:

- Kungaba khona izinto ezivimbelayo (okuvimba okupholisayo);
- Ukwesweleka kokupholisayo;
- Iphamphu noma ithemostata elingasebenzi kahle.

Hlola inani lalokhu okupholisayo nokufudumala njalonjalo. Phatha/Hlola/Sevisa lonke uhlelo olupholisayo njalo kabili ngonyaka. Ukuze uhlelo lokupholisa lusebenze kahle kudingeka ukuthi luhlanzwe lonke, kakhulukazi lapho kushintsha iminyaka (ehlobo nasebusika – ukushisa nokubanda) nalapho kufakwa i-'antifreeze'.



Amageji akhombisa ukushisa nokubanda kwenjini angasebenzi kahle angalimaza injini logandaganda wakho.

IMINININGWANE ITHOLWE KWESIFUNDO SEGSA
SOKUFUNDISA UKUPHATHA UGANDAGANDA NEMISHINI

Sizimisele ukukhipa incwadi enhle kakhulu. Uma ufisa ukuxoxa ngokuphakathi noma ngendlela kubhaliwe ungathintana noJane McPherson.