

PULA IMVULA

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INCWADI YEGRAIN SA YABALIMI ABASAKHULAYO



Isithombe: Benno Botha

Indlela yokwenza isilinganiso SESILIMO SAKHO

UKUSEBENZISA ULWAZI OLULANDELAYO NJE-NGOMHLAHLANDLELA, UNGENZA ISILINGA-NISO SAMANDLA ESIVUNO SESILIMO NEMALI ENGENAYO ONGAYITHOLA YESIZINI. UNGAKHO-HLWA UKUTHI LUNINGI USHINTSHO OLUNGA-AFEKTHA UKUSHAYA EMHLOLWENI KWESILINGANISO SESILIMO NOMA SESIVUNO. UMA USONDELA ESIKHATHINI SOKUVUNA, UKUPHIKELELA KWAKHO KUYA NGOKUSHAYA EMHLWENI NGOBA MANCANE AMATHUBA OKUBA KWENZEKE USHINTSHO OLUKHULU.

Indawo efundwe ngokujulile ukuphikelela ngezivuno zesilimo nomangesilinganiso sesilimo. Amafomula athile enziwe futhi alungiswa,

kodwa ulwazi olunzulu, phakathi kwezinye izinto, igatsha lolimo nesigodi kuhlezi kubalulekile ekunqumeni ngesivuno sesilimo.

Enye yamafektha abalulekile yisisindo se-*kernel*. Akushintshi kakhulu ukusuka kusizini eyodwa kuya kwenye kodwa futhi na-phakathi kwesizini eyodwa. Ngisho emuva kokuba isilimo sesivuthiwe, ama-fektha afana ne-ear rot namanye ama-phathogens angaba nomthelela esisindweni se-*kernel*. Imihlahlandlela ihamba kanje:

UKOLO

I-avareji yezinhlamu zikakolo ezingabaleka kahle zingalinganiselwa:

- Inhlabathi eyomile – 3 500 izinhlavi /100 g
- Okuniselwayo – 3 000 izinhlavi/100 g

Okwenziwayo jikelele kubili, ukuhlwanyela nokutshala, kuchazwa ngokwehlukana ukuze kunqunywe ngesivuno.

Indlela yokwenza...

Ukuhlwanyela noma ukutshala ukolo kolayini abancane

- Okokuqala, inani lamadlebe noma imihlanga ngokweskwe mitha (m^2) kunqunyiwe.
- I-avareji yenani lezinhlamu ngokwedlebe elilodwa kunqunywa ngokubala isampuli yezinhlamu zedlebe likakolo ngalinye, okuba lwa kukho inani lamadlebe amancane namakhulu. Uma izinhlamu zingeke zibalwe okwamanje, i-avareji ekahle yokubalwa kwamacultivar kungasetshenziswa.
- Le fomula elandelayo ingasetshenziswa ukubala isivuno lapho kwatshalwa khona ukolo:

Inhlabathi eyomile: $\frac{\text{Amadlebe noma izinhlanga per } m^2 \times \text{izinhlamu per ear}}{3\,500} = t/\text{ha}$	Ukunisela: $\frac{\text{Amadlebe noma izinhlanga per } m^2 \times \text{izinhlamu per ear}}{3\,000} = t/\text{ha}$
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Ukolo otshalwe kolayini abehlukene

- Ububanzi bolayini bunqume kanje: Ibanga eliphakathi kolayini abayi-10 liyaliganiswa, ngamanye amagama kusukela kulayini woku-1 kuye kulayini we-11, futhi ibanga elitholakele lihlukanisa nge-10 kunqunywa ngobubanzi bukalayini.

Isibonele

Ibanga ezikhaleni zolayini abayi-10 = 3,5 m

$$\text{Ububanzi bomugqa u-} \frac{3,5 \text{ m}}{10} = 0,35 \text{ m}$$

- Inani lamadlebe noma izinhlanga kulayini ebangeni elingu-3 m elibaliwe.
- Inani lezinhlamu *per ear* kunqunywa ngokubalwa isampuli yamdalebe, okubandakanya imadlebe amancane namakhulu ngokungalingani. Uma izinhlamu zingeke zisabaleka, kungasetshenziswa i-avareji enhle yaleyo-cultivar ukubala.
- Kungasetshenziswa le fomula engaphansi ukubala isivuno lapho ukolo etshalwe khona kolayini abehlukene.

Umhlabathi owomile: $\frac{\text{Amadlebe noma izinhlanga per } 3 \text{ m} \times \text{izinhlamu per ear}}{\text{Ububanzi bolayini (m)} \times 3 \times 3\,500} = t/\text{ha} \text{ (yield)}$	Ukunisela: $\frac{\text{Amadlebe noma izinhlanga per } 3 \text{ m} \times \text{izinhlamu per ear}}{\text{Ububanzi bomugqa (m)} \times 3 \times 3\,000} = t/\text{ha} \text{ (isivuno)}$
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UMMBILA

- Umhlahlandela ka-0,28 g/*kernel* kungasetshenziswa i-avareji yesisindo sama-*kernel* ommbila lapho izinhlamu zingabalwa khona ukuze ubale amandla esilimo.
- Uma izinhlamu zingeke zibaleke, u-120 g kuye ku-180 g *per ear*, kuya ngokwakheka nokwenzeka kwamadlebe aphindaphindiwe, kungasetshenziswa.
- Uma izinhlamu zingeke zibaleke, u-120 g kuye ku-180 g *per ear*, kuya ngokwakheka nokwenzeka kwamadlebe aphindaphindiwe, kungasetshenziswa.
- Nquma i-avareji yesisindo ngokwama-gremu *per ear*.
- Le fomula engaphansi manje isingasetshenziswa ukubala isivuno.

$$\frac{\text{Inani lamakhanda per } 10 \text{ m}}{1\,000} \times \frac{\text{amagremu per head}}{\text{Ububanzi bolayini}} = t/\text{ha} \text{ (isivuno)}$$



UBHEKILANGA

- Sebenzisa lemhlahlandela ukunquma nge-avareji yesisindo sezi nhlamvu ikhanda ngalinye esigabeni sobuncane ngaphambi kokuthi izinhlamu ezisekhanda zibalwe.

Ukukwakha/izitshalo/ha	amagremu ezinhlamu/ikhanda
50 000	34
40 000	41
30 000	48
20 000	55
10 000	62

- Sebenzisa le ndlela elandelayo ukubala izinhlamu ikhanda ngalinye:

- Linganisa idayametha yenhloko.
- Linganisa idayametha yesethi yenkaba yohlamvu uma kwenzeka.
- Bala inani lezinhlamu *per cm²* futhi hlukanisa le nombolo nge-10 ukuthola inani lezinhlamu *per cm²*.
- Bala indawo yokukhiqiza ngalendlela elandelayo:

Idayametha yekhanda	= 15 cm	
Idayametha yesethi yenkaba yohlamvu	= 5 cm	
Isamba sendawo	= 15 x 15 x 0,79	= 177,75 cm ²
Indawo engakhiqizi	= 5 x 5 x 0,79	= 19,75 cm ²
Indawo ekhiqizayo	= 177,75 cm ² - 9,75 cm ²	= 158,00 cm ²

- Phindaphinda inani lezinhlamu ngokwesentimitha skwele (cm²) ngokwendawo yokukhiqiza ukuze uthole inani lezinhlamu ikhanda ngalinye.
- Phindaphinda inani lezinhlamu ekhanda ngokwe-avareji yesisindo sohlamvu ukuthola isisindo sekhanda. Sebenzisa isisindo sika-0,04 g inhlamu ngayinye njengomhlahlandela.

- Bala inani lamakhanda *per 10 m*.

4. Linganisa ububanzi bukalayini.

5. Sebenzisa le fomula elandelayo ukubala isivuno:

$$\frac{\text{Inani lamakhanda per 10 m}}{1\,000} \times \frac{\text{amagrem ikhanda ngalinye}}{\text{ububanzi bukalayini}} = \text{t/ha (isivuno)}$$

UBHONTSHISI OWOMILE NOBHONTSHISI ISOYA

Landela izinyathelo ezilandelayo ukwenza isilinganiso sesilimo sika bhontshisi owomile nobhontshisi isoya:

1. Nquma inani lezitshalo per 10 m kanye ne-avareji yobubanzi bukalayini.

$$\text{Izitshalo per 10 m} \div \text{ububanzi bukalayini} \times 1\,000 = \text{plants/ha}$$

2. Nquma nge-avareji yenani lemi-dumba isitshalo ngasinye nezi nhlavi umdumba ngamunye.

Ubhontshisi isoya, \pm 1,8 wezinhlamvu/umdumba: Isisindo: \pm 0,16 g/uhamvu

Ubhontshisiowomile: Izinhlavu/umdumbanesisindo/uhamvuziya-hlukana ngokwama-cultivar:

I-Small white canning types: Isisindo \pm 0,19 g/uhamvu

Ubhontshisi onemithende ebomvu phecelezi Red speckled types: Isisindo \pm 0,47 g/uhamvu

3. Abela isisindo ngesitshalo usebenzisa umhlahlandlela, kodwa njalo ungakukhohlwa lokho:

- Qinisa ukulinganisa ukumiswa kwezitshalo nobude bezitshalo.
- Ukubukeka nombala wezitshalo jikelele.
- Izimo zomswakama (isomiso ukugcwala kakhulu kwamanzi).
- Ukhula, ukulawulwa kwezinambuzane nezifo.

4. Imihlahlandlela yokumisa izitshalo:

Ubhontshisi owomile:	zinhlobo zezinhlamu ezinkulu	zinhlobo zezinhlamu ezincane
Izindawo ezingaseMpumalanga	\pm 120 000	150 000 +
Izindawo eziseNkabeni	\pm 100 000	\pm 140 000 - 150 000
Ezindaweni eziseNtshonalanga	\pm 80 000 - 100 000	\pm 120 000 - 140 000
Ubhontshisi isoya:		
Izindawo eziseMpumalanga	\pm 300 000 - 400 000	
Izindawo eziseNkabeni	\pm 280 000 - 300 000	
Izindawo eziseNtshonalanga	\pm 280 000 - 300 000	

5. Manje bala isivuno ngalefomula elandelayo:

$$\text{Izitshalo}/10 \text{ m} \div \text{ububanzi bolayini} \times \text{isisindo/isitshalo (g/isitshalo)} \div 1\,000 = \text{ithani/ha}$$

6. Hlinzekela ukulahlekelwa ngesikhathi sokuvuna kanje:

- Lungisa isivuno esibaliwe sikabhontshisi owomile ngokwefektha ka-80%.
- Lungisa isivuno esibaliwe sikabhontshisi isoya ngefektha ka-85%.
- Ukhumbule futhi ukubheka ubude bombese wokuvuna ubho ntshisi isoya.

I-Santam Agriculture isebeza ngokungaphumuli icubungula ukuhlela kahle izindlela zokunquma ngomonakalo odalwe yisichothe nesilinganiso sesivuno sohla lwezilimo. Lo luphenyo alukaze luthathwe njengoluphelele. Imikhakha emisha kuyaqhutshewa nokuba ifundwe futhi izinqubo ezikhona ziyahlolwa futhi ziyaguqulwa nokulandela izinyathelo, phakathi kwezinye izinto, ama-cultivar amasha futhi kuguqulwe amasu okulima. ■

U-KOBIE DE BEER, OWAY-EYIMENENJA, WEZINSIZA ZOMSHWALENSE (ISIVUNO), WE-SANTAM AGRICULTURE



IZWI LIKA... Johan Kriel

NGESIKHATHI KUBHALWA LO MYALEZO, KWAKUY-ISIKHATHI SOKUTSHALWA KOKUSAHLAMVU KWASEHLOBO ESIFUNDENI KULELI. KODWA, AMA-PLANTER AYEHLEZI LAPHO EGCINWA KHONA NGENXA YOKUTHI BEKUMANZI KAKHULU ENDAWENI YETHU KUTHE TEKE NGENXA YEMVULENI EBILOKHU INA CISHE ZONKE IZINSUKU. IZILIMO ESEZIVELE ZIPHANSI ZIYAGWILIZA EMANZINI. LOKHU KWANGENZA NGAQAPHELA UKUTHI KULULA KANGAKANANI UKUGUQUKA KWESIMO. UBHUBHANE LWE-COVID-19 NEZIPHITHIPHITHI ZANGOJULAYI 2021 NAZO ZISIKHOMBISILE UKUTHI EMPELENI SISENGCUPHENI ENGAKANANI.

Abakhiqizi kufanele bajule kakhulu, bacabange ngokuqala kabusha futhi bahlelele ingomuso. Nayi imihlahlandlela embala:

1. Yazi ukuthi yiluphi uhlobo lomsebenzi wokulima owufunayo. Ngeke utshale ummbila epulazini lezimvu eKaroo.
2. Yazi amandla enhlabathi yakho. Ngokwenyuka kwezindleko zama-input, ngeke usakwazi ukuthatha amashansi ngenhlabathi enganothile.
3. Ukongiwa komswakama kubalulekile uma ufuna ukutshala nge mpumelelo.
4. Izindlela zanamuha zethileji ziyasebenza. UKususa ukuminyana emikhakheni kubalulekile ekuvuleni ukunotha okuphelele kwenhlabathi yakho.
5. Ukhkhethwa kwe-cultivar nezinsuku zokutshala kubalulekile ukuze ukuvuna kuqale ngesikhathi.
6. Ukuqhubekela phambili kogandaganda nama-implimenti kubalulekile ukuze umsebenzi wenzive ngesikhathi.
7. Kuzodingeka ufake ingxene yeckephithali yokukhiqiza njengoba kulukhuni satshe ukuthola imalimboleko yokukhiqiza ngokugcwele. Ngakho ke ukuchithwa kwemali kufanele kuqashelwe kakhulu.
8. Hlela ukumakethwa kokusahlamvu kwakho ngesikhathi futhi uqinise-kise ukuthi uyazi kahle imakethe.
9. Amakhemikhali okulawula ukhula nezinambuzane kufanele uwaphathe ngokukhulu ukucophelela ukuze udilive umkhiqizo ophephile, nonempilo kubathengi.
10. Yelua isandla usize umakhelwane noma umlingani wakho ongumkhiqizi ezikhathini ezinzima – noma usize umlimi osafufusa ukuze aqale naye.
11. Kuwumsebenzi wakho ukuvikelela komndeni, abasebenzi, umhlaba, idlelo nemfuyo yakho.

Ukulima, ukukhiqiza ukudla nokubona kukhona okukhula obala kuhlezi kuyinto eyigugu, nomsebenzi ogculisa kakhulu emhlabeni. Ungalilahli ithuba olinikeziwe. ■

La mafektha anomthelela kumanani omkhigizo

KULE SIMO ESIKHONA SEKLAYIMETHI YOMNOTHO, IZITOLO ZINOBUNZIMA BOKUHLALA ZISESIMENI ESIHLE SAMANANI ENTENGO UKULANDELA ISI-MO SEZINXUSHUNXUSHU EZWENI LONKE KANYE NENGCIKEDZE YOKUKHQIZA YABAKHQIZI BEMA THIRIYALI ENGAHLUZIWE. LEZI ZINGCINDEZI ZOKUKHQIZA ZIBANDAKANYA UKWENYUKA KAKHULU KWEZINBLEKO ZAMA-/INPUT, LOKHU KUHAMBELANA KAKHULU NESAMBA SEZINBLEKO ZOKUKHQIZA IMATHERIYALI ENGAHLUZIWE EFANA NOMMBILA NOBHEKILANGA. NGABE UNGAKANANI UMTHELELA WAMANANI ENTENGO ABATHENGI ABAWA KHOKHELA IMPAHLA YASEKHAYA?

Impuphu yommbila no-oyili kabhekilanga ngezinye zezinto ejwayelekile ezitholakala ethala labathengi baseNingizimu Afrika. *I-Consumer Price Index (CPI)*, okusho isisindo esi-avareji sikabhasikidi wempahla yomthengi, nezinsiza ezithengiwe, okubandakanya le mpahla yommbili.

INANI LOXHAXHA LWEMPAHLA EJWAYELEKILE ESET-SHENZIZWA EKHAYA

Uchungechunge lokukhqiza umkhqizo lunamalinki amanangi. Inani loxhaxha phecelezi *value chain* liqala ngomkhqizo ongahluziwe futhi ilinki ngayinye ku-*value chain* ingeza inani emkhqizwveni kuze kufinylele ekuphthulweni komkhqizo womthengi. **Ifiga 1** umele i-*value chain* jikelela yemikhqizo ejwayelekile esetshenziswa ekhaya.

Ababambe iqhaza ekuqhubekeni kwe-*value chain* bahamba kanje:

1. Abadayisi bama-*input* babandakanya izinkampani ezsisplaya ama-*input* afana nomanyolo, imbewu namakhemikhali e-agro.
2. Abakhqizi bokusahlamvu bakhanda ilinki yesibili yale-*value chain*. Uma inhlabathi isilungisiwe kanye nama-*input* adingekayo asetholakele, usunagaqala umkhqizo. Izinqubo zokukhqizwa zingahlukana ngokwezidin-go zohlobo ngalunye lokusahlamvu ne-*cultivar*. Izinsuku kuze kuyofika

ekuvuneni nezimo zezulu ziqonde ngqo kwikhomodithi nganye.

3. Uma ikhomodithi isivuniwe, abakhqizi bayayithutha imatheriyali engahlu ziwe iyihambise ku-silo noma esigayweni esiseduzane. Umgayi uzobe esephrosesa futhi uhluzwe imatheriyali engahluziwe ibe umkhqizo otha ndwa umthengi.
4. Emva kokuba imethiriayali engahluziwe isihluziwe yaba umkhqizo othile, umgayi uzosabalala umkhqizo ngaphansi kwe-*brand* yawo noma adayise umkhqizo ohluziwe ukuze kusungulwe ama-*brand*.
5. Ama-*brand* athile asabalala umkhqizo ezitolo nakumahholiseli.
6. Izitolo namahholiseli bese besabalala imikhqizo kubathengi.

UMTHELELA WAMANANI ENTENGO EMKHIQIZWENI

Umthelela wommbila omhlophe enanini lentengo yesikhwama sempu-phu yommbila esingu-2,5 kg

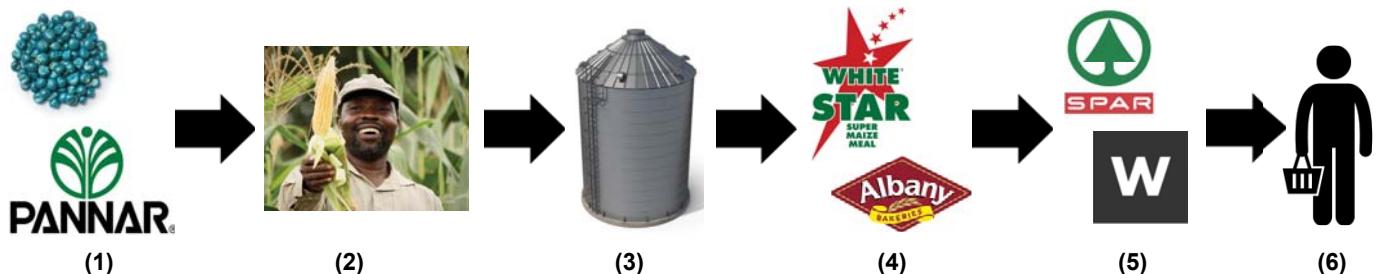
Ithebula 1 imele idatha useshensiziwe ukuthola iphesenteji ekhishwe abakhqizi kumanani entengo yempuphu yommbila ezitolo. Inani lentengo etholakala kumkhqizi ibalwa ngokwe-avareji yonyaka ye-nani le-Safex ngonyaka ngamunye wokumaketha bese kususwa i-location differential kanye nezindleko zokuphatha nokulondoloza.

Ifiga 2 ikhombisa iphesenteji etholakele kokukhokhwe abakhqizi emananini entengo yempuphu yommbila ezitolo. Kusukela kuFig 2 kungaphothula ngokuthi inani lentengo yommbila lingumthelela ongafinylela ku-50% wentengo yasezitolo ebhadalwa abathengi uma be-thenga u-2,5 kg wempuphu yommbila. Amaphesenti asele kungezelela nge-*value added* ngokwe-*value chain*, lokhu kubandakanya i-*packaging*, ukuphrosesa nokugaywa.

Umthelela wamanani okukhqiza ubhekilanga ibhodlela elingu-750 ml ka-oyeli kabhekilanga

Ithebula 2 kumele idatha esetshenziswe ukuthola iphesenteji ekhokhwa abakhqizi kumanani entengo ka-oyili kabhekilanga ezitolo. Intengo yomkhqizi ibalwa nge-avareji yenani le-Safex ngonyaka unyaka ngamunye

1 Amanani oxhaxha lwemikhqizo yasezindlini ejwayelekile.



1 Intengo yokukhqizwa kombila vs inani le ntengo yempuphu yommbila ezitolo.

Unyaka	Amanani e-Safex (R/t)	Amanai omkhqizi (R/t)	Amanani entengo yomkhqizi impuphu yommbila (R/t)	Amanani entengo yempuphu yommbila engu (u-2,5 kg)	Amanani ezitolo (R/t)	Ukuthayisel-a komkhqizi kumanani entengo ezitolo
2019/2020	3 315	2 692	1 480	23,65	9 460	52%
2020/2021	3 287	2 841	1 563	25,27	10 108	51%
2021/2022	3 242	2 768	1 522	27,67	11 068	48%

2

Ingxene yephesenteji yomkhiqizi wommbila lenani lentengo yempuphu yommbila engu-2,5 kg ezitolo ngo-(2021/2022).

R27,67 amanani entengo ezitolo



R13,28 okuthayiselwa umkhiqizi

R14,39 okuthayiselwa uxhaxha lwamanani

3

Ingxene yephesenteji yamanani entengo omkhiqizi kabhekila-nга amanani entengo kabhekilanga ezitolo (2020/2021).

R22,80 amanani entengo ezitolo



R10,26 okuthayiselwa umkhiqizi

R12,54 okuthayiselwa uxhaxha lwamanani

2

Inani letengo yokukhiqiza ubhekilanga vs inani lentengo ka-oyili kabhekilanga ezitolo.

Unyaka	amanani e-Safex (R/t)	Amanan iokukhiza (R/t)	Amanani entengo yomkhiqizi ka-oyili (R/t)	Amanani entengo ka-Oyili u-(750 ml)	Amanani entengo ezitolo (R/t)	Ukuthayisela komkhiqizi kumanani entengo ezitolo
2019/2020	4 932	4 609	11 522	22,18	27 004,88	43%
2020/2021	5 380	5 049	12 623	22,80	27 753,17	45%
2021/2022	9 885	9 546	23 865	27,46	33 431,63	71%

wokumaketha bese kususwa i-relevant location differential kanye nezindleka zokuphatha nokulondoloza.

Ifiga 3 ibheka iphesenteji etholakala kokuthayiselwe kubakhiqizi kumanani ka-oyeli kabhekilanga ezitolo. Ngenxa yenhoso yalomfanekiso, amanani entengo asukela ku-2020/2021 asetshenziswa. Lokhu kwensiwa ukubaluleka kokwenyuka kwentengo kabhekilanga ngo-2021/2022 lokho kunganikeza ukumeleleka okuqondile kokukhishwa abakhiqizi enanini lento-ngo kabhekilanga.

ngezikhathi zonke. Abakhiqizi be-mathiriyali engahluziwe ukusho ukuthi yibona ababhekene namanani entengo zeziimpahla ezidayiswa ezitolo. I-value ingezwa ngamalinki ahlukene ku-value chain, ngayinye iba nomthelela enanini lokugcina lentengo yomkhiqizo. ■

ISIPHETHO

Abathengi ngokuvamile bacabanga ukuthi amanani entengo aphe-zulu ezimpahla ezisetshenziswa ekhaya kudalwa abakhiqizi bematheriyali engahluziwe, njengoba kukhonjiswi kule-athikhile, akuhlali kunjalo

U-HELEEN VILJOEN, USOMNOTHO OYITOHO KWAGRIN SA



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UMgabiseleni Simon Dlamini wamukela umhlahlandlela wokukhalibhretha isifutho ehhovisi eLouwsburg.

KHALIBHRETHA *i-boom sprayer yakho*

UKUZE UQINISEKISE UKUQONDISA OKUKHULU ESIFUTHWENI OKUFANELE USIKHALIBHRETHE NGAPHAMBI KOKUBA KUQALE ISIZINI YOKUFUTHA, UPHINDE USIKHALIBHRETHE NJALO ISIZINI YONKE YOKUFAFAZA.

Inqubo yokukhalibhretha isifutho iklanyelwe ukuqinisekisa ukuthi ufaafe inani elifanele loketshezi (amanzi noshev) endaweni efanele.

Amathuluzi adingekayo uma kukhalibhretha yilawa:

- I-thayma;
- Ujeke wokilinganisa (kumakwe ngama-ml);
- kanye nethephu yokulinganisa.

IZINTO OKUFANELE UZIKHUMBULE

- I-nozzle enembobo encane ezodiliva uketshezi oluncane kunaleyo enembobo enkulu. I-nozzle ingaba nephethini yokufutha ebanzi noma encane.
- Njengoba umpompa ngamandla, ingcindezi iyakhula futhi idedela uketshezi oluningi. Uma ingcindezi iphezulu, amathonsana aba mancane.
- Uma ufutha ngogandaganda, ingcindezi yesifutho i-afekthwa yizinguquko/min (rpm).
- Amagiya kagandaganda a-afektha isivinini sikagandaganda.
- Umshayeli kagandaganda kudingeka enze isinqumonge nge-rpm kanjalo nangeziya elizosetshenziswa futhi lokhu akugcine lokhu kungaguquki uma sekwenziwe amakhalibhreshini.
- Shintsha inani likashev uengxuben. Ushev uomningi usho ukuthi kufakwe izithako eziningi ezinamandla enanini elilinganayo lamanzini.

ENDLELA YOKUKHALIBHRETHA

- Gcwala ithange lesifutho.
- Kufanele unqume ukuthi ngabe yiliphi igiye elizosetshenziswa futhi ngabe iyiphi i-rpm. (isib. igiya 4 ku-2 500 rpm)
- Linganisa ibanga lika-100 m.
- Sebenzisa lelo giya ne-rpm efanele, linganisa isikhathi esithathwa ugandaganda ukukhava u-100 m – isibonelo imizuzwana engama-21.

- Gijimisa ugandaganda ngokwesimo simiyo, ngokwesivumelwano sika-2 500 rpm, uphinde uhlole ikhava yesifutho oyithola phansi.
- Setha umfutho wesifutho ukuze sikunikeze i-ifekthi oyifisayo (e.g. 3 bar).
- Ukusebenzisa isikhathi esifanayo esithathwa ugandaganda ukukhava u-100 m, xhumanisa isifutho, uphinde ulinganise senani lamanzi akhiquqizwa yi-nozzle, isibonelo u-1 200 ml/1,2 amalitha.
- Yiphinde le nqubo ngama-nozzle amabili noma amathathu uthathi nesifundo esi-avareji.
- Sebenzisa umthamo woketshezi lwe-nozzle eyodwa (isibonelo 1 200 ml/1,2 amalitha) futhi ukuphindaphinde lokhu ngenani lama-nozzle (isibonelo ama-nozzle ayishumi nambili) ukuze wazi ukuthi mangaki amalitha owafafazayo ku-100 m.

Ngama-nozzle onke: 12 x 1,2 amalitha = 14.4 amalitha.

- Kala ububanzi be-boom (isibonelo 4,7 m). Manje uyabazi ububanzi obufafazayo, futhi uyawazi umthamo wamanzi owafafaza kulobo bubanzi ubungu-100 m. Indawo ekhavwe yisifutho ku- 100 m: U-100 m x 4,7 m = 470m².

Kule ndawo u-14,4 wamalitha assetshenziswa. Indawo eyi-1 ha= 10 000 m² (100 m X 100 m). Umthamo okufanele usesetshenziswe ku-1 ha uzoba u-10 000/470 = 21,27 x 14,4 amalitha = 306 amalitha. Umthamo ozosetshenziswa ku-1 ha uzoba u-10 000/470 = 21,27 x 14,4 amalitha = 306 amalitha/ ha. Umthamo okufanele usesetshenziswe ku-1 ha uzoba u-10 000/470 = 21,27 x 14,4 amalitha = 306 amalitha/ha.

Ilebuli kusiqukathi sekhemikhali izokhombisa umthamo wamanzi adingekayo ihektha ngalinye kanye nenani lamalitha obuthi edingeka ehektheni ngalinye.

Uma uthola ukuthi umthamo woketshezi olufafazwayo alukho esimeni esejwayelekile, phindaphinda ukubala ukulungisa umfutho wesifutho noma igiya likagandaganda noma usayizi waman-nozzle. Uma umthamo wamanzi uqondile, kudingeka ubale inani lamalitha omuthi okufanele ufkwe esifuthweni sethange ngalinye. ■

ITHIMBA LABAHLELI BEPULA

Ithuba le 'Grow for gold'

SIVUNO SINEQHAZA ELIBALULEKILE ENZUZWENI YOMKHIQIZI WOKUSAHLA MVU. UMCINTISWANO WESIVUNO EZWENI KWA-GRAIN SA, OBIZWA NGE-GROW FOR GOLD, KUKUNIKEZA IPLATIFOMU LABALIMI ABAKHULU ENI NGIZINU AFRIKA EMIKHAKHENI EYAHLUKENE FUTHI WABELANE WABELANE NANGEZINDABA ZABO ZEMPUMELELO.

Imikhakha ibandakanya inhlabathi eyomile neniselwayo. Abakhqizi bayaqhube ka nokwehlukana ngokwezfunda nokuhlanganyela njengezwe. Izindlela zokuqala ukhqiize nezinlelo eziphusile zokulima bayagquqquzelwa ukuba baphumelele bathole isivuno esiphezulu ihektha ngalinye, kungakhathalekile ukuthi utshale yiphi *i-cultivar*.

Umncintiswano uhlelekele ngendlela yokuthi wakha ukuxhumana phakathi kwezinkampani ngazinye zembewu umncintiswano wesifunda kanye nomncintiswano owengamele. Inka mpani ngayinye yembewu isawukhipha owayo umncintiswano wesivuno, ukuwungenela kunga qhubekela emncintiswaneni wezwe ongenelwa izwe lonke owenganyelwa yibhena ye-Grain SA. Lo mncintiswano ufaka phakathi ukuxhumana nazozonke izinkampane zembewu kwakhiwe uhlelo Iwamabanga, ngakho ke kuqinisekisa zonke izinkampani zembewu ezibambe iqhaza nabakhqizi bukusahlamu bahlulelwya ngezinga lenqubo efanayo.

Ekuqaleni bekungabakhqizi bommbila abakhulu abangenisa inzuso, ubhekilanga nobhontshisi isoya kungangenisa, kodwa imikhakha emisha beyingeziwe yama-**small scale farmers** (1 ha minimum kuya ku-2 ha *maximum*) kanye **nabakhqizi bakakolo**.



U-Gardner Khumalo olima esifundeni i-Amajuba ngaphandle kwase-New Castle waba owokuqala ukuwina umncintiswano emkhakheni wabalima ummbila endaweni encane phecelezi small-scale i-Grain SA's Grow for Gold National Yield Competition ngesivuno esingu-8,01 t/ha.



Ngesivuno sika-14,7 t/ha uBheki Mabuza olima e-Amersfoort, eMpumalanga, uphume isithathu emncintiswaneni wokukhiqizwa kommbila eMpumalanga esifundeni saseNkangala phecelezi Highveld ku-2021 i-Grain SA Grow for Gold National Yield Competition. Wancintisana nabalimi bommbila abaphakeme eNingizimu Afrika.



Sikena i-QR khodi ukuze ufunde kabanzi ngomncintiswano oku-Grow for Gold website.

INDELA YOKUNGENELA

- Ngenela enkamanini yakho yomncintiswano wembewu. Xhumana nomdayisi wakho we mbewu uma ufuna ulwazi olubanzi.
- Uma isifunda/inkampani ingeyona ingxenye yalo mncintiswano okhona, ukungenela kunga thunyelwa ngqo kwa-Grain SA ngokugcwalisu ifomu ku-website, <http://groeivirgoud.co.za/en/register/>.
- Kufanele urejiste okungenani kusasele amaviki amabili ngaphambi kokuba kuqala ukuvuna. Imali yokungenela (ukukhombisa ukuzinikela) u-R1 000 ukungenela kanye futhi kufanele kubha delwe ngomngenelo ngamunye. **Amalungu akwaGrain SA angangenela mahhala.**
- Abangenele kufanele bafake igama lomkhiqizi futhi ukhetha ibhlokhi (isilinganiso sika-2 ha). Kubalimi abalima kancane ibhlokhi ekhethiwe ilinganiswa no-1 ha nebukhulu buka-2 ha. ■

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IsiZulu, IsiNqisi, IsiTswana, IsiSuthu, nesiXhosa.

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Iphrogrammu eguqula izimpilo



Umbiko

Ithimba leGrain SA – usizo lwabalimi

UKUTHI jeqe kudayari yokuvakashela amapulazi emavikini amabili okuqala kaDisemba ixoxa udaba Iwethimba lokuThuthukisa abaLimi kwaGrain SA. Izikhathi **ezingama-70** zokuvakashela abalimi abangama-43 abahlanganyela ku-AB InBev, i-Advance Farmers, i-Recapitalisation, i-SACTA namaphrokethi aka-Standard Bank kulo nyaka. Ithimba lizibandakanya nabalimi ezinyathelweni zabo zonke zohambo Iwabo – okufaka phakathi umsebenzi wamapheda wonke, ukuhlela nokubhajetha, ukutholakala kwamakhothi nokufaka ama-oda.

Siphinde sifundise abalimi ukubaluleka kokuhlelela isizini yakho yonke nokugcina ithreyi obeka kulo amapheda alandelayo indlela yonke. Ngenxa yokuthi sibambi sana nama-stakeholders ababambe iqhaza ekuthuthukisweni kwabalimi, sikhathazekile ngokugcina kwamarekhodi kusukela ekuqaleni. Onke amakhothi, ama-oda namanothi okudiliva, ama-invoysi kanye neziqinisekiso zokuthi kukhokhiwe kufanele kufayilwe ngobunono ukuze kube yireferensi ngesikhathi esizayo. Emva kwalokho, ukugcina kahle kwamarekhodi yisisekelo sebhizinisi eliyimpumelelo. Ukupatha kwamarekhodi ukwazi lokho onakho, lapho unawo nokuthi kufanele ube nawo isikhathi esingakanani!



Izimvula ezinkulu epulazini likaThemba Bambaspha endaweni yase-Ermelo ziphamazise umsebenzi wakhe wokulima. Imeluleki wakhe wamvakashela ezomsiza ngokwenza izinhlelo.



Omunye wabalimi baseFreystata abay-ingxenye yephrokethi i-Standard Bank, uJoseph Mohlomi, baxoxa ngokulungisa umhlabathi nomeluleki wakhe.

ULesole David Thama uSihlalo, we-Hanbury Ranch Pty Ltd 1 nomeluleki wakhe.

Ukulangazelela ukwazi kabanzi

KUNEDIMANDI enku lu yokwelulekwa. Ngisho nangasekupheleni kuka-2021 bakhona abalimi ababene ntshisekelo yokujoyina nokuhlanganyela kuperogremu yokuThuthukiswa kwabaLimi kwaGrain SA. Bafakelwa ugqozi impumelelo yamalungu abanesikhathi eside abalokhu be-phumelela ukuthola izivuno ezingcono. U-Jurie Mentz, umxhumanisi wezentuthuko wehhovisi elise-Louwsburg waba nomhlangano neqembu labalimi Emahlatini eMpu-malanga abamagange ngokujoyina le phrogrammu. Waxoxa ngezinhlaka zakwaGrain SA nokusebenza nokuxoxa nabalimi mayelana nezimiso zolimo lokonga.



U-Jurie Mentz ebamble umhlangano Emahlatini ngaphansi kwezihlahla nabalimi abanogqozi abafuna ukujoyina lephrogrammu.

U-Jerry Mthombothi, umxhumanisi wezentuthuko ehhovisi eNelspruit, wabika emhlanganweni we-study group ngabasha abarejiste kwi-Ga-Riba Study Group. Waphothula ukubarejista njengamalungu futhi waxoxa nabo ngezisekelo zokutshala kommbila ukuze baqale ukutshala besebenzia izindlela ezingile zokukhiqiza. Kwakhulunywa ngalezi zihloko ezelandelayo: ukukhethwa kwezinhlolo zommbila, ukulungiswa kwe nhlabathi, ukudepha kwenhlabathi, inani lezitshalo, ukufakwa kukamanyolo nokulawulwa kokhula. Abalimi balulekwa uku-ba batshale inani elifanele lezitshalo, bafake inani elifanele likamanyolo nangokusebenzia ikhemikhali yokulawula ukhula. Nabo futhi bayagqquzelwa ukuba bethamele imihlangano yama-study group ka-2022 baphinde bethamele nezfundo abazohlelelwaza zona.



Abalimi baseLimpopo abethamelia i-Ga-Riba Study Group entsha esanda kubunjwa, balambele ulwazi.