

PULA INVULA



Abadlali-ndima abakwinkqubo: Abahleli phambili, ukusuka ekhohlo, nguLawrence Luthango, uJerry Mthombothi kunye noJane McPherson. Ngasemva, ukusuka ekhohlo nguJohanKriel, uJurieMentz, uDanie van den Berg, uJanHouseham, uTonie Loots noWillie Kotzé.

Uphuhliso lwabalimi luyabalulwa ngenxa yokugqibelela kwalo

NGENTSASA ENTLE "PHANTSE EYENTLAKOHLAZA" EBLLOEMFONTEIN, ABALIMI ABASAPHUHLAYO BAFUMENE UKUBALULWA ABAKUFANELEYO NGENXA YEGALELO LABO KULIMO LWELI LIZWE. "USUKU LOKUVUNA" NJENGOKO LWALUBIZWA NGABANYEABATHABATHI-NXAXHEBA ABAKULE NKQUBO, LWABA YINTSASA APHO IGRAIN SA, NJENGENXALENYESE NKQUBO YABO YOPHUHLISO LWAMAFAMA, YABA NABANYE ABADLALI-NDIMA ABAZINIKI ITHUBA LOKUWONGA ABALIMI ABASEBENZA NABO UKUZE BABHIYOZELE IZIVUNO ZABO ABAZIFUMENE NZIMA.

UJannie De Villiers (iCEO-Grain SA) uthi umbono wokuphuhlisa abalimi eMzantsi Afrika kukwenza abalimi inxalenye yoqoqosho olungundoqo. "Kufuneka

babe ngabalimi abarhwebayo abakwaziyo ukuvelisa ukutya kwelizwe nokwelizwekazi besebenzisa uhlahlolwabiwo-mali olulondolozekayo. "Ubalule abalimi abazibeka esichengeni ngenxa yoshishino lwabo. "Imfezeko ivuselela abantu kwaye inika uzuko kuThixo. Aba balimi basaphuhliso bavuselela ilizwe ngokubonisa indlela umntu anokusebenza intsimi ngayo ukuze abenento ayinikelayo," utshilo. Uphinde waphawula ukuba kulusizi ukufumanisa ukuba emva kweminyaka eli-17 yolawulo ngentando yoninzi, ezolimo azikamanyaniswa. I-Grain SA iza kusebenza nzima kakhulu kumzamo wokuphumeza okokuphela," utshilo.

UJenny Matthews (waseGrain SA) uphawule imiceli-mngeni ethe yaba khona, Ewe kukho iintsuku

Imagazini yakwaGrain SA
yophuhliso lwabavelisi

FUNDA NGAPHAKATHI:

- 4 > INkqubo yoPhuhliso lwamaFama ifumana isitofu semali esesandleni
- 8 > limbotyi zesoya – isityalo esingumman-galiso wehlabathi
- 10 > Ukusetyenziswa komgquba wasebuhlanti njengesichumiso



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Uphuhliso lwabalimi luyabalulwa ngenxa yokugqibelela kwalo



UMama uJane uthi...

Iindaba ezimnandi ngenene asizifumani kaninzi! Siyavuya ngenene ukuba nako uku-xelela abafundi ukuba sikwazile ukufumana izigidi ezingama-R35 kwiSebe loPhuhliso lwamaPhandle noHlenga-hlengiso lomHlaba (*Department of Rural Development and Land Reform - DRDLR*) ukuze kuxhaswe abalimi abali-16 ngemali yokuqalisa amashishini eFree State.

Ngonyaka ka-2010, sibe neengxoxo neSebe lezoLimo ngethemba lokufumana amagalelo eemveliso adingwa ngabalimi. Akutsitsanga nto. Nangona kunjalo, iindaba ezimnandi kukuba i-DRDLR iye yaweva amalinge ezicelo zethu yaza yazinikela ukuba isincede.

Kulo nyaka senze uhlalutyo lweefama ezili-16 – abalimi abasoloko beyinxalenye yenkqubo yethu kwiminyaka eliqela, abalimi abebeyinxalenye yamaqela ofundo-nzulu, iintsuku zamafama, inkqubo yamafama yenqanaba eseliphambili ngokunjalo baye kwizifundo zoqeqesho ezininzi. Silungise isicwangciso esineenkukacha sokuqhuba ishishini esibandakanya ukusetyenziswa koomatshini (ukuthenga nokukhanda iitrektara nezixhobo zokusebenza), ukubiyela nenkxaso yamanzi, iishedi nezakhiwo, imfuyo kunye namagalelo eemveliso zezityalo. Ezi zicwangciso ziye zanelwa kanti uhlalo lwabiwo-mali olupheleleyo lufakwe kwihakawunti yebhanki yohlobo olulodwa yaseGrain SA evulwe ngale njongo.

Zonke iinkqubo zobalo-mali eziyimfuneko zenziwe, ngokunjalo nesicwangciso esineenkukacha zempumezo somlimi ngamnye. Kude kube ngoku sibancedisile abalimi ngempumezo ephathelene neetrektara kunye nezixhobo zokusebenza kwaye siqhuba kakuhle ngamagalelo eemveliso.

Sinqwenela ukubulela i-DRDLR ngokusi-themba kwayo ekubonisileyo kwaye siqinisekisa bonke ababandakanyekayo ukuba thina nabalimi, sinethemba lokukwenza impumelelo oku. Sijonge phambili ekukwazini ukunceda abanye abalimi kwixesha elizayo.

apho siziva ngathi siyasilela edabini kodwa namhla yimini yethu. Zikhona izinto esiphumelele kuzo, kukho iifama ezikhule ukusuka kwimveliso yetoni enye ngehektare nganye ukuya kwiitoni ezinengehektare nganye, abantu abanobomi obutshintshayo ngenxa yolimo, okokungapheleli ekutshintsheni ubomi babo bodwa kodwa kuchaphazeleke kwaye “kuphucule nobomi babanye abantu.”

UJane McPherson (umphathi wenkqubo yophuhliso lwamaFama yaseGrain SA) uthe uMzantsi Afrika udinga icandelo elomeleleyo lolimo kunye nelizwi eliyimbumba. Āsinako ukuba nelizwe elingadibenanga kulimo. Sid-inga ukhuseleko lokutya lwesizwe; akukho mntu oza kusondla, ngabalimi kuphela. Ulimo yintsika yoqoqosho lwethu, lungumqeshi obalulekileyo. “Ngokuluvu lukaJane uphuhliso lolimo yinxalenye ebalulekileyo kwicandelo lolimo. Ukhanyise ukubaluleka kokuphuliswa kwabalimi njengabantu ngabanye. “Ukuze si-fumane icandelo elimanyeneyo nelineenkqubela kufuneka sigqalise kuphuhliso loluntu. Asithethi ngemali okanye ngezinto kuphela, kodwa sithetha ngawe. Sonke sinezidingo kwaye ulimo lunokufaka igalelo kwezinye zezo zidingo. “Le yinkqubo yotshintsho olunika ithemba ebomini boluntu. Sifuna ukufikelela ekukwazini ukuzenzela kwaye siphucule umgangatho wobomi.”

UJaneMcPherson ukhuthaze abalimi-kuba babonisane ngeempazamo zabo. Ēmva kweentsilelo ezithile ziliqela izifundo ezinokufundwa. Xa kukho okungahambanga kakuhle esikwazi sodwa singazibhaqa sonke sisenza kwa ezo mpazamo endaweni yokufunda omnye komnye.”

I-Grain SA izama ukwenza ntoni kwinkqubo yayo?

Injongo ekujoliswe kuyo ekugqibeleni kukuphuhlisa abalimi abarhwebayo abanesakhono, abalandolozekayo, abamnyama.

Ifuna ukuphuhlisa abalimi abarhweba ngokutya okuziinkozo nokufaka igalelo kukhuseleko lokutya lwasemakhaya nolwesizwe ngokusebenzisa ngeyona ndlela ifanelekileyo imithombo yobutyebi obuyindalo enokufunyanwa ngumlimi ngamnye. “Xa unokukwazi ukusebenzisa umhlaba wakho ngeyona ndlela ifanelekileyo, uya kuba negalelo kukhuseleko lokutya lwelizwe lethu. Akuthethwa ngomhlaba kuphela, kungathethwa ngoomatshini kuphela, imimandla yentengiso, imali, okanye izakhono zobuchule; kubhekiselelwa kuzo zonke ezo zinto. Yinkqubo le, asingomtsi omnye kuba akunakwenza oko ukuze ube ngumlimi, uyakhula ude ube ngumlimi.” Utshilo uMcPherson.

Abalimi abafumene amabhaso kulo nyaka babekwe ngokwezintlu ezilandelayo:

- Abalimi bolondolozo (abo balima umhlaba ongange-1 hektare ukuya kwezili-10); ngokunjalo
- Abalimi bemihlaba emincinane (abo balima iihektare ezili-10 apho bakhupha khona imveliso efikelela kwiitoni ezingama-250). Amalungu eklabhu yama-250 (avelisa ngaphezu kweetoni ezingama-250 zokutya okuziinkozo ngonyaka) kunye neklabhu yama-500 (abavelisa ngaphezu kweetoni ezingama-500 zokutya okuziinkozo ngonyaka) nabo baye babalulwa ngethuba lombhiyozo.

NGUELMARIESCHOEMAN,
UMNIKELI KWIPULA/IMVULA



Abaxhasi benkqubo: NguDiale Mokgojiwa (eStandard Bank), uDudu Mashile (eMonsanto) noRudy Mostert (eProfert).



Abatyunjwa kuluhlu lwabaLimi bemihlaba emiNcinane: NguWilson Tyelaphantsi, uSandisile, Colbert Timakhwe, uCaledon Quta (Okwabaphume phambili), uElijah Tefelo Mohapi, uThulane Mduduzi Mbele (Ophumeleleyo), uBen Saul Gininda, uElmon William Mthombothi noSehere Daniel Makgoana (Okwabaphume phambili).



Abatyunjwa kuluhlu lwabaLimi boLondolozi: NguMzoliswa Benedict Gxiva, uMbuzeli Spondo (Okwabaphume phambili), uMfaniseni Alpheus Mnculwane (Ophumeleleyo), uBhekithemba Bethuel Mtshali (Okwabaphume phambili), uBilly Essential Mthimkhulu noClinton Mbongiseni.



Amalungu eklabhu yeeToni ezingama-250: UMponeng Lidia Lentoro (eFree State), uMoleleko Jacob Mthimkhulu (eFree State), uLerato Modise owamkele ibhaso likaSiphiwo Gift Mafuleka (eMpumalanga) noSempe Lucas Mokgethi (eMntla-Ntshona).



UmLimi wonyaka wemihlaba emiNcinane: NguThulane Mduduzi Mbele.



Amalungu eklabhu yeeToni ezingama-500: NguJohn Mpau Dipali (eFree State), uRuben Moiloa Maphira (eFree State), uThemba Johannes Congwane (eMpumalanga) noLerato Modise owamkele endaweni kaZodiwe Paul Motshwene.



Umlimi wolondolozi wonyaka: NguMfaniseni Alpheus Mnculwane.

INkqubo yoPhuhliso lwamaFama ifumana isitofu semali esesandleni

NJENGOKO UBIZO LWENKQUBO YETHU YOPHUHLISO LWAMAFAMA “IKUKUPHUHLISA ABALIMI ABARHWEBAYO ABANESAKHONO, ABAMNYAMA NOKUFAKA IGALELO KUKHUSELEKO LOKUTYA LWESIZWE”, SIYAZAZI KANANJALO IINGXAKI ABAJONGENE NAZO ABALIMI. UKUZE SIKWAZI UKUHLANGABAZENA NENJONGO YETHU, ABALIMI BADINGA ULWAZI NEZAKHONO ZOBUCHULE, UMHLABA, OOMATSHINI BOKUSEBENZA NEMALI YEMVELISO. KWIMINYAKA EDLULILEYO YAKUTSHANJE, UQOQOSHO KWIMVELISO YOKUTYA OKUZIINKOZO KWENZE UKUBA KUBE NZIMA KAKHULU UKUPHUHLISA ABALIMI BEZITYALO OKUZIINKOZO – IINDLEKO ZAMAGALELO ZIYE ZANYUKA NANGONA AMAXABISO OKUTYA OKUZIINKOZO, EHLILE.

Nangona sikuqonda ngokupheleleyo ukuba ishishini kufuneka libe nenzuzo ukuze likwazi ukuqhuba, kwakhona sijongene nemeko apho abalimi bafanele ukuqhuba ngokulima izityalo ukuze baphucule izakhono zobuchule babo njen-gabalimi. Akunakukwazi ukuthi kumlimi “qalisa” uphinde uthi “yeka” – kaloku kufuneka enze ntoni ngomhlaba lo gama silinde ubukho beemeko ezigqibele-leyo?

Kunyaka odlulileyo, sizame kangangoko ukufumana iSebe lezoLimo le-siZwe ukuba lincedisise abalimi bethu abali-152 ngobonelelo lwe-R1 500 nge-hektare nganye ngokuphathelelene neendleko eziphezulu kakhulu zemveliso. Ngelishwa, isebe alenzanga nto ngesicelo sethu. Isebe belinengxowa-mali ye-Ilima Letsema esekwe ngenjongo yophuhliso lwabalimi bokutya okuziinko-zo, kodwa lenze isigqibo sokusebenzisa le mali ngokuthanda kwalo. (Siyazi ukuba iSebe lezoLimo laseGauteng linikele ngomhla we-11 Matshi 2011 nga-

magalelo esityalo ebesifanele ukulinywa ngoNovemba 2010 kwaye sixelelwa ukuba uMntla-Ntshona neFree State zibuyisele uhlahlo lwabiwo-mali lwazo lungakhange lusetyenziswe). Lo mgangatho wokusebenza ongento yanto uya kuba yingxoxo yolunye usuku.

Sibe neengxoxo eziliqela neSebe loPhuhliso lwamaPhandle noHlenga-hlengiso loMhlaba laze lasixelela ukuba ikhona imali yenkxaso ekhoyo enoku-funyanwa ngabalimi abafumene ukubuyiselwa komhlaba. Le mali ifunyanwa ngabalimi be-SLAG, i-LRAD ne-PLAS, kodwa ngelishwa, abalimi bemihlaba edityanelweyo abayinikwa (nangona ngokoluvo lwethu, uphuhliso lwa-maphandle lufanele ukubandakanya imiba yokudityanelwa kwempahla).

Emva kweengxoxo ezinde neSebe lesiZwe nelePhondo, sivumile uku-qhuba iprojekthi yovavanyo eFree State kanti kude kube namhla kwenziwe okulandelayo:

1. Isebe loPhuhliso lwamaPhandle noHlenga-hlengiso loMhlaba lithe lino-ludwe lwabalimi abanemfanelo yokufumana inkxaso yemali.
2. Kwinkqubo yoPhuhliso lwamaFama yaseGrain SA, besinalo uludwe lwabalimi ebebesoloko beyinxalenye yenkqubo yophuhliso kwiminyaka emininzi.
3. Sichonge abalimi abebekuludwe lweSebe kunye nabo bakuludwe lwethu saza senza isigqibo sokwenza uvavanyo ngabo balimi. Imiqathango yethu esiyisebenzise xa sikhetha ibibandakanya okulandelayo: umlimi makabe ebeyinxalenye yenkqubo yethu kwisithuba sonyaka om-nye obona buncinci, makabe uye kwizifundo zoqeqesho ezintathu obona buncinci, makahlale kwifama leyo okanye kufutshane kakhulu kwaye





abe ngumlimi wayo ophambili.

4. Sityelele ifama nganye saza senza uhlolo lweemfuneko ngocoselelo ukuze loo mlimi afumane imveliso efizekileyo nokumncedisa ngokusebenzisa kakuhle imithombo yobutyebi bendalo obukhoyo. Sinike umlimi ngamnye ulungiselelo lwesicwangciso soshishino obelubandakanya ukuthengwa kweetraktara ezintsha nesezikhe zasetyenziswa kunye nezixhobo, ukuthengwa kwemfuyo, izidingo zenkxaso yamanzi nokubiyela ezo ndawo, izixhobo zokusebenza, ukuthathwa kwentwana yomhlaba ezihlalutywayo kunye ne-100% yamagalelo emveliso onyaka wokuqala.
5. Sibhale mvumelwano ne-DRDLR ukuze iindima noxanduva lomdlalindima ngamnye zicace. Le mvumelwano yasayinwa ngamaqela lawo mabini.
6. Sivule i-akhawunti entsha yebhanki sisenzela ezi nkxaso-mali zodwa – apho umxhamli ngamnye ebesayina naye njengomthathi-nxaxheba.
7. Isicwangciso soshishino esilungisiweyo saxoxwa ngocoselelo nomlimi ngamnye ukuze siqiniseke ukuba umlimi uzonwabele iziqukatho zesicwangciso eso soshishino.
8. Umlimi ngamnye usayine isicwangciso sakhe soshishino.
9. Izicwangciso zinikelwe kwisebe le-RDLR.
10. Iimali zenkxaso zafakwa kwi-akhawunti yebhanki (ama-R29 258 ezigidi).
11. Ngoku sibhale isicwangciso sempumezo esineenkukacha:
 - a. Umlimi ngamnye unomntu omcebiso.
 - b. Umlimi ngamnye ucelwe ukuba abhalise amagama kunye neenkukacha zoqhagamshelwano zabaxhasi bakhe (ukuze akhe iqela

labantu anokuqhagamshelana nabo kwindawo akuyo aze omeleze nobudlelwane boshishino).

- c. Iziphumo zohlaluty lwasampulu yomhlaba zifakiwe kwinkqubo yethu ukuze ukuqinisekise amacebiso.
- d. Iingqikelelo zamaxabiso ziya kufumaneka nanini apho kunokwenzeka khona (ngaphandle kwezixhobo zokusebenza esezikhe zasetyenziswa, ukukhandwa kweetraktara nezixhobo zokusebenza kunye ne-diesel).
- e. Umxhasi ngamnye uya kubhaliswa kwinkqubo yoGqaliselo lwe-Mali esSandleni. Kuya kufakwa ii-odolo kwenziwe zonke iintlawulo ngokwesakhelo senkqubo yaseGSA.

Sinochulumanco olukhulu ngale projekthi kuba aba balimi bafumene uqeqesho namava osebenzi wokufama ukutya okuziinkozo; bafumana isixokelelwano senkxaso, ngoku siyakwazi ukubancedisa ngokuthenga iitraktara nezixhobo eziyimfuneko zokwenza umsebenzi wasefama ngendlela efanelekileyo; baya kufumana amagalelo apheleleyo e-100% kunyaka wokuqala, kanti namaxabiso okutya okuziinkozo nawembewu ye-oyile ayathembisa kwixesha elizayo lonyaka.

Ngenxa yako konke oku, sinethemba lokusondela kakhulu kwinqubo yethu, “ekukuPhuhlisa abalimi abarhwebayo, abanesakhono, abamnyama abalima ukutya okuziinkozo nokufaka igalelo kukhuseleko lokutya kwamak-haya nolwesizwe.”

**NGUJANE MCPHERSON, UMPHATHI WENKQUBO
YASEGRAIN SA YENKQUBO YOPHUHLISO LWAMAFAMA**

Kwirediyo

Uze ungaphoswa zezi nkqubo zinomdla kwirediyo, kuba ziquka imibandela enomdla kubalimi abasaphuhlayo.

Irediyo	Usuku lweveki	Inikelwa ngubani	Ixesha
Irediyo Qwaqwa	NgoLwesine	nguJohan Kriel	19:00 - 20:00
Irediyo Mafikeng	NgoLwesine	nguTonie Loots	19:30
IZululand FM	NgoMgqibelo	nguJurie Mentz	06:10
ILigwalagwala FM	NgoLwesine	nguJerry Mthombothi	05:10
Umhlobo Wenene FM	NgoLwesibini	nguLawrence Luthango	04:30
IAlfred Nzo FM	NgoMvulo	ngulan Househam	19:00 - 20:00



Imbewu yeoyite neprotheyini

Zilinyelwa ntoni iimbotyi zesoya?

IMBOTYI ZESOYA ZISESONA SITYALO SIBALULEKE KAKHULU SEMBEWU YEYOILE EHLABATHINI. XA IIMBOTYI ZESOYA ZIFAKWA KURHWEBO LWEENTENGISO ZEHLABATHI ZILUPHINDA-PHINDA KABINI NALUPHI UHLOBO LWEMBEWU YEYOILE KWEZISIBHOZO EZINGUNDOQO. INTLOBO EZIPHAMBILI ZEMBEWU YEYOILE EKURHWETWAYO NGAZO ZIIMBOTYI ZESOYA, YIMBEWU YOMQHAPHU, NGAMANDONGOMANE, NGUJONGILANGA, YIMBEWU YEFULA NEOYILE, IMBEWU YEFLEKISI, UKHOZO LWENQOBA YEYOILE NEZESUNDU.

Oojongilanga neembewu zesoya ziyeyona mbewu ibaluleke kakhulu yeoyile eveliswa eMzantsi Afrika. Imbewu yomqhaphu ne-canola ziveliswa ngezixa ezincinane. Imveliso yembewu yomqhaphu yahluka ukusuka phakathi kweetoni ezingama-15 000 nezingama-32 000 ngonyaka. Imveliso yembewu yomqhaphu ngoku seyingaphantsi kwe-4,7% kwimveliso yembewu yeembotyi zesoya. Imveliso yembewu ye-canola yahluka ukusuka kwiitoni ezingama-31 000 ukuya kwezingama-40 000 ngonyaka kanti yehlile ukusuka kuma-30% imveliso yembewu yeembotyi zesoya ukuya phantse kwi-5%.

Iziquhelo malunga nemveliso yoojongilanga, iimbotyi zesoya namandongomane kunye neendawo ezityalwa kuzo ziboniswa kwitshati engezantsi.



Imveliso yamaxesha onyaka yezityalo zembewu yeoyile eMzantsi Afrika ngokweetoni					
	Efumanekileyo	Efumanekileyo	Efumanekileyo	Efumanekileyo	Elindelekileyo
ISITYALO	2007/2008	2008/2009	2009/2010	2010/2011	2011/2011
Ujongilanga	872,000	801,000	516,265	861,770	
iimbotyi zesoya	282,000	516,000	566,000	708,750	
Amandongomane	88,800	99,500	88,000	69,420	

Indawo yemveliso yamaxesha onyaka elinywe izityalo zembewu yeoyile eMzantsi Afrika ngokwehektare					
	Efumanekileyo	Efumanekileyo	Efumanekileyo	Efumanekileyo	Elindelekileyo
ISITYALO	2007/2008	2008/2009	2009/2010	2010/2011	2011/2011
Ujongilanga	564,300	635,800	397,700	642,700	
iimbotyi zesoya	165,400	237,750	311,450	418,000	

Isivuno esiqikelelwayo sonyaka ngehekare nganye ngetoni nganye					
	Efumanekileyo	Efumanekileyo	Efumanekileyo	Efumanekileyo	Elindelekileyo
ISITYALO	2007/2008	2008/2009	2009/2010	2010/2011	2011/2011
Ujongilanga	1,54	1,25	1,29	1,34	1,35
iimbotyi zesoya	1,70	2,17	1,81	1,69	1,84
% Extra	10%	73%	40%	26%	36%

Njengoko kubonakala kwiziqhelo eziphathelele nemveliso yeemboty zesoza kukho ukwanda kwemfuno ebangwayo yale mveliso. Lo ngumqondiso ocacileyo kummandla wentengiso nonika ithemba kumlimi onqwenela ukuqalisa ukulima iimboty zesoza okanye ofuna ukwandisa imveliso yakhe yexesha elingaphambili.

Okubanga umdla lunxulumano lwezivuno ezingumyinge wesizwe phakathi kweemboty zesoza nojongilanga njengoko lubonakala kwitshati engasentla. Kwiminyaka emine isivuno seemboty zesoza besithe chatha ngomyinge wama36% ngaphezu kwesoojongilanga.

Ukuba ube nawo amava alo mahluko wesivuno kwifama yakho lo mba ungasetyenziselwa ukubala ingeniso esisixa esipheleleyo efumaneka xa usenza uhlaluty oyintsusa yomda. Yiba soloko usebenzisa imiyinge yeemveliso efumaneka kwimisebenzi yakho yasefama xa zikhona iinkcukacha.

Amxabiso ekuya kuvalwa ngawo ngoMeyi 2012 obhambathiso lwekamva kwiJSE amalunga ne-R3 600 ngetoni nganye ukuze ngojongilanga abe malunga ne-R4 080 ngetoni nganye. La maxabiso athathela ingqalelo yonke imibandela efana namanqanaba embewu yeoyile egciniweyo, amanqanaba otshintshiselwano lwerandi ne-dollar, iimeko zemozulu neemfuno ezibangwa kwimimandla yentengiso kwixesha elizayo ngokuphathelele nesondlo namanye amashishini ekeyiki zeoyile neoyile.

Ukusetyenziswa kwekeyiki yeoyile yesoya malunga neetoni ezingama-958 000 yeetoni ngonyaka ngamnye ize ifikelele phantse kwi-14,75% yezabelo zezondlo ezenziwa eMzantsi Afrika. Imveliso yeli lizwe yekeyiki yeoyile efumaneka kwishishini lesondlo ziitoni ezili-152 000 kwiitoni ezingama-387 360 eziveliswe ngabavelisi beli. Ubalo lweetoni ezikhutshwa kweli lalapha lunyuke laya kwiitoni ezili-103 520 eziveliswe kunyaka ophelileyo. Ikeyiki yeoyile yesoya ethengwe kwamanye amazwe imalunga neetoni ezingama-989 558. Kwixabiso le-R3 200 ezi ndleko zelizwe zokuthenga ngaphandle zifikelela kwi-R3,1 yeebhiliyoni kutshintshiselwano namazwe angaphandle.

Ngoko ke likhulu ithuba lokwandiswa kwemveliso yeli lizwe yeemboty zesoza. Umba osisithintelo zizixhobo zemveliso yekeyiki yeoyile xa kusetyenziswa i-hexane ukuhluzisa ioyile ngoko ke isakhono sokuvelisa ikeyiki yeoyile yesoya yomgangatho ophezulu efunwa kwishishini lezondlo sinisithintelo.

Uhlanganiselo oluqikelelwayo lwembewu yemboty zesoza ngama-40% eprotheyini, ama-21% eoyile, ama-34% esitatshi kunye ne-5% yothuthu. Isidlo sekeyiki yeoyile yeemboty zesoza sifikelela kuma-60% ukuya kuma-70% exabiso lemboty zesoza ukuze intsalela ivele kwioyile.

Ikeyiki yeoyile yesoya isetyenziswa kuhlanganiselo lwezabelo zentsalela xa kusondliwa iinkuku kwizahlulelo ezahluka-hlukeneyo zeshishini leenkuku, iihagu neenkomo.

Uthelekiso lomda oyintsusa

Xa usebenza ngezivuno ezingumyinge wesizwe, ingeniso eyintsusa efumaneka koojongilanga ngehektare nganye naxa ucingela umahluko wothutho wama-R200, iya kubaleka ngendlela elandelayo:

$1,35 \text{ iitoni ngehektare} \times R3\ 880 \text{ ngetoni} = R5\ 238 \text{ ingeniso ngehektare.}$
Amxabiso esoya kumaxesha azayo abekwa kwixabiso elingabonisi mahluko ukuze isibalo sengeniso yeesoya ngokusebenzisa izivuno ezingumyinge wesizwe sibe njengesilandelayo:



$1,84 \text{ iitoni ngehektare} \times R3\ 600 \text{ ngetoni} = R6\ 624 \text{ ingeniso ngehektare.}$

Ingeniso yeemboty zesoza ngehektare ngoko ke yi-R1 386 ngaphezulu okanye ama-26% ngaphezu koojongilanga.

Umlimi ngamnye kuya kufuneka abale izivuno ezinokufumaneka emva kokuhlalutya umhlaba wakhe, nemozulu kunye nenkqubo yemveliso. Umahluko wesisele soojongilanga kwindawo yakho unako nawo ukusetyenziselwa ukubala ingeniso epheleleyo echaneke ngakumbi ngehektare ngokuphathelele nefama yakho.

Okuluncedo oluphathekayo ngemveliso

Ezinye izinto eziluncedo ngokuvelisa iimboty zesoza kwifama yakho kukuba kujikeleziso lwakho lwezityalo uba nesityalo esingumdumba ukuze ujikelezise ingqolowa, umbona, oojongilanga neemboty zesoza. Oku kuya kunceda kwinkqubo yokutshatyalaliswa kokhula nakwisimo semihlaba ephantsi kojikeleziso lwezityalo.

Isityalo semboty zesoza sinengcambu enokukhula ngesantya esiphakathi kwama-25 mm nama-50 mm ngosuku. Iingcambu zesityalo semboty zesoza zinokufikelela kwiimitha ezili-1,8 kwixesha lonyaka. Isityalo ke ngoko sinokunceda ekuthinteleni ukugangatheka kweengcambu kwaye sitsale izondlo emhlabeni ukuze kusetyenziswe ezinye izityalo.

Izityalo zesoza zinobudlelwane bokuphilisana neentsholongwane zezhizibium ezithi xa zifakwe kakuhle zenze amaqhuquhuva ezingcanjini. La maqhuquhuva ajika abambe i-nitrogen emoyeni aze abuyisele i-nitrogen ehlambululekileyo ephakathi kwama-20 kg nama-70 kg emhlabeni. Le nitrogen evela kwindalo ephilayo iyakwazi ukufunyanwa sisityalo esilandelayo.

Ulonolozo lwe-nitrogen kumacebiso esichumiso ukwenzela isityalo sehlobo elizayo luya kuba nesiphumo solondolozo olukhulu kwiindleko zenitrogen. Isichumiso se-nitrogen sixabisa i-R9,50 ngekhilogram. Kwinqanaba lokwenza isigxina se-nitrogen okanye ukufikelela kuma-50 kg ngehektare nganye ngokwenza amaqhuquhuva asebenzisekayo, oko kungaba nolondolozo lwama-R475 ngehektare nganye kwiindleko zokufakwa kwezichumiso kwixesha elizayo. Kwakhona abalimi bakholisa ukuba namava okwanda kwemveliso kwizityalo ezilandela iimboty zesoza.

INQAKU LINIKELWE NGUMLIMI OTHATHE UMHLALA-PHANTSI

Uvuliwe umnyango wokuqwalasela ngamandla imveliso yeemboty zesoza kwifama yakho.

Iimbotyi zesoya

IMBEWU YESOYA IQULETHE AMA-38% EPROTHEYINI, ILI-18% YE-OYILE, ILI-15% YEZITATSHI EZINYIBILIKAYO, ILI-15% YEMICU KUNYE NOKUFUMA KWELI-14% NEETYUWA NGOKUNJALO. NGENXA YOKUHLANGANISELANA KWEPROTHEYINI ENINZI IIMBOTYI ZEOYILE YESOYA ZIBONWA NJENGESITYALO ESINGUMMANGALISO WEHLABATHI. I-NITROGEN YIBLOKO ENGUNDOQO YOKWAKHA KWIMVELISO YEPROTHEYINI NGOKUNJALO IIMBOTYI ZESOYA ZIYIDINGA I-NITROGEN KAKHULU XA KUTHELEKISWA NEZINYE IZITYALO.

Ukunamatheliswa kwe-nitrogen

Ngethamsanqa iimbotyi zesoya ziphuhlise ubudlelwane bokuphilisana nezinye izidalwa obaziwa njengobudlelwane bokusebenzisana, apho isityalo sifana nomamkeli okanye ikhaya lentsholongwane eyibhaktiriya ethile ukuze le bhaktiriya ibe nesakhono sokuqokelela i-nitrogen emoyeni osingqongileyo ize yenze ukuba ifumaneka kwisityalo. Izityalo ke ngoko ezikwaziyo ukunamathelisa i-nitrogen emhlabeni zaziwa ngokuba yimidumba.

Umoya osingqongileyo unegesi (umoya) eyi-nitrogen engama-78% kodwa izityalo azikwazi kuyisebenzisa ngokungqalileyo. Izityalo zikwazi ukuyisebenzisa i-nitrogen kuphela xa ikwi-ammonium okanye njenge-nitrate. Iibhaktiriya ye-rhizobium eqinisekisa ukuba i-nitrogen iyanqakulwa emoyeni ongqonge isityalo ize ithuthelwe kwisityalo yaziwa ngokuba yi-Bradyrhizobium Japonicum. Isityalo sona sinika inkxaso yeeekhabhohayidreyithi neetyuwa kwisicuku seebhaktiriya kanti zona iibhaktiriya zona zijike i-nitrogen esemoyeni ibe luhlobo olusebenzisekayo kwisityalo.

Iibhaktiriya zihlala kwizahlulo ezibizwa ngokuba zii-bacteroid ezenza amaqhuquhuva anokufikelela kwi-10 000. Oku knokuqwalaselwa kwizibhaxu ezingqukuva ezisabumhlophe ezibonakala kwiingcambu sesityalo se-ertyisi.

Iimbotyi zesoya zidinga malunga nama-85 kg e-nitrogen ngetoni nganye yembewu evelisiweyo. Isityalo esinesivuno esingumyinge weetoni ezimbini siya kudinga i-170 kg ye-nitrogen ngehektare nganye. Ukunamatheliswa okuyindalo kwe-nitrogen kusisizathu sesidingo sesixa esipheleleyo sesityalo esingama-50% ukuya kuma-80%.

Ukubumbeka kwamaqhuquhuva nokufakwa kweebhaktiriya

Umba obaluleke kakhulu ekuveliseni ngemfezeko iimbotyi zesoya ngoko ke kukuqinisekisa ukuba ukubumbeka kwamaqhuquhuva kulunge kakhulu okanye kude kubalasele.

Ukufakwa kweebhaktiriya ezithile ze-rhizobia kwimbewu yembotyi zesoya phambi kokutyala okanye ngexesha lokutyala. Izingxalwa zinokuthengwa ngokweentlobo ezahluka-hlukileyo kubandakanywa ezilulwelo, ezikhenkciweyo, ezikwimithana evundileyo, ezingumgubo nangokwamahlalutye. Imiba ebalulekileyo ekufuneka ikhunjulwe:

- Landela imiyalelo yabanini bemizi-mveliso ngokuqaphela.
- Musa ukubeka imbewu engxaliweyo esichengeni sokukhanya phambi kokutyala kwaye dibanisa kuphela imbewu eyanele indawo eza kulinywa ngaloo mini. Yiba soloko ugcine imbewu enamaqhuquhuva nengxaliweyo kude nelanga kwindawo esethunzini nepholileyo.
- Ezinye iintlobo zonyango zisuka zibe yityhefu kwiibhaktiriya. Qiniseka ukuba umxhasi wakho wembewu akasebenzisanga nkqubo yokunyanga imbewu yakhe nge-Captain okanye nge-PCNB.
- Cinga ngokuhlenga-hlengisa isixhobo sakho sokutyala ukuba sikwazi ukutshiza isingxalwa esixubileyo ngokungqalileyo emhlabeni ofumileyo emva kwesixhobo sokufaka imbewu okanye isikrazuli somhlaba. Iinkqubo ezinjalo nezokuqhoboshela ziyafumaneka ngexabiso eliphantsi kummandla wentengiso weli lizwe.
- Musa ukutyala xa kushushu ngokugqithisileyo okanye kubanda njalo. Amaqondo obushushu bomhlaba afanelekileyo okutyala aphakathi kwe15°C nama 27°C. Kwimihlaba eyisanti yaseFree State eseNtshona kuncinane kakhulu ukwenzeka kwamaqhuquhuva okunokuba khona xa kulinywa ukususela kuOktobha ukuya kuDisemba ukususela kwintsimbi ye-10h00 ukuya kweye-14h00 emini ngenxa yobushushu obugqithisileyo kweli xesha.
- Faka iibhaktiriya kwimbewu yakho ngonyaka ngamnye xa ulime iiso ya kuloo ntsimi kwa kwixesha elingaphambili lonyaka.



– isityalo esingummangaliso wehlabathi

Ukuqwalasela ukusebenza kwamaqhuquhuva

Umlimi makagqale kakhulu ngexesha lokutyala aze aqalise ukuqwalasela ukwenzeka kwamaqhuquhuva kwiiveki ezimbalwa emva kokutyala. Kwiiveki ezintlanu ukuya kwentandathu emva kokutyala iqhuquhuva kufuneka ukuba libe selilikhulu kwaye libe selisebenzisa ngeli xesha. Xa ukwenzeka kwamaqhuquhuva kusilele umntu unokuqwalasela ukuba yeyiphi imiba kwixesha lokutyala engagcinwanga ukuze kufumaneki iimpendulo zeengxaki ezinokuba khona. Izifundo ezifundiweyo zinokusetyenziselwa ukuphucula indlela yokufaka iibhaktiriya kwixesha langoku lokutyala nokuba lelizayo.

Ukuba akulingenanga ukwenzeka kweqhuquhuva, kuya kufuneka ukuba kunikwe i-nitrogen efakelwayo ukuqinisekisa isityalo esinenzuzo. Sebenzisa umhlakulo ukuze wembe ngokuqaphela kwindawo ejikeleze izityalo nokususa iingcambu kunye nawaphi amanye amaqhuquhuva aphuhla ngaxeshanye. Amaqhuquhuva ashiyeka lula emhlabeni xa iingcambu zit-salwa nanjani.

Kufuneka kubekho amaqhuquhuva obukhulu besi-8 ukuya kuma-20 (i-2 mm ukuya kwi-4 mm macala) ngesityalo ngasinye nje phambi kwebakala lokudubula kweentyatyambo. Amaqhuquhuva enzeke kwiingcambu ezinde mhlawumbi asisiphumo esingqalileyo sokungxalwa kweebhaktiriya kweli xesha lonyaka kanti amaqhuquhuva enzeke kwiingcambu zase-macaleni abumbeka ngenxa yeebhaktiriya esezikhona emhlabeni.

Amaqhuquhuva amancinane amhlophe awakaqalisi ukunamathelisa i-nitrogen. Sebenzisa imela ukusika amaqhuquhuva ukuze avuleke. Amaqhuquhuva axakeke ngokunamathelisa i-nitrogen aba pinki ukuya kumbala obomvu. Amaqhuquhuva aluhlaza, antsundu okanye athambileyo awanamathelisi nitrogen.

Ukwenzeka kwamaqhuquhuva okusileleyo ngoko ke ukunqongophala kwe-nitrogen kuya kubonakala kwizityalo ezahluka-hlukileyo eziba nombala

osabutyheli okanye luhlaza okuyeke-yeke emagqabini okanye emiqolweni nokuba zizibhaxu ezinombala ophumileyo okanye izityalo ezingakhuliyo.

Amasimi mawahlolwe ngalo lonke ixesha lonyaka ukuze kubekwe iliso ekukhuleni kwamaqhuquhuva nokukhangeleka kwesityalo. Isityalo sembotyi yesoya esikulungelelaniso oluchanekileyo siya kubonisa ukukhula okomeleleyo kunye namagqabi aluhlaza okunzulu kakhulu.

Xa ukrokrela ukuba kukho ingxaki funa icebiso kummeli wenkampani yakho yembewu okanye kwi-arhente uze ujonge imibandela enokuba ngoonobangela enikwe ngezantsi.

Ukwenzeka kwamaqhuquhuva asilelayo nokunamathela kwe-nitrogen okungephi kunokubangwa yimibandela elandelayo:

- Amasimi amatsha aneebhaktiriya esezikhona kuwo.
- Amasimi aqulathe amanqanaba aphezulu e-nitrogen eyintsalela esemhlabeni ukususela kwimidumba yesondlo sangaphambili sempahla efuyiweyo efana nelusini okanye imigquba efakwe kakhulu.
- Umhlaba owome kakhulu ongakwaziyo ukugcina ibhaktiriya.
- Iimeko zomhlaba ezimanzi kakhulu okanye ezixineneyo ezithatha iintsuku ezisixhenxe okanye ngaphezulu ngokwenza njalo kunciphe inkqubo yokwenzeka kwamaqhuquhuva ezingcanjini ngakumbi i-oksijini (umongomoya).
- Ubumuncu (pH) bomhlaba obungaphantsi kwe 5,7 okanye obungaphezulu kwe 7,3.
- Imihlaba egangathekileyo ekwa cutha utshintshiselwano lomoya phakathi komphezulu womhlaba neengcambu.

INQAKU LINIKELWE NGUMLIMI OTHATHE UMHLALA-PHANTSI



Olu phawu lohlobo olulodwa lwenziwe lwaba yinto enokubakho ligalelo leTrust Yophuhliso Lwembewu yeOyile neProtheyini.

Ukusetyenziswa komgquba wasebuhlanti njengesichumiso

KWIINKULUNGWANE EZILIQELA ABALIMI BEBESOLOKO BESASAZA UMGQUBA WEMFYUO EMASIMINI NJENGENDLELA YOKUPHUCULA UMGANGATHO WOMHLABA NOKULIMA IZITYALO. KWIMINYAKA EDLULILEYO EZI ZICHUMISO IBIZISO EZINGUNDOQO, OKANYE IBIBA ZIZO KUPHELA EZINIKI ISONDLO KWIMVELISO YOKUTYA. NJENGOKO IZICHUMISO EZIVELA KWIZINTO EZIPHILAYO ZINESIQLATHO ESIPHANTSI SEZONDLO XA KUTHELEKISWA NEZINYE IZICHUMISO KWAYE UKUZISEBENZISA KUNIKA UMSEBENZI OMKHULU, UBUKHULU BECALA SEKUSETYENZISWA IZICHUMISO EZINGAVELI KWIZIDALWA EZIPHILAYO NJENGOMTHOMBO WEZONDLO ZEZITYALO EZIKHULAYO.

Ixabiso lomgquba ngokoqoqosho linokunxulunyaniswa nexabiso lezichumiso ezisetyenziswa endaweni yawo, kunye nesiquatho sezinto ezivela kwizidalwa eziphilayo, kwisakhono sokuphucula iimpawu zembonakalo yomhlaba kunye nokomeleza imveliso yezityalo. Umgquba uneziphumo ezibini ezibalulekileyo kwiimpawu zomhlaba:

1. Unika inkxaso yezondlo; kananjalo
2. Utyebisa umhlaba ngolutho oluvela kwizidalwa eziphilayo, kananjalo uphucula iimpawu zembonakalo yomhlaba ezifana nesakhiwo sawo, isantya sokungenelela kwamanzi, isakhono sokugcina amanzi, ukungena komoya emhlabeni kunye nobunzulu bomhlaba olinyweyo.

Isiphumo esiluncedo ngesichumiso esivela kwizidalwa eziphilayo ngokuphathelele neempawu zembonakalo yomhlaba sinamandla ngaphezu kwesichumiso esingaveli kwindalo ephilayo. Xa kusenzeka, makusetyenziswe umgquba ovela kwiintlangi zezilwanyana ezitinyeni nasemasimini.

Mininzi imibandela echaphazela isixa sezondlo esisemigqubeni. Umgangatho wesakhiwo somgquba uxhomekeke kwizondlo ezityiwa sisilwanyana eso, xa isondlo sityebile ngeeprotheyini, umgquba utyeba ngakumbi ngenayitrojini (nge-nitrogen). Ngokunjalo, xa ininzi phosphorus ne-potassium kwizondlo zezilwanyana, ziya kuba ninzi nasemigqubeni. Umgquba uqala ukuqhekeka msinyane emva kokuba uchithwe sisilwanyana. Ukuba umgquba usekhlani kwaye usendaweni apho unako khona ukoma, ininzi i-nitrogen ephelela emoyeni (ethi shwaka emoyeni). I-potassium yona inokulahleka emgqubeni ngenxa yokukhukuliswa yimvula.

Malunga nama-70% ukuya kuma-80% e-nitrogen, ama-60% ukuya kuma-

65% e-phosphorus kunye nama-80% ukuya kuma-90% anikwe kwizondlo zezilwanyana, ayafumaneka emgqubeni. Isondlo esiphezulu esibuyela emgqubeni sivumela ukuhlaziywa kwezondlo zezityalo ukususela kwisityalo ukuya esilwanyaneni nokubuyela kwisityalo kwakhona. Ukuze kucutheke ilahleko zezondlo ngethuba lolondolozo, umgquba unokuqakaniselwa ndawonye uze ugqunywe. Akufuneki ugcinwe ithuba elide umgquba kwaye kufuneka udityaniswe nomhlaba ngocoselelo msinyane kangangoko kunokwenzeka.

Nantsi imilinganiselo eqikelelwayo ye-nitrogen (N), i-phosphorus (P) ne-potassium (K) emgqubeni weenkomo; i-nitrogen yi-1%, i-phosphorus yi-0,5% ukuze i-potassium (K) ibe yi-1,0%.

Nangona kunjalo, mininzi imibandela echaphazela izixa zomgquba, ngoko ke, le milinganiselo ziingqikelelo kuphela. Isixa sezondlo ezisemigqubeni kunye nokufunxwa kwazo zizityalo ekugqibeleni kwahluka ngokweendawo ngeendawo. Nantsi imibandela engundoqo echaphazela isiquatho sezondlo:

1. Ukuhlanganiselwa kwezixa zezondlo.
2. Indlela yokuqokelelwa komgquba.
3. Indlela yokugcinwa komgquba.
4. Indlela yokugalelwa kwawo nexesha lokuwugalela.
5. Iimpawu zomhlaba nesityalo esigalelwa umgquba.
6. Imozulu.

Xa kuthethwa gabalala, ukukhuliswa kweenkomo zombona kufuna ama-50 e-nitrogen nge4T, ama-22 ephosphorus ne-120 ye-potassium.

Asizizo zonke izondlo ezisemigqubeni ezisukuba sezikulungele ukufunxwa sisityalo. I-nitrogen ne-phosphorus ezininzi ezisemigqubeni ziboph-eleleka okanye zibambeke kulutho oluvela kwizidalwa eziphilayo kwaye zifunyanwa sisityalo kuphela xa zibola. Kodwa yonke i-potassium esemigqubeni sukuba seyikulungele ukufunxwa sisityalo.

Emgqubeni weenkomo ngama-20% e-nitrogen epheleleyo kunye malunga nama-40% e-phosphorus (P) epheleleyo efumaneka kunyaka ofakwe ngawo umgquba. Xa kufakwa umgquba weenkomo, isixa esilingeneyo sinokuba ngama-20 eetoni ngehektare nganye okanye ama-20kg nge-10m². Oku kuphantse ukulingana ne-emele yeelitha ezintlanu ngesikwere semitha ngasinye. Esi sixa somgquba sinokumnika inkxaso ye-

Izondlo ezinikwa ngumgquba ngekhilogram/ngehektare nganye

Isantya ngeToni/ngehektare nganye	N (nitrogen)	P (phosphorus)	K (potassium)
5	10	10	50
20	40	40	200

phosphorus elingeneyo kunye ne-potassium eninzi, kodwa kungafuneka umaleko wangaphezulu we-LAN.

Ingxowa yama-50 kg ye-2:3:2 (38) ingaqulatha i-5,4 kg ye-nitrogen, i-8,14 kg ye-phosphorus ne-5,4 kg ye-potassium.

Ngoko ke, ngokusebenzisa itheyibhile engasentla, umntu unako ukufumanisa ukuba ungakanani umgquba ofunekayo ukuze kufumaneka isivuno ekujoliswe kuso. Inye indlela umntu anokufumanisa ngayo ukuba sinjani isimo sokondleka komhlaba, kukuthatha isampulu yomhlaba, ndlela leyo enokwalatha ukuba kufuneka i-nitrogen, i-phosphorus ne-potassium engakanani.

Ukusebenza komgquba njengesichumiso kuxhomekeke kwizondlo oziqukathileyo ezinganikwa ngezixa ezaneleyo ngumhlaba. Ngoko ke, ixabiso lerandi lesichumiso somgquba sethuba elifutshane lilingane neendleko zesichumiso ebesiya kuthengwa xa bekungafakwanga mgquba. Emasimini apho amanqanaba omhlaba e-phosphorus ne-potassium abonakalisa khona ukuba anika inkxaso eyaneleyo, lixabiso lesichumiso se-nitrogen kuphela elinokuqwalasela.

Amasimi ane-phosphorus ne-potassium enganelanga kakhulu aya kufuna uchatha we-phosphorus ne-potassium emva kwexesha, xa kungagalelwa mgquba. Umgquba unokunceda ekulungiseni ubumuncu bomhlaba ngokunjalo uphucule nemihlaba eneempawu ezicekethekileyo zombonakalo ezifana nobunzulu bomhlaba obulinyiweyo obungephi, ukuba namagade, ukufunxeka nzima kwamanzi.

Inkcitho ephucula ngamandla uhlaziyo lwezondlo, umgangatho wobume bemeko engqonge isakhono solawulo lwakho, lutyalo-mali olulungileyo olo.

Okuqhelekileyo kukuba ulinganiselo lwe-nitrogen, i-phosphorus nolwe-

potassium emgqubeni lusuka lungangqinelani nolinganiselo lwesixa sezi zondlo zifunwa sisityalo, ngoko ke, ukusetyenziswa okupheleleyo akufane kwenzeke. Injongo yolawulo lwezityalo olufanelekileyo kukuphuhlisa inkqubo yokuchuma komhlaba esebenzisa umgquba ukunika izondlo ezifunwa zizityalo ezininzi kangangoko kunokwenzeka, ukuze isichumiso esithengwayo sinike oko kufuneka kongeziwe kuphela.

Kufuneka isicwangciso sokufikelela kwisantya esithile sokufaka isichumiso esisifanele kakhulu isityalo esithile, ngokuqwalasela oku:

1. Imfuneko yezondlo zesityalo.
 2. Isiqukatho sezondlo ezisemgqubeni.
 3. Isantya sokugalela umgquba.
 4. Isixa sesichumiso esithengwayo esifunekayo ukongeza emgqubeni.
- Ixesha kunye nendlela yokugalela umgquba zilawula isakhono sokuhlaziya kwezondlo. Qwalasela le mibandela xa ugalela umgquba:
1. Ukugalela umgquba kwangoko kunciphisa ukulahleka kwe-ammonia.
 2. Ukugalela umgquba xa sekusondele ukutyala kangangoko kunciphisa ilahleko yezondlo.
 3. Umgquba mawugalelwe ngokulungelelana kuyo yonke indawo.
 4. Kuthintele ukusifaka ngokugqithisileyo isichumiso esithengwayo.
 5. Iingcebiso ngentwana yomhlaba ehlalutyiweyo (isampulu) mazilandelwe ukuqinisekisa ulungelelwano olufanelekileyo lwezondlo.
 6. Gcina ingxelo yamanqanaba ezondlo ezisemasimini uze uyisebenzise njengesiseko sokulunga-lungisa umgquba ogalelwayo neenkqubo zokuchuma komhlaba.

NGUIAN HOUSEHAM, UMQUQUZELELI WEPHONDO
WENKQUBO YASEGRAIN SA YOPHUHLISO LWAMAFAMA

Ukuthintela ukuphaphatheka komtshizo kwizityalo zakho

ABALIMI ABANINZI KULE MIHLA BALIMA IZITYALO NGEZITYALO KWIIFAMA ZABO. KWINKQUBO YEFUSI OKO KUBANDAKANYA UKUJIKELEZISWA KWEZITYALO ZENGQOLWA, OJONGILANGA, IIMBOTYI ZESOYA, AMAZIMBA, UMBONA, IITAPILE NAMADLELO APHO IMICHIZA EYAHLUKA-HLUKENEYO EMININZI ITSHIZWA KHONA KWIZIGABA EZAHLUKA-HLUKILEYO ZOKUKHULA KWEZITYALO KWISITHUBA SONYAKA.

Abalimi abakufutshane kwiindawo ezingasezidolophini nangakwizityalo ezinkcenceshwa kakhulu kangangoko, phantsi kwemithunzi, kwimithi yeziqhamo ekhula kwisithuba sonyaka siphelele, amasimi emidiliya, awemifuno namanye, mabaqaphele xa befaka imitshizo kuba umtshizo unokuphaphatheka xa kukho umoya. Umlimi makathathe ingqalelo ukuze angonakalisi ezinye izityalo ezikwifama yakhe kanti nangakumbi ezabamelwane bakhe.

Iimeko zokutshiza

Abalimi mabasoloko beqwalasela uqikelelo lwemozulu lwendawo yabo kunye neemeko zaphambi kokutshiza nangethuba lokutshiza. Umoya ovuthuza ngamandla, uxinzelelo oluphezulu kakhulu lwempompo nemilomo engalunganga kunye nemimiselo yokuphakama kwesibambo zizinto ezinokubangela ukuphaphatheka okuxhalabisa kakhulu komtshizo kuyo yonke ifama ukuya emasimini akufutshane nasemasimini ommelwane wakho. Nantsi imibandela efanale ukukhunjulwa:

- Ukutshiza xa kuvuthuza umoya ngamandla naphantsi kweemeko zemozulu ezahluka-hlukileyo.
- Amathontsi omtshizo amancinane kakhulu.
- Ukuphakama kwesibambo okungalunganga.
- Isantya esiphezulu kakhulu sesixhobo sokutshiza xa kutshizwa intsimi.
- Iimveliso zemichiza nemixube ephelela emoyeni lula ngethuba lokutshiza nasemva kwako.
- Izityalo ezahluka-hlukileyo ezixinaniswayo xa zityalwa apho kungekho khona imimandla engenanto phakathi kwemiqolo.
- Amaqondo oxinzelelo ekusetyenzwa phantsi kwawo ayabunciphisa ubukhulu bamathontsi kwaye andisa ukuphaphatheka komtshizo.
- Izixa ezincinane ezifakwa ngemilomo emincinane nazo zinako ukwandisa ubukho bokuphaphatheka.

Kumaxesha athile onyaka iimeko zokutshiza ziya kufaneleka kumathuba athile emini okanye ebusuku. Ababhambathiswa abanee-GPS nee-GIS koomatshini babo banako ukutshiza indawo enkulu ngobusuku obuzolileyo.

Yiba soloko ubonisa umbhambathiswa wakho okanye umazisa ngeendawo ezinkenenkene kwaye wazise abamelwane bakho xa uza kutshiza isityalo esithile ngokusebenzisa imichiza ethile. Abamelwane bakho banethuba lokukwazisa ngazo naziphi izityalo ezinokuchaphazeleka, phambi kokuba kwenzeke nawuphi umonakalo.

Hlalutya iimeko zemozulu ezifana nemvula, ukusibekela nobushushu uze uphinda-phinde ukuzihlola ngalo lonke usuku okanye ubusuku.

Ukuthintela ukuphaphatheka komtshizo kwizityalo zakho

Bubushushu obungakanani obulungele ukutshiza?

Ziyafumaneka iimitha zemozulu ezisebenza njengezixhobo zokubala ezilinganisa umahluko phakathi kobushushu obuthathwe ngethemomitha enebhalbhu emanzi kunye nobushushu obuthathwe ngethemomitha yebhalbhu eyomileyo. Ubushushu bebhambhu emanzi buthathwa kobo bebhambhu eyomileyo ukuze kufumanike iqondo elilinganise ngokwamaqondo eesentigreyidi. Oku kwaziwa ngokuba ngumlinganiselo we-Delta T weemeko zemozulu ezikhoyo ngoko.

Izixhobo zeemitha zinesiqhubeli-phambili ekwakhelwe kuso isixhobo somoya nesikwaziyo ukulinganisa ngendlela echanekileyo isantya somoya. Umlinganiselo lowo unxulumene ngokungqalileyo nokuthi shwaka emoyeni kungenjalo ukusinda kwamathontsi omtshizo. Xa lomlinganiselo ufikelela phakathi kwesibini nesibhozo, kucetyiswa ukuba kuphezwe ngokutshiza. Phantsi kweemeko zamaqondo aphezulu emozulu nokufuma okuphantsi okanye isiqukatho sokufuma okusemoyeni esiphantsi, amathontsi aphelela emoyeni phambi kokuba isityalo sifumane ithuba lokufunxa umchiza. Phantsi kweemeko zobushushu obuphezulu nezomileyo amathontsi asenokungafiki nokufika emagqabini ezityalo. Ukuba iimeko zihamba kunye neemeko zomoya omkhulu, ukutshiza kuba sisenzo esingasebenziyo.

Amanqanaba afundwa kwi-Delta T aphantsi anokwenza ukuba amathontsi amancinane ahlale ejinga emoyeni endaweni yokuhla afikelele kukhula ekugqaliselwe kulo. Kwiimeko ezinobushushu obuphezulu ukhula lunokucinezeleka kangokuba ukufunxeka kwemichiza emathontsini kube kuncinane kakhulu. Phantsi kwezi meko ipesenti yokutshatyalaliswa kokhula iba sezantsi.

Uluhlu olulolona lufanelekileyo ukusuka kwisi-

bini ukuya kwisibhozo esilinganiswa ngokwamaqondo esentigreyidi lunokuba khona phakathi kwamaqondo obushushu phakathi kwebhalbhu eyomileyo yamaqondo eesentigregreyidi ka0 ukuya kwama50 kunye nokufuma kwe10% ukuya kuma81%. Ngamanye amazwi, ukutshiza okufanelekileyo kusenokwenzeka kubushushu obuphantsi obunokufuma okuthande ukuba phantsi okanye kubushushu obuphezulu obukhatshwa kukufuma okuphezulu.

Enyanisweni asiyonto enokwenzeka ukuyihlalutya ngokuyibona ngamehlo yonke le miba ngaphandle kokuba umntu selekhe wanamava okutshiza kwiimeko ezichanekileyo. Njengoko kubonakala, kucetyiswa ukuba umntu athenge imitha ye-Delta T ukuze kuthathwe imilinganiselo echanekileyo xa kusetyenzwa naxa itanki yesitshizi yenziwe ikhamte phakathi kwamathuba okuzaliswa. Isigqibo esilungileyo malunga nokuqhuba okanye ukuyeka sinokwenziwa nangeliphi ixesha emini okanye ebusuku.

Ukuthathela ingqalelo ubushushu obugqubayo buhamba nemigqaliselo esisiseko eyile:

- Musa ukutshiza emini xa kukho umoya oshushu wesantya esingakhawuleziyo xa uthande ukuba mkhulu umoya. Umntu unako ukuyiqwalasela le meko xa ejonge nayiphi imisi eqhumayo kwindawo leyo.
- Musa ukutshiza ebusuku xa kukho umoya wesantya esingakhawuleziyo okanye ukutshona kwelanga apho isibhakabhaka singcwengileyo khona njengoko kukho umngcipheko wokutshiza kwezinye iindawo ekungajoliswanga kuzo.
- Tshiza ngeentsasa okanye ebusuku xa kukho impepho engephi nepholileyo eya kuzifanela kakhulu iimeko zokutshiza.

INQAKU LINIKELWE NGUMLIMI OTHATHE UMLALA-PHANTSI



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Injongo yethu kukuvelisa olona papasho lubalaseleyo xa lunokubakho. Nawaphi anqaku aphawulwayo ngesiqukatho somhleli okanye ngedlela yokubhalwa kwaso ngoko ke, mawabhekiswe kuJane McPherson.