

PULA IMVULA

GROWING FOOD • PEOPLE • PROSPERITY

INCWADI YEGRAIN SA YABALIMI ABASAKHULAYO



Isithombe somncintiswano we-SA Graan/Grain-ngu – Adriaan Bibbey, July 2020

Nqanda ukulahlekelwa ngesikhathi **SOKUVUNA**

KUNESAGA ESITHI: 'OKUQALWE KAHLE INGXENYE YAKHO ISUKE ISIYENZIWE.' ESIMENI SABALIMI BOKUSAHLAMVU, LOKHU NGEKE KUBE YIQINISO. AKWANELE UKULIMA ISILIMO ESIHLE UMA UNGENALO UHLELO LWESIGABA SOKUGCINA SOKUKHQIZA NGESIKHATHI SEKUDANGEKA UKUBA ZIVUNWE ISILIMO FUTHI ZIGCINWE NGOKUPHEPHILE NOMA SIDAYISWE.

Isikhathi sokuvuna uvuthondaba lwekhala ezolimo yomlimi. Yisizini lapho evuna khona izithelo zokusebenza kwakhe nokuqoqa umvuzo wemali yakhe ayitshalile, isikhathi namandla. Ngokujwayelekile futhi kuba yisikhathi sengcindezi enku lu nokuqhathazeka, nengoba abalimi besebenzisa ithuba lesikhathi elincane esiphakathi kokuvuthwa kwesilimo ngokuphelele, ukuguquka kwesizini kanye nokugwabhzueli kwamaphethini esimo sezulu.

- Izinkinga ezivamile ezehlisa amanani entengo emnyango wesilo:
- Izinhlamvu eziqhephukile.
- Ama-kernels onakele ishwabene, kusobala ukuthi awavuthiwe, amoshwe yisithwathwa, ashiswe yilanga, aqhumile nomazinhlavu zama-kernels zinezimbobo, ezidalwa yizinambuzane nomagundane.

- Ukuggwala kwama-kernels aseshintshe umbala ngenxa yokuhlala kakhulu lapho kushisa khona futhi onakale. Ama-kernels azobukeka emnyama, eshwabene, aphafukile nom aqhumile nomazinhlamvu – okufana nengilazi, amatshe, umquba nom aqhumile nomazinhlamvu zokhula kwisampuli yokusahlamvu.
- Izinto ezingafanele kusampuli, okungaba yinoma yini engazona izinhlamvu – okufana nengilazi, amatshe, umquba nom aqhumile nomazinhlamvu zokhula kwisampuli yokusahlamvu.

AMACEBO OKUFANELE UWACABANGE

Abalimi abanangi bacanga ukuthi uma isilimo sesivuthiwe asisekho isidindo sokuba ukhathazeke ngokhula, kodwa ukhula lunomthelela esivunweni ngesikhathi sokuvuna kanye nasekhwalithini yesivuno. Uma ukhula luluningi kakhulu, lunciphisa isivinini somshini ikhombayini, lunukubeza izinhlamvu futhi ludale iphunga elibi, nongadala mhlabane ukwehla kwekhwalithi esilo nom aqhumile nomazinhlamvu izindleko zokuhlanza okusahlamvu futhi kakhishwe izinhlamvu. Abaphathi besilo baqinisa isandla ngezinhlamvu ezifana ne'olieboom', kuwubuthi ezilwaneni nasebantwini. Ithimba lama 'choppers' ensimini yonke ingenzangcono ikhwalithi yokusahlamvu okudiliviwe.

Nqanda ukulahlekelwa ngesikhathi...

UKUTHUTHUKISA IKHWALITHI YOKUSAHLAMVU

Amafektha abalulekile okufanele uwabheke ukuvuthwa kwezilimo kanye nokunakekelwa kwekhombayini jikelele.

Ukvuthwa kwesilimo

Kubaluleke kakhulu ukwazi izigaba zokuvuthwa kwesilimo osilimayo futhi ukuze uqiniseke ngephesenteji yomswakama afanele ukuvuna nowamukelekile kuma-si/o.

Ubhekilanga: Ukvuthwa kwesitshalo sikabhekilanga emzimbeni kubonakala ngesikhathi ingemuva lekhanda lesitshalo liguquka ekuben iuhlaza libe phuzi bese kuthi ama-bracts aguquke abe nsundu. Lokhu kwenzezeka ezinsukwini eziphakathi kuka-30 kuya ku-45 emva kokuqhakaza futhi nangeshikhathi umswakama wezinhlamvu ulinganiselwa ku-35%. Isamba sesikhathi sokukhula kusukela ezithorjeni ezincane kuye ekuvuneni kuthatha i-avareji yezinsuku eziyi-125 kuye kweziyi-130. Iphutha elijwayelekile ukulinda isikhathi eside ukuze uvune, njengoba izinhlamvu zigcina sezoma kakhulu zize ziwele phansi, lokho kudala ukulahlekelwa ngaphandle kwestdingo. Ukvuna kungaqala ngesikhathi amakhanda kabhekilanga ese-phendukile aba nsundu. Ama-co-ops endawo azokwamukela izinhlamvu ezizodiliva kuwo ezinomswakama ongu-10% noma ngaphansi kuphela.

Isikhathi esiphakathi kokuvuthwa nokuvuna kufanele siscinwe sisifushane kakhulu ukuqinisekisa ukuthi ukulahlekelwa okungadalwa umonakalo ongenziwa yizinyoni, ukuwa (ukudilikela phansi), isifo i-head-rot nokufohlozeka kugcinwe kukuncane.

Ummbilä: Ummbilä ungavunwa ngezandla noma, osekwejwayelekile ezinsukwini zanamuha, nge-combine harvester machine. Eningizimu Afrika kujwayelekile ukuthi ummbila uyekelwa isikhathi eside imile emasimini uze wome ngokuphelele. Le indlela yokonga kumlimi. Kufanele izinga lomswakama ligcinwe liku-12,5% kuya ku-14%. Isampuli encane ingahlolwa esilo eseduze. Kubalulekile ukuba okusahlamvu ungakuyeki kuhlale isikhathi eside kakhulu ensimini, njengoba lokho kuzoholela ekulahlekelweni.

Ubhontshisi owomile: Ubhontshisi owomile wabizwa kanjalo ngenxa yokuthi ngokujwayelekile ayekelwa esitshalweni imidumba ize yome. Isitshalo sonke sikhishwa, sibekwe eshedini uma kwenzeke futhi siyekelwe lapho some elinye iviki kuya kwamabili engeziwe. Imidumba eyomile ibese ivulwa kuhkhwae ubhontshisi.

Abeluleki bayexwayisa ukuthi ukuze ugweme ukulahlekelwa ngesikhathi sokuvuna, abalimi kufanele baqale ukukhipha ubhontshisi emasimini ngesikhathi sekome okungenani u-75% wezitshalo zikabhontshisi. Uma ubhontshisi womela ensimini kakhulu, imidumba yawo iyazivulekela – ubhontshisi uwele phansi bese uyamlahlekela umlimi.

Ochwepheshe bancoma ukuthi izitshalo zikabhontshisi kufanele zikhiwe ekuseni kakhulu nantambama kakhulu, ngesikhathi isimo sezulu singashisi kakhulu, ukugwema ukuvuleka kwemidumba. Izitshalo zikabhontshisi ezomile kufanele zigcinwe kuseyili phecelezi *tarpaulins*, futhi igcinwe yomile futhi isethunzini ukuvikela imidumba ingavuleki futhi ichithe ubhontshisi omningi.

Ukunakekelwa komshini

Ngenxa yokuthi isikhathi sibalulekile, kubalulekile ukuthi abalimi baylungiselela ngokufanele isizini yokuvuna baqinisekise ukuthi lonke usuku abanalo balusebenzisela ukuvuna futhi bengasichithi isikhathi bekhanda ama-combine harvesters. Usuku ngalonye olulahlekayo luyakhokhelwa ngoba okusahlamvu kulahlekelwa yisisindo futhi kuzoncipha isisindo sesivuno esilo. Kufanele uqinisekisa ukuthi zonke izinhlamvu eziqoqiwe futhi ziphelela ezinqoleni eziphikelele emakethe. Hlolá ukuthi izinqola azi-vazi futhi uqinisekise ukuthi amathayi asesimeni esifanele.

Ukuholwa njalo kwekhombayini kwaziwa ukuthi kukhulisa umkhiqizo futhi kweza isiqiniseko sokuthi sincane isikhathi esilahlekayo ngesikhathi esimatasa sokuvuna. Ukuholla umshina kwehlisa izindleko zokusebenza futhi kwenze ngcono ukongiwa kwamafutha phecelezi fuel.

I-HEADER

- I-header platform kufanele isethwe ngokufanele ukuba ithathe izikhwebu noma amakhanda kabhekilanga, kodwa izinhlanga zibe mbalwa impela.
- Qinisekisa ukuthi i-cutter bar ibukhali futhi izinhlanga izinquma kahle kakhulu. Inqubo yobhula kufanele ibone ukuthi amakhanda edlula kukhombayini, sekususwe zonke izinhlamvu/imbewu ezivuthiwe ekhanda. Amakhanda kufanele aqhephuke abe yizingcezu kunokuthi kunokuba kugayekе kuba yizincezu ezincane, noma isampuli yakho yokusahlamvu ezigcwala izimvithi eziningi.
- Ama-pani angaphambilä kwiplatifomi kufanele avikeleke ngokufanele futhi afakwe kahle.
- Gada emaceleni nangemuva kwe-header yenza ngcono ukusebenza ikhongozele okusahlamvu ukusakazekayo kuphoseka ngaphambilä nangemuva.
- I-roller bar ngaphansi kwe-header kufanele ixhunyaniswe ukuze izidonsele phansi izitshalo ezibucayi futhi izifake emshinin phecelezi machine feeder.
- Ngokucophelela guqula isivinini sama-paddles ukuba sihambisane nesivinini saphansi se-combine harvester – ngaphandle kwalokho sidala ukulahlekelwa okungadingekile.
- Amasethingi ezisefo kufanele ahlolwe ukuze isampuli ezophuma iħlanzekile – kodwa ingahlanzekile kakhulu. Uma isampuli iħlanzeke kakhulu, kungaba uphawu olukhombisa ukuthi ngisho nezinħlamvu ezikhule ngokuphelele zilahleka ngemuva emshinin, lapho khona umoya uheleza ngamandle. Kuvumelekile ukuthi kubē nezinto ezingalungile okungenani ezingalinganiselwa ku-4% futhi yilokho okufanele kuphokophelelwe, kunokuba nesampuli eħlanzeke u-100%. Qapha: isivinini somoya wokuvuna ubhekilanga siphansi kunale-so sokunye okusahlamvu ngenxa yokuba lula noma ukungabi naso isisindo kwezinhlamvu zikabhekilanga. Uma umoya osungulekile unamandla kakhulu, uzoheleza kahle ngisho izinhlamvu zizokhandeka ngokufanele ku-chaffer nasesisefeni. Isiphephethi phecelezi i-fan kufanele isethwe ukuze ukuphephetha komoya kwanele ukugcina izibi ‘zintanta’ esisefeni noma ezikrinini. Hlolá ngemuva kwekhombayini njalo futhi uqinisekise ukuthi kukhona izinhlamvu ezingenalutho kuphela ezilele phansi.

Okunye okubalulekile okufanele ukucabange isivinini sokuya phambili se-harvester, okungaba yi-avareji ka-5 km kuya ku-8 km ngehora. Kungehla njengokwehla komswakama oqukethwe uhlamvu wehla noma kuhkule uma amazinga omswakama ephezulu. Lokhu kwenzelwa ukunciphisa ukulahlekelwa ngenxa yokufohlozeka, njengoba amakhanda kabhekilanga ingena kukhombayini. Isivinini se-drum akufanele sibe phezulu kakhulu, njengoba lokho kungadala ukuphephuka kwezinhlamvu eziningi.

IMIKHUBA YANSUKU ZONKE

Kubalulekile ukwenza uhlolo lokunakekela zonke izinsuku, okubandakanya ukuhlanza ugcine ikhombayini inganawo amakhasi nezintuli



Ngesikhathi sokuvakashela emapulazini, u-Jurie Mentz, imenenja yezentuthuko esifundeni ehhovisi e-Louwsburg, wenza lo mlimi wayeka inqubo yokuvuna ukuhlola ama-beaters njengoba kuningi okusahlamvu okwakuvuza.

usevise njalo. I-khompresa iyasebenza ukuphephetha ikhiphe zonke izimvithi uzikhipe kumaphathi asebenzayo ekhombayini.

- Hlola i-drive chain nokuqina kwebhande.
- Hlola i-feeder chain.
- Thulula i-rock trap uma ikhombayini inayo.
- Vula ama-cooler systems uhlole ukuthi ngabe azikho izimvithi ezivimba ukuheleza komoya.
- Gcoba i-rotor drive ngogilisi, i-return auger bearings ne-unloader pivot.
- Hlola umoya ethayini.

Okunye okwenziwayo kwenziwa kangcono uma injini ibanda noma ngaphambi kokuba idume.

- Bheka izinga lika-oyili enjinini.
- Bheka izinga le-coolant kwi-radiator.
- Hlola i-hydraulic reservoir sight glass.
- Khiphia amanzi ahlezi ku-fuel filter.

Ukubheka le mininingwane kuzokwenza udilive isivuno esikhulu. ■

**U-JENNY MATHEWS,
UNGOTI WEZOKUPHATHA
NENTUTHUKO NOKUFUNDISA**



IZWI LIKA...

Jerry Mthombothi

KULE SIZINI, ABALIMI BAHLANGABEZANE NEZINKINGA EZININGI EZIFANA NE-NTENGO EPHEZULU YAMA-INPUT, UKUSHISA KWESOMISO SANGOJANUWARI KANYE NEZIMVULA EZINKULU KUSUKELA MAPHAKATHI NOFEBHUWARI.

Iningi labalimi ngeke likwazi ukubuyela ekulimeni ngesizini elandelayo yokutshala ngenxa yesomiso esihlasele izilimo zabo ngoJanuwari, kwalandela izikhukhula ezaphinde zahlasela izilimo emvakwalokho. Izilimo zihlaseleke ezindaweni ezahlaselwe yisivuu esishisayo, futhi ngenxa yalokho ummbila awukhulanga kahle. Omunye wommbila wadondobala namaqabunga awo oma.

Ummbia ongahlaselwanga yisomiso, kanye nommbila owasinda esomisweni, wahlaselwa yizimvula ezinkulu eza-na maphakathi noFebhuwari. Izimvula ezinkulu zagcwala masinyane amanzi angaphansi komhlaba phecelezi *water table*, nokuyinto eyadala omonakalo omkhulu nokucwila kwezilimo zabalimi emanzini. Izilimo eziningi lahlaseleka ngendlela yokuthi abalimi abaningi balahlekelwa uisamba sonke sesilimo.

Labo balimi bazobekana nobunzima bokuphindela ekulimeni ngesizini yokutshala ezayo, ikakhulukazi abalimi abancane abangazifaki kumshwalense izilimo zabo.

Abalimi kufanele bezame futhi banciphise ubungozi babo ngokuthi basheshe batshale izilimo zabo ngo-Okthoba noma ngasekuqaleni kukaNovemba eNkangala, kuya nge-mvula. Lokhu ukugwema ukuthi ufake iziyephana phecelezi *tasselling* kommbila maphakathi noJanuwari, lapho kungaba khona ukubalela kwelanga kakhulu okungaphazamisa i-pollination yezilimo zabo zommbila wabo.

Kubalulekile futhi ukuthi izilimo zabo bazithathole umshwalense wokuvikela omonakalo ongadalwa yisichotho, isomiso, isithwathwa, nomlilo. Abalimi bangahlukanisa ngokutshala izilimo ezahlukene ngezikhathi ezahlukene ngesizini eyodwa. Labo abangalima kokubili ngemfuyo nangezilimo ezingenisa imali, kufanele benzenjalo ukuze basabalalise ubungozi.

– U-Jerry Mthombothi imenenja yezentuthuko yesifunda ehhovisi iMbombela. ■

Amasu athikameza i-Sclerotinia

NGESIKHATHI SOSUKU LOCWANINGO LWE-SCLEROTINIA NGOMHLA KA 13 OKTHOBA 2022, ABANINGI ABABAMBE IQHAZA BAXOXA NGENDLELA EYINHLANGANISELA YOKUPHATHWA KWEZIBULALA ZINAMBUZANE I- INTEGRATED PEST MANAGEMENT (IPM) INGA-IMPLEMENTWA ABAHQIZI UKULAWULA LOLU BHUBHANE. INHLANGANISELA YOKWAKHA I-IPM SYSTEM UKUQONDISA I-HOST-PATHOGEN-ENVIRONMENT INTERACTIONS (KUBIZWA NGESIFO ESIWUNXANTATHU) NAMA-FEKTHA AQHUBA UKWAKHEKA KWESIFO ENSIMINI.

I-PM yazisa abalimi ukuthi bavikele izilimo zabo ngesikhatha bephazamisa isifo esingunxantathu ngoku-(i) ukugxila emandleni esitshalo esihlalwa yisilokazana, (ii) ubuthakathaka be-pathogen no-(iii) kusungula izimo zenhlalo ezingakukhuthazi ukwakheka kwale sifo. Ukuphazamisa ukuhambisana noma ukuphazamisa okukodwa kwala mafektha amathathu abalulekile (i-host, i-pathogen, inhlalo yendawo) umphume-la wakho kuba ukungapheleli kukanxantathu onciphisa noma umkhawulo wokuvela kwesifo. Isifo sezitshalo ngeke sivele uma engekho ama-viable pathogen, asikho isitshalo esingenwa izifo noma uma kunezimo zenhlalo yendawo ye-pathogen.

SAZI ISITHA SAKHO

Ukuqondisa kahle i-life cycle ye-Sclerotinia nochungechunge lwezechlo eziholela ekukhuleni kwesifo kubalulekile kubakhqizi ukuze bangenelele futhi bakunciphise ukusabalala kwesifo. I-life cycle ye-Sclerotinia ibandakanya le zigaba ezilandelayo (**Ifiga 2 ekhasini 6:**)

1. I-Sclerotinia ensimini ingeniswa yi-sclerotia (okumnyama nezinhlaka eziqinile eziphilayo ngokuvamile zitholakala eziqwini zikabhontshisi isoya ezinomthelela, emakhanda kabhekilanga noma eziqwini zikabhekilanga). Ngokuvamile, izifo zidaleka ngokuba khona kwezinhlamvana ezincane ezinamathela eqabungeni phecelezi spores akhona ensimini, kunalawo ama-spores apheshethwa umoya emasmini omakhelwane.
2. Uma izimo zenhlalo zendawo zivuna ukukhula kwesifo (ukubanda nomswakama), ukuqhuma kwe-sclerotia mhlawumbe ngokuba nomthelela ezimpandeni noma kwenza izimila ezifana nekhewe ezbizwa nge-apothecia (okuyikhaya lama-spores).
3. Ama-spores asabalaliswa ama-pathogen aphephethwa umoya ngesikhathi amagagasi omoya eheleza ngaphezukwama-apothecia, esabalalisa ama-spores ngomoya.
4. Ngokusabalaliseka ngempumelelo, ama-spores awela angene kumtissue yesitshalo azohlala kuso ukuza aqale umthelela. Ama-spores azobese eyaqhuma, okuwenza angene kuma-tissue azohlala kuwo akhule. Ukwakheka kwesifo ngempumelelo kubonakala ngophawu lwamanzi acwilise iziqu namakhanda okudalwa yi-cell wall degrading enzymes ekhiqizwa yi-S. sclerotiorum.
5. I-Sclerotia yakheka ngasekupheleni kwesizini yokulima, noma uma izimo zingasasivuni isifo. Ukwakheka kwe-Sclerotia kuhambelana

nemethiriyali yesitshalo esinesifo futhi singena enhlabathini ephenzulu phecelezi soil surface, lapho izomila khona ngesizini elandelayo uma izifo zisivumela. I-Sclerotia ingahlala enhlabathini iminyaka eminingi iphila (eyisishiyagalombili noma ngaphezulu). Ngakho ke le sifo singakhela/sikhule isikhathi eside.

AMASU OKUTHIKAMEZA LO NXANTATHU

Akhona amacebo ahlukene phakathi eqhingeni ngalinye kulawa angenha okuphazamisa unxantathu we-Sclerotinia (Zadoks & Schein, 1979). Amacebo abalulekile emaqhingeni ahlukene aphakanyiswa ngosuku locwaningo lwe-Sclerotinia adingidwe ngezansi.

Izimo ezinciphisa ukukhula kwezifo

I-Sclerotinia iphila endaweni ebandayo nenomswakama. Ukuphazamisa inhlalo yendawo elungele i-pathogen, ukwakheka kogqinsi lwekeheno phi phezo kubabontshisi isoya kufanele kugwemeke. Ikenophi inikeza i-microclimate ye-sclerotia imile ikhande i-apothecia. Ukukhululeka kwe-apothecia nokusabalala kawama-spores azo-infektha izilimo ezihlala kuzo.

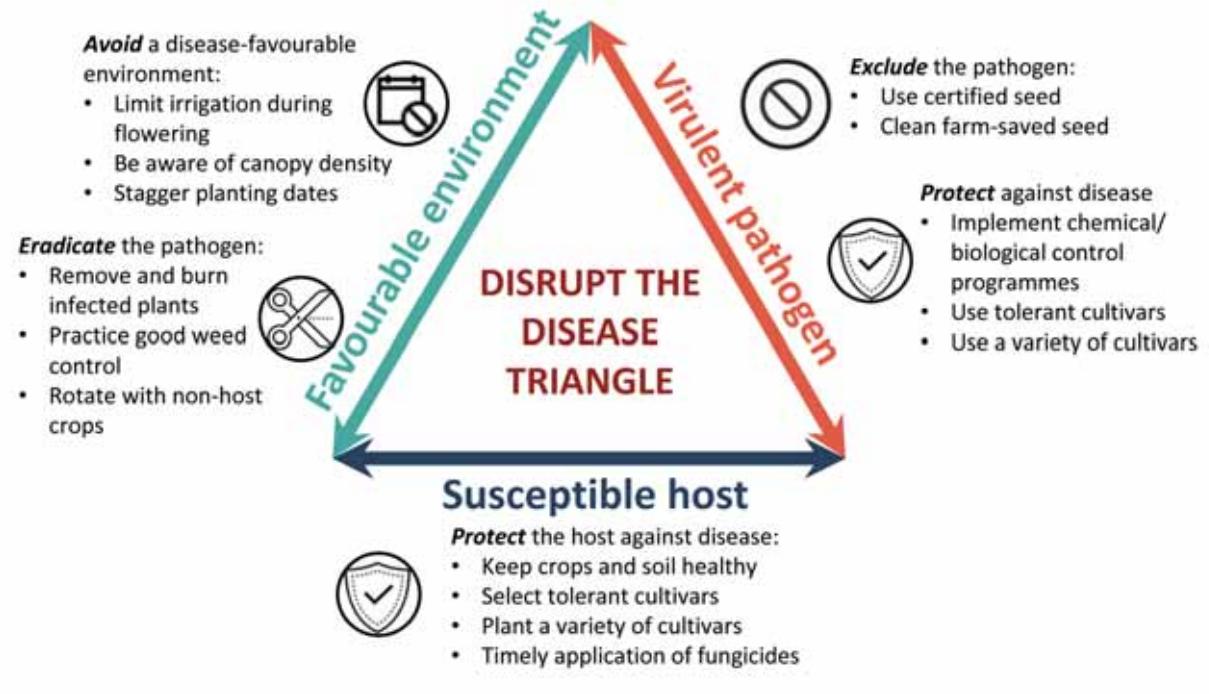
Amacebo aphakathi kwamasu okugwema angaphazamisa ukuzwana phakathi kwe-pathogen kanye nesimo senhlalo, okubandakanya ukutshala olayini ababanzi ukunciphisa ugqinsi lweesisindo nokugweama ukusebenzisa i-oksijini ngokweqfile (njengoba kupromotha ukukhula kwezitshalo, lokho kuholela ekukhandekeni kwekeheno phi ewugqinsi kakhulu). Ukunciphisa ama-canopy awugqinsi kuzoqhubeka nokuvumela amakhemikhali nelanga ukuba kungene futhi kubhoboze inhlabathi, kunciphise umswakama wenhlabathi nokuveza i-sclerotia ukukhulisa kakhulu izimo zokumila.

Ubhontshisi isoya nobhekilanga ngokuvamile kungenwa yizifo ze-Sclerotinia kusukela ekuqhakazeni kuye ekufeni kwezimbali. Ngakho ke, ukushesha utshale nokuntengantenga kwezinsuku zokutshala kuyanco-nywa ukugwema ukuqhuma kanyekanye kokukhululeka kwama-spores ngesikhathi sezinsuku zemvula yasehlobo nasekuqhakazeni kwezimbali. Izinsuku zokutshala ngakho ke kungaba yithulusi elisebenzayo lokusabalalisa ubungozi, njengoba izinsuku eziningi zokutshala kungasiza ukugwema isikhathi semithelela. Ukwengeza, gwema ukunisela ngesikhathi sokuqhakaza kwezimbali njengoba lokhu kungasekela ukuqhuma kwe-sclerotia, kugqugquzele ukukhula kwe-apothecia nokukhululeka kwe-ascospore.

Sekela isizinda

Ukusekela isitshalo sonke nempilo yenhlabathi kungasisiza isitshalo ukulweni nesifo, nakuba lokhu kukodwa kungeke kuniikeze ukuvikeleka okwanele ezifeni ze-Sclerotinia. Ukkhethwa ama-cultivars azinze kahle enhlalweni yendawo ethile ukuqinisekisa ukuzinza kwesivuno, njengobhontshisi isoya nama-cultivar kabhekilanga aziwa ngokwehluka indleleni enza ngayo eziinhlalweni zezindawo eza hlukene.

Ukkhethwa kwama-cultivar abekezelayo, uma ekhona, anco-nywa njalo njengesu lokuvikela isitshalo esihlalwa yisilokazana. Nakuba, engekho ama-cultivar kabhontshisi isoya noma kabhekilanga akwazi ukubekezelha ngokuphelele ezifeni ze-Sclerotinia, amanye



I-Sclerotinia sclerotiorum yi-ajenti ebanga izifo ze-Sclerotinia zik-abhontshisi isoya, ubhekilanga nekhanola. *I-Sclerotinia ingaholela* ekulahlekelweni kakhulu yisivuno, okungaba phezulu cishe ngo-80% kukho kokubili ubhontshisi isoya nobhekilanga.

ama-cultivar abekezelala kakhulu ukwedlula amany. Ukubekezelala (ilapho izinhlobo zezilimo zicindezeleka kancane ngendlela yokulahlekelwa kunezinye ezibucayini besifo esifanayo) sisetshenziswa uma kuntuleka ukubekezelala okuphelele. Kuyanconya futhi ukuthi ukuthala ama-cultivar angaphezulu kweyodwa ngesizini ukunciphisa ukusabalala kobungozi besifo.

Umkhawulo wokubakhona kwe-pathogen

Kubalulekile kubakhiqizi ukulawula i-pathogen inoculum ngaphansi kwezimo zasensimini. *I-inoculum* ichaza ukukhulueka kwama-spores kwi-apothecia (akhandeke kwi-sclerotia). Ama-spores nawo angaphephethwa umoya emasimini azungezile okungaphezulu kwamandla omkhiqizi, nakuba esimeni se-*S. sclerotiorum*, amabanga amade kanjalo engavamile.

Ukubheka insimu isizini yonke kubalulekile ukugcina amarekhodi alapho izifo ze-Sclerotinia zihlasela khona nokuthi zihlasela kangakanani. Abakhiqizi bangezama ukulawula ubuningi be-inoculum ensimini ngokukhetha ukubhubhisa noma basuse ngokushisa izilimo ezhilase-leke kakhulu (uma zimbalwa kuphela) nokutshala ezingahlalwa yizina-

mbuzane ngesizini elandelayo ukunciphisa ukuba khona kwe-sclerotia.

Ukwengeza, ukwenza imephu nokulandela umzila wezindawo ezivamise ukuhlaseleka, yindlela esebezayo yokuthagetha izindawo ezithile futhi uhlelele ekutshaleni izilimo ezingenwayo kulezo zindawo.

Ukulawula ukhula nakho kubalulekile, njengoba ukhula oluningu luyikhaya le-*Sclerotinia*. Lolo oluqinisekisiwe eNingizimu Afrika uqadolo ojwayelekile phecelezi blackjack (*Bidens pilosa*), i-pigweed (*Amaranthus deflexus*) kanye ne-tall khakhibos (*Tagetes minuta*).

Kukhona ama-fungicides okulawula izifo ze-*Sclerotinia*. Kodwa, lawa agcina kuphela kubhontshisi isoya futhi kukhona okwelapha imbewu kabhekilanga kuphela. *I-Procydione* irejistelwe i-stem rot se-*Sclerotinia* kabhontshisi owomile, ubhontshisi oluahlaza phecelezi green beans, ubhontshisi isoya nophizi. *I-Benomyl* eyokwelapha imbewu kabhekilanga erejistiwe, kodwa isisisiwe ezimakethe zase-Melika nase-Australia ngenxa yokuba noshevu omnini.

ENingizimu Afrika, imbewu eqinisekisiwe ngeke iqukathe ngaphezulu kuka -0,2% i-sclerotia, futhi imbewu yelashelwa ukuthi igcineke inempilo. Ukuhlanga imbewu eqinisekisiwe ingasiza eku-nciphiseni i-pathogen emasimini. Uma ugcina imbewu kabhontshisi isoya, qaphela ukuthi ukugcina imbewu esuka emasimini athelleleke nge-*Sclerotinia* kungaholela ekutheni i-sclerotia esembewini iphinde itshalwe ngesizini elandelayo. Ngakho ke, ukuhlunga imbewu kuyanomeka ukuze kuncishiswe i-sclerotia eningi. Ukunye futhi, *I-Sclerotiorum* yaziwa ngokuthi ihamba nembewu phecelezi seed-borne futhi lokhu kungaba ubungozi ukugcina imbewu uma ingahlanzekile ngokufanele. *I-Sclerotia* evunwe ngesizini edlule ingasabalalisa isifo sigcwale onke amasimu uma iphindie yatshalwa. Ukuhlanga ngokufanele impahla yokusebenza emva kokuvuna amasimu anomthelela nakhona kubalulekile ukususa i-Sclerotia mhlambie enamathlele ethulusini lokusebenza.

OKUFANELE KWENZIWE

- Gcina amarekhodi alapho kwatholakala khona khona umthelela we-Sclerotinia esizini ngayinye.
- Hlolwa amasimu akho.

2 /-life cycle ye-Sclerotinia sclerotiorum.



Izimpawu kuba yisimila esimhlophe phecelezi white mycelium ngaphambili ekhanda likabhekilanga.



Skena i-QR khodi ukuze
ufunde i-athikhile ephelele
ku-sagrainmag.co.za.

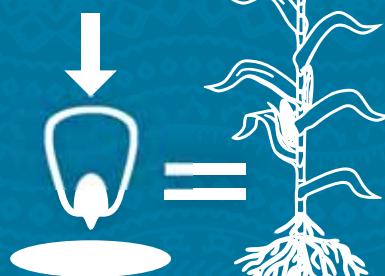
- Kusukela emavikini amabili ngaphambi kokuqhakaza kwe-zimbali, insimu yihlole njalo ukuze ubone ukuthi ngabe ikhona i-apothecia.
- Emuva kokuqhakaza kwezimbali, qapha amasimu ubheke izimpawu nezibonakalo zesifo. Uma kunezitshalo ezimbalwa kuhphela ezikhombisa ngokusobala izimpawu zesifo, zisuse futhi uzishise ukuvikela ukunqwabelana kwe-pathogen ensimini.
- Sabalalisa ubungozi bakho ngokuthi utshale ama-cultivar ahluklukene. Ututshala ngezinsuku ezahlukene kungasiza ekutheni usinde ezifeni kwamanye amasimu.

Thintana no-Dr Lisa Rothmann ku-CoetzeeLA@ufs.ac.za noma ku-079 270 9691 noma u-Dr Miekie Human ku-miekie@grainsa.co.za noma ku- 067 016 9493 uma ufuna imininingwane. Vakashela ku-SASRN website ku-sclerotinia.co.za noma ekhansi le-Facebook ku- (<https://www.facebook.com/sclerotiniaZA>) okusha okwengeziwe. ■

U-DR LISA ROTHMANN, UNIVERSITY OF THE FREE STATE, U-DR MIEKIE HUMAN, RESEARCH AND POLICY CENTRE, GRAIN SA NO-DR GODFREY KGATLE, RESEARCH AND POLICY CENTRE, GRAIN SA. I-ATHEKILE YAQALA UKUSHIC-ILELWA E-SA GRAAN/GRAIN, NOVEMBA 2022.

EVERY KERNEL COUNTS

**Multiply your maize
with one DEKALB
seed per hole.**



With **DEKALB®**, one seed is all you need! The built-in technology in our maize seed unlocks a world of possibilities for your farm and ensures that one seed per hole is enough. Our **DEKALB** seed bags are available in packages of **2 kg, 5 kg and 30 000 kernels** and you can choose between stacked traits, **Roundup Ready® MAIZE 2** and conventional hybrids. Discover how **Bayer's** crop protection and **DEKALB** advanced genetics can help you gain the **#DEKALBadvantage**.



www.cropscience.bayer.co.za // www.bayer.co.za // Tel: +27 11 921 5002

Bayer (Pty) Ltd. Reg. No. 1968/011192/07. 27 Wrench Road, Isando, 1601. PO Box 143, Isando, 1600.

The registration owner of **DEKALB®** and **Roudup Ready® MAIZE 2** is **Bayer AG, Germany**.





PULA IMVULA

Shintsha ekuphileni uye empumelelweni

NGOKUKHULA KWEZINDELEKO ZAMA-/INPUT KANYE NESIMO SEZULU ESI-NGAQONDAKALI, ABALIMI KUFANELE BASEBENZE NGOBUHLAKANI UMA BEFUNA UKUBA NEBHIZINISI LOKULIMA ELINENZUZO EZINZILE.

Abalimi abanangi abanayo intshisekelo ye-administration ngoba bafuna ukuba ngaphandle balime. Kodwa, ukuze ube nalokhu, lokhu okunye kufanele kube khona – okusho ukuthi ukuze ukwazi ukugxila kulokho okuthandayo, kudingeka uthole indlela futhi yokwenza i-administration ngendlela ukuze ungaphili kuphela, kodwa uthuthuke.

Ngakho ke kubaluleke kakhulu ukurejistela intela kwa-SARS. (Fundu kabanzi ngokubhalisa intela kwi-Pula Imvula eshicilelweni ngoMashi 2023.)

UKUREJISTA

Kubalulekile kumuntu ukurejistela i-VAT lapho i-value yamasaplayi akhokhelwa intela enziwe esikhathini esiyizinyanga eziyishumi nambili ngokulandelana engaphezulu noma engahle ibe ngaphezulu kwesigidi phecelezi R1 million. Lokhu kusho ukuthi wenze imali engaphezulu kuka-R1 million ngonyaka owodwa. Uma i-SARS ithola ukuthi unemali enguloluhlobo kanye nokugwema intela, inhlawulo ingaba yinkulu.

Umuntu engazikhethela ukurejistela i-VAT **ngokuzivolontiya** kwakhe uma i-value yamasaplayi akhokhelwa intela noma ezokwenziwa engaphansi kuka-R1 million kodwa ene, ngaphansi kwezimo ezithile, engaphezulu kuka-R50 000 esikhathini esedlule sezinyanga eziyishumi nambili. Uma uwela lapha kungcona ukuba urejiste njengoba kungatholakala eminye imihlomulo engashiwu ngokuhamba kvesikhathi.

I-TAX CLEARANCE CERTIFICATE

Ukuba ngomkhokhi ntela akulungile kuwe kuphela kodwa kuzosiza isimo sentela yebhizinisi lakho. I-tax clearance certificate ibalulekile kumadokumenti asemthethweni ongawathola kwa-SARS njengobufakazi bokuthi ibhizinisi lakho aliyikweleti intela kwa-SARS. Ukuba noku-kodwa kwalokhu kuchaza ukahi ibhizinisi lakho lisesimeni esihle kwa-SARS okuchaza ukuthi ama-return akho ahanjiswa ngokufanele.

Ungayithola kanjani i-tax clearance certificate:

- Ngokwe-e-filing (uma urejistile).
- Gcwalisa ifomu noma ungaliposela kwa-SARS noma ulufake ebhokisini lakwa-SARS.
- Ungacela umgcinimabhuku wakho (nongaphinde abe umsebenzi wezentela), okwaziyo ukukusiza aphinde akucelele le sitifiketi.

Le sitifiketi sihlala unyaka owodwa kusukela ngosuku esikhishwa ngalo.

QAPHELA

Ulwazi onikezwa lona lungumfanekiso phecelezi snapshot sezinto ezimbalwa eziyisisekelo uzodinga uqala ukuzilungisa ngendlela ukuze uthuthukise ibhizinisi lakho liye kwelinje izinga.

Imithombo

<https://www.sars.gov.za/>

<https://www.patc.co.za/>

U-LIANA STROEBEL,
IMENENJA YEMISEBENZI,
NOKUQEQUESHA, KWA-GRAIN SA



Ithimba labahleli

GRAIN SA: PRETORIA

PO Box 74087
Lynnwood Ridge
0040
■ 086 004 7246
■ www.grainsa.co.za

UMHLELI OPHETHE

u-Dr Sandile Ngcamphalala

■ 082 862 1991 ■ Ihhovisi: 012 943 8296
■ sandile@grainsa.co.za

UMHLELI UKWABA

Liana Stroebel

■ 084 264 1422 ■ Ihhovisi: 012 943 8285
■ liana@grainsa.co.za

UPHATHINA WOKUSHICILELA

INFOWORKS MEDIA PUBLISHING

Isekela mhleli – U Louise Kunz

■ louise@infoworks.biz
■ Umholi wethimba – U Johan Smit
■ 082 553 7806 ■ Ihhovisi: 018 468 2716
■ johan@infoworks.biz
■ *Ukushicilela – U Elizma Myburgh, Jesseme Ross*



Uhlelo IweGrain SA LokuThuthukisa amaFama

ABAQONDISO BENTUTHUKO

Jacques Roux

Empumalanga neFreystata (e-Bloemfontein)
■ 082 377 9529 ■ Jacques.rouxjr11@gmail.com

Johan Kriel

ENtshonalanga neFreystata (e-Bloemfontein)
■ 079 497 4294 ■ johank@grainsa.co.za

Jerry Mthombothi

Mpumalanga (Mbombela)
■ 084 604 0549 ■ jerry@grainsa.co.za
■ Office: 012 943 8289 ■ Smangaliso Zimbili

Jurie Mentz

Mpumalanga/KwaZulu-Natal (Louwsburg)
■ 082 354 5749 ■ jurie@grainsa.co.za
■ Office: 012 943 8218

Graeme Engelbrecht

KwaZulu-Natal (Dundee)
■ 082 650 9315 ■ graeme@grainsa.co.za
■ Office: 012 943 8287 ■ Nkosinathi Mazibuko

MJ Swart

INTshona-Koloni (Paarl)
■ 072 090 7997 ■ mj@grainsa.co.za
■ Office: 012 943 8285 ■ Hailey Ehrenreich

Du Toit van der Westhuizen

North West (Lichtenburg)
■ 082 877 6749 ■ dutoit@grainsa.co.za
■ Office: 012 943 8290 ■ Lebo Mogatlanyane

Luke Collier

Eastern Cape (Kokstad & Mthatha)
■ 083 730 9408 ■ luke@grainsa.co.za
■ Office: 012 943 8280 ■ Luthando Diko
UCwayita Mpotsi (Umsizi ehlovu: Mthatha)
■ 078 187 2752 ■ umthatha@grainsa.co.za
■ Office: 012 943 8277

IPULA IMVULA IYATHOLAKALA FUTHI NANGALEZI ZILIMI EZLANDELAYO:

IsiZulu, IsiNqisi, IsiTswana, IsiSuthu, nesiXhosa.

Articles written by independent writers are the views of the writers and not that of Grain SA.

THIS PUBLICATION IS MADE POSSIBLE
BY THE CONTRIBUTION OF THE MAIZE TRUST

MADE POSSIBLE BY
THE MAIZE TRUST

Iphrogrammu eguqula izimpilo



Farmer
Development
Programme

Umbiko

Abalimi bathuthukisa ama-khono abo

IMIHLANGANO yama-Study group ineqhaza elidingekayo lwePhrogrammu eThuthukisa aBalimi kwaGrain SA iphinde igxile ekwedluliseleni ulwazi nasekuthuthukiseni amakhono abalimi.

Ngomhla ka **1 Febhuwari** imenenja yentuthuko esifundeni, u-Graeme Engelbrecht ehhovisi laseDundee, wahlangana namalungu akwaDukuza Central Study Group eZam'ukuzenzela Community Centre ezoxoxa ngenqubekelaphambili yokutshala.

Abalimi bawuthokozela umhlangano futhi bahlanganyela ezigxoxweni bukhoma. Babelana ngenqubekelaphambili yezilimo baphinde baxoxa nangezinselelo nokukhathazeka abanakho no-Graeme. Kwaba nengxoxo emayelana nokunakekelwa kwemishini yokubhula ummbila ngaphambi kwsizini yokuvuna. Abalimi futhi balangazeleta ithuba lokuthola i-study group planter ukuze bakhulume ngezinselelo abahlangabezana nazo ngokukhalibhretha, oku-afektha amaphethini okutshala nokuphathwa kokulinywa kwezilimo. Ilungu elisha lethimba, uPhumzile Ngcobo, ongumsizi wemenena yezentuthuko, naye wethulwa kubalimi.

Ngomhla ka **9 Febhuwari**, uJerry Mthombothi, imenenja yezentuthuko esifundeni iMbombela, wahlangana nabalimi baseSalubindza Study Group. Waxoxa ngokwenziwayo nokungafanele kwensiwe uma kusetshenziswa i-knapsack sprayer.

Elinye iphuza elibalulekile ku-ajenda kwaba ukubaluleka kokulawula ukhula ngokusetshenziswa kwamakhemikhali. Kwakhulunywa ngalezi zihloko eziandelayo:

- Yini ukhula?
- Kubaluleke ngani ukulawula ukhula ezilimeni zakho?
- Kungani ukhula lumphumelela?
- Ukwanda kokhula.
- Kufanele kuqale nini ukulawula ukhula?
- Izizathu zokwehluleka ukulawula ukhula.
- Amafektha anomthelela wokukhetha ama-herbicides etc.



I-Salubindza Study Group
i-aplaya lokho ekufundile
ngokukhalibhretha kwe-knapsack sprayer.



U-Graeme Engelbrecht
ethokozela ukushaywa
umoya ofreshi nabalimi
iDukuza Study Group.

Ukuqapha IZILIMO ZAKHO

UFEBHUWARI kuhlale kuyinyanga ematasu lapho kubonakala ithimba lakwaGrain SA lihlangana nabalimi ezweni lonke.

Umsebenzi obaluleke kakhulu ukuqapha inqubeke-laphambili yezilimo, izimo nokuxoxa ngezinkinga. Ithimba futhi laqala ukuba nezingxoxo mayelana nokulungiselela isizini yokuvuna elandela. Kwensiwa **isamba samaseshini okuxhumana nama-study group anga-64** nethimba eLithuthukisa abaLimi kwaGrain SA **livakashele amapulazi angama-134** ngalesikhathi senyanga.

Ngaphandle kokubambeleka okudalwa yizimvula ezinkulu azazidamane zina, ehhovisi eliThuthukisa abaLimi kwaGrain SA lakwazi ukutshala **ithrayali ploti** eduze kwase-Barberton. Lokhu kuxhaswe ngemali i-Bayer ne-Grain SA. Kwarishwa iploti eliyi-hektha elilodwa, ladeswa futhi latshawa ngesandla. Insimu yafuthwa ngesibulalakhula phecelezi **weedcide** nesibulalazinambuzane pecelezi **pesticides** ukuvikela i-cutworm ezinsukwini ezimbili emva lokutshala.



Ngaleli-ploti lethrayali e-Barberton, ithimba liyethemba ukuthi abalimi bazowubona umphumela omuhle wokulungisa inhlabathi ngokufanele, ukuvula izikhala phakathi kolayini ngokuhlelekile, inani lezitshalo elifanele kanye nephrogremu yokufutha njalo. ■