

Uhlelo oludidiyelwe Iwamasu okulawula utshani obenabayo emobeni



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Umbhalu: Dr Peta Campbell

yashicilelwa ngu



South African Sugarcane Research Institute
170 Flanders Drive, Mount Edgecombe, 4300
Private Bag X02, Mount Edgecombe, 4300
Tel: (031) 508 7400 Fax: (031) 508 7597
Website: www.sugar.org.za/sasri

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yikuphi ukulahlekelwa noma ukulimala, okuqondile noma okungaqondile, okubangelwa
ukusetshenziswa kolwazi lwalencwadi*

*Ukusetshenziswa kwamagama emikhiqizo akufanele kucatshanelwe
njengokugunyaza ukusetshenziswa kwayo.*

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**ISINGENISO NEZINDLELA
ZOKULAWULA EZIFINGQIWE**

Isingeniso

Utshani obenabayo buyinkinga enkulu eMbonini kaShukela yaseNingizimu Afrika, ezimweni ezimbi kakhulu, buholela ekushabalaleni kwesivuno.

Le ncwadi ichaza izindlela eziyishumi nantathu zokulawula utshani obenabayo nemiyobo yabo, kuchazwa isimo ngasinye nendlela yokwenza nokulungisa lapho kufanele khona. UHLELO OLUYINGXUBE LOKULAWULWA KOKHULA lusebenzisa izinhlanganisela ezifanele zamasu okulawula okungaba, ukusetshenziswa kwezindlela zesintu, amathuluzi kanye nezibulala-khula nokubalulekile ekulawuleni ukhula ngendlela enempumelelo. Qala ubuke ubungako bokhula olusensimini ngaphambi kokuba ukhethe ingxube yezibulala-khula, ngaphezu kwalokho bheka usuku lokuvuna, isivuno esingahle sibe khona, izindleko kanye nobukhona bezinsizakusebenza.

Uhlelo lokulawulwa kotshani obenabayo epulazini lonke kumele luhlonze amasimu okuzoqalwa ngawo bese ubheka izindlela eziyinhlanganisela ongazisebenzisa, lezi zindlela zivumela ukuqaliswa kohlelo oluyingxube lokulawulwa kokhula. Nakuba lendlela ingeke ikwazi ukuqedo bonke utshani obenabayo epulazini, kungenzeka inciphise izindleko.



Izindlela ezifingqiwe zokulawula utshani obenabayo

Lokhu okungenzansi kukhombisa ukuthi iziphi izindlela ezahlukene ezingasetshenziswa ukulawula utshani obenabayo kwizimo zokuhlasela kokhula.

Ubungako bokhula (1-10%)

IKHASI	INDLELA YOKULAWULA	Kumasimu alaliwiwe azotshalwa kabusha	kumoba omfishane	kumoba omude	Masekuh- lahliwe	onqenqeme ni lwensimu
14	Indlela 1: Ukuhlakula		✓			✓
15	Indlela 3(a): Ukuhlanzeka kwensimu: ukususa ngesandla ukhula/ ukufutha ukheth'amabala ukhula olude		✓		✓	
15	Indlela 3(c): Ukuhlanzeka kwensimu: Ukusebenzisa umquba wemfuyo okhethekile	✓				
15	Indlela 3(d): Ukuhlanzeka kwensimu: ukusebenzisa imbewu yomoba ehlanzekile	✓				
18	Indlela 6:Ukutshala ungalimanga	✓				
20	Indlela 8: Ukugqugquzelu ukwemboza ngokushesha komoba	✓				
23	Indlela ye-11: Ukumboza ngamahlamvu emva kofutha ngesibulala-khula	✓			✓	
27	Indlela ye-12(b): ukufutha ngomashay'abhuqe ukhetha amabala	✓	✓ isihenqo		✓	✓
31	Indlela ye-14: Fluazifop-butyl (grass with broken/cut runners)	✓	✓ isihenqo			
32	Indlela ye-15(a no c): Isibulala-khula i-Paraquat enesinamathelisi noma i-diuron		✓ isihenqo			✓
32	Indlela ye-15(b): Ukufutha nge-Paraquat ukuze utshani buhlume kabusha		✓ isihenqo		✓	✓
33	Indlela ye-16: isibulala-khula i-Glufosinate ammonium		✓ isihenqo		✓	✓

Ubungako bokhula (11-20%)

I K H A S I	INDLELA YOKULAWULA	Kumasimu alalisiwe azotshalwa kabusha	kumoba omfisha ne	kumoba omude	Masekuh- lahliwe	onqenqeme ni lwensimu
14	Indlela 1: Ukuhlakula		✓			
15	Indlela 2: Ukuhlanzeka kwensimu: ukususa ngesandla ukhula/ ukufutha ukheth' amabala ukhula olude		✓		✓	
15	Indlela 2: Ukuhlanzeka kwensimu: Hlanza ogandaganda, amabhuzu kanye namathuluzi owasebenzia ensimini	✓	✓		✓	✓
15	Indlela 2: Ukuhlanzeka kwensimu: Khetha umquba ofaneleyo	✓				
15	Indlela 2: Ukuhlanzeka kwensimu: Ukusebenzia imbewu ehlanzekile	✓				
16	Indlela 4(a): Ukushisa utshani obomile ukuze buhlume kabusha	✓			✓	
18	Indlela 6: Ukutshala ungalimanga	✓				
19	Indlela 7: Ukusetshenziswa kukamanyolo		✓			
20	Indlela 8: Ugugqugquzelu ukwemboza ngokushesha komoba		✓			
21	Indlela 9: Iztishalo ezivikelayo					✓
23	Indlela ye-11: Ucumboza ngamahlamu emva kokufutha ngesibulala-khula umashay' abhuqe				✓	
27	Indela 12(b): Ukufutha ukhetha amabala ngesibulala-khula umashay' abhuqe	✓	✓ isihenqo noma inozolo i-dribble bar	✓ inozolo i- floodjet noma dribble bar	✓	✓ inozolo i-floodjet noma dribble bar
31	Indlela ye-14: isibulala-khula i-Fluazifop-butyl (ukunqamula izimpande)	✓	✓ isihenqo			
32	Indlela ye-15(a no c): Ukufutha ufake isinamathelisi noma i-Diuron		✓ isihenqo			✓
32	Indlela ye-15(b): Paraquat ukuze utshani buhlume kabusha		✓ isihenqo			
33	Indlela ye-16: isibulala-khula i-Glufosinate ammonium		✓ isihenqo		✓	✓

Ubungako bokhula (21-40%)

IKHASI	INDLELA YOKULAWULA	Kumasimu alalisiwe azotshalwa kabusha	kumoba omfishane	kumoba omude	Masekuh- lahliwe	onqenqemeni lwensimu
14	Indlela 1: Ukuhlakula		✓			
15	Indlela 2: Ukuhlanzeka kwensimu; ukususa ngesandla ukhula/ ukufutha ukheth' amabala ukhula olude		✓		✓	
15	Indlela 2: Ukuhlanzeka kwensimu: Hlanza ogandaganda, amabhuzu kanye namathuluzi owasebenzia ensimini	✓	✓		✓	✓
15	Indlela 2: Ukuhlanzeka kwensimu: Khetha umquba ofaneleyo	✓				
15	Indlela 2: Ukuhlanzeka kwensimu: Ukusebenzia imbewu ehlanzekile	✓				
16	Indlela 4: Ukushisa utshani obomile ukuze buhlume kabusha	✓			✓	
18	Indlela 6: Ukutshala ungalimanga	✓				
19	Indlela 7: Ukusetshenziswa kukamanyolo		✓			
20	Indlela 8: : Ukuggugquzelu ukwemboza ngokushesha komoba		✓			
21	Indlela 9: Izitshalo ezivikelayo					✓
23	Indlela ye-11: Ukumboza ngamahlamu emva kokufutha ngesibulala-khula umashay'abhuqe				✓	
27	Indela 12(b): Ukufutha ukhetha amabala ngesibulala-khula umashay'abhuqe	✓	✓ isihenqo noma inozolo i-dribble bar			✓ inozolo i-floodjet noma dribble bar
31	Indlela ye-14: isibulala-khula i-Fluazifop-butyl (ukunqamula izimpande)	✓	✓ isihenqo			
32	Indlela ye-15(a no c): Ukufutha ufa ke isinamathelisi noma i-Diuron		✓ isihenqo			✓
32	Indlela ye-15(b): Paraquat ukuze utshani buhlume kabusha		✓ isihenqo			
33	Indlela ye-16: isibulala-khula i-Glufosinate ammonium		✓ isihenqo			

Ubungako bokhula (41-60%)

Ikhasi	INDLELA YOKULAWULA	Kumasimu alalisiwe azotshalwa kabusha	kumoba omfisha ne	kumoba omude	Masekuh- lahliwe	onqenqememi lwensimu
15	Indlela 2: Ukuhlanzeka kwensimu: ukususa ngesandla ukhula/ ukufutha ukheth'amabala ukhula olude	✓	✓		✓	
15	Indlela 2: Ukuhlanzeka kwensimu: Hlanza ogandaganda, amabhuza kanye namathuluzi owasebenzisa ensimini	✓	✓		✓	✓
15	Indlela 2: Ukuhlanzeka kwensimu: Khetha umquba ofaneleyo	✓				
15	Indlela 2: Ukuhlanzeka kwensimu: Ukusebenzisa imbewu ehlanzekile	✓				
16	Indlela 4: Ukushisa utshani obomile ukuze buhlume kabusha	✓			✓	
18	Indlela 6: Ukutshala ungalimanga	✓				
19	Indlela 7: Ukusetshenziswa kukamanyolo		✓			
20	Indlela 8: : Ugugqugquzela ukwemboza ngokushesha komoba		✓			
21	Indlela 9: Iztishalo ezivikelayo					✓
22	Indlela ye-10: Iztishalo zokumboza insimu	✓				
23	Indlela ye-11: Ukumboza ngamahlamu emva kokufutha ngesibulala-khula uMashay'abhuqe				✓	
25	Indlela ye-12(a): Ukufutha ngesibulala-khula umashay'abhuqe	✓	✓ izindawo ezingamaphe shu kuhela	✓		✓
31	Indlela ye-14: isibulala-khula i-Fluazifop-butyl (ukunqamula izimpande)	✓				
32	Indlela ye-15(a no c): Ukufutha ufake isinamathelisi noma i-Diuron		✓ isihenqo			✓
32	Indlela ye-15(b): Paraquat ukuze utshani buhlume kabusha		✓ isihenqo			
33	Indlela ye-16: isibulala-khula i-Glufosinate ammonium		✓ isihenqo		✓	✓

Ubungako bokhula (61-100%)

khasi	IZINDLELA ZOKULAWULA	Kumasimu alalisiwe azotshalwa kabusha	kumoba omfishane	kumoba omude	Masekuh- lahliwe	onqenqemeni lwensimu
15	Indlela 2: Ukuhlanzeka kwensimu: ukususa ngesandla ukhula/ ukufutha ukheth'amabala ukhula olude		✓		✓	
15	Indlela 2: Ukuhlanzeka kwensimu: Hlanza ogandaganda, amabhuza kanye namathuluzi owasebenzisa ensimini	✓	✓		✓	✓
15	Indlela 2: Ukuhlanzeka kwensimu: Khetha umquba ofaneleyo	✓				
15	Indlela 2: Ukuhlanzeka kwensimu: Ukusebenzisa imbewu ehlanzekile	✓				
16	Indlela 3: Ukugunda utshani					✓
16	Indlela 4: Ukushisa utshani obomile ukuze buhlume kabusha	✓			✓	
17	Indlela 5: Isibulala-khula kanye nokulimela phezulu ekwindla	✓				
18	Indlela 6: Ukutshala ungalimanga	✓				
19	Indlela 7: Ukusetshenziswa kukamanyolo		✓			
20	Indlela 8: : Ugugquqzelu ukwemboza ngokushesha komoba		✓			
21	Indlela 9: Iztishalo ezivikelayo					✓
22	Indlela ye-10: Iztishalo zokumboza insimu	✓				
25	Indlela ye-12(a): Ukufutha ngesibulala-khula umashay'abhuqe	✓		✓		✓
29	Indlela ye-12(c): Ugawula umoba ngaphambi kokufutha ngesibulala-khula umashay'abhuqe		✓			
30	Indlela ye-13: Isibulala-khula i-Arsenal GEN 2® (izinyanga ezine nemvula engu -600mm ngaphambi kokuba utshale)	✓				
31	Indlela ye-14: isibulala-khula i-Fluazifop-butyl (ukunqamula izimpande)	✓				
32	Indlela ye-15(a no c): Ukufutha ufa ke isinamathelisi noma i-Diuron		✓ isihenqo			✓
32	Indlela ye-15(b): Paraquat ukuze utshani buhlume kabusha		✓ isihenqo			
33	Indlela ye-16: isibulala-khula i-Glufosinate ammonium		✓ isihenqo		✓	✓



**UHLELO OLUDIDIYELWE
LOKULAWULA UKHULA**

Uhlelo oludidiyelwe lokulawula ukhula

Ngonyaka wezi-2017 u-Odero wachaza uhlelo oludidiyelwe lokulawula ukhula, ngokusetshenziswa kwezindlela ezahlukahlukene zokulawula ukhula okungaba eyesintu, imishini, eyemvelo kanye nokusebenzia izibulala-khula ube uthola isivuno esikwenzela imali futhi ungathembeli kwindlela yokulawula eyodwa.

Ukhula oluningi luyalawuleka uma uhlelo oludidiyelwe lokulawula lusentshenziswa ngendlela efanele. Lokhu kwengeza amandla omoba ekuncintisaneni kwavo nokhula. Lengxube yokulawula ukhula ibalulekile ngoba isebeenzisa izindlela ezahlukene ngoba uma usebeenzisa eyodwa ivame ukungaphumeleli. Lezi zindlela kumele zisebenze kahle ukuvikela ukukhula kokhula, ukuze luthithibale futhi lungasabalali.

Ukuze loluhlelo oludidiyelwe lwamukeleke lumphinde lusentshenziswe, kumele kubelula ukulisebenzia ekulweni nokhula emobeni ngazikhathi zonke, lumphinde lungambi eqolo futhi luphephe kwimvelo.

Amakhasi 13-31 alencwadi achaza izindlela ezahlukene zokulawula ukhula kwizimo ezahlukahlukene. Lamasu aloluhlelo oludidiyelwe akhiwe ngokuhlanganisa izindlela ezifanele zokulawula utshani obenabayo emasimini. Isibonelo, uma ubungako bokhula bungamaphesenti 61 – 100 emasimini alele, kudingeka uhlelo oludidiyelwe olungafane nolwensimu enomoba omfishane. Lengxene ibhekana namasu ohlelo oludidiyelwe lwamasu okulawula ukhula epulazini.

Amatemu asentshenziswe kulencwadi:

Amatemu	Izincazelot	Kuphi
<i>Indela yokulawula</i>	Umsebenzi owodwa	kwinsimu
<i>Isu</i>	Inhlanganisela yezindlela ezifanele zokulawula	kwinsimu
<i>Icebo</i>	Inhlanganisela yamasu afanele epulazi lonke	Epulazini

Ukwakha uhlelo oludidiyelwe lokulawula ukhula epulazini

Inkinga ngokulawula utshani obenabayo kuncike kubungako bendawo, isib. ehhekeni elilodwa kulula mawuqhathanisa nakumahheka ayishumi.

Ukuphumelela ukulawula utshani obenabayo kuncike kwicebo lokubulawula epulazini lonke. Uhlelo lokulawula utshani obenabayo epulazini lonke lufaka amasimu ngokuhlukana kwavo kanye nezindleko. Ngokohlelo oludidiyelwe lwepulazi lonke kuqalwa kubhekwe amasimu ahlaseleke kakhulu kugekuqaphwa amasimu angconywana ukuze lungasabalali.

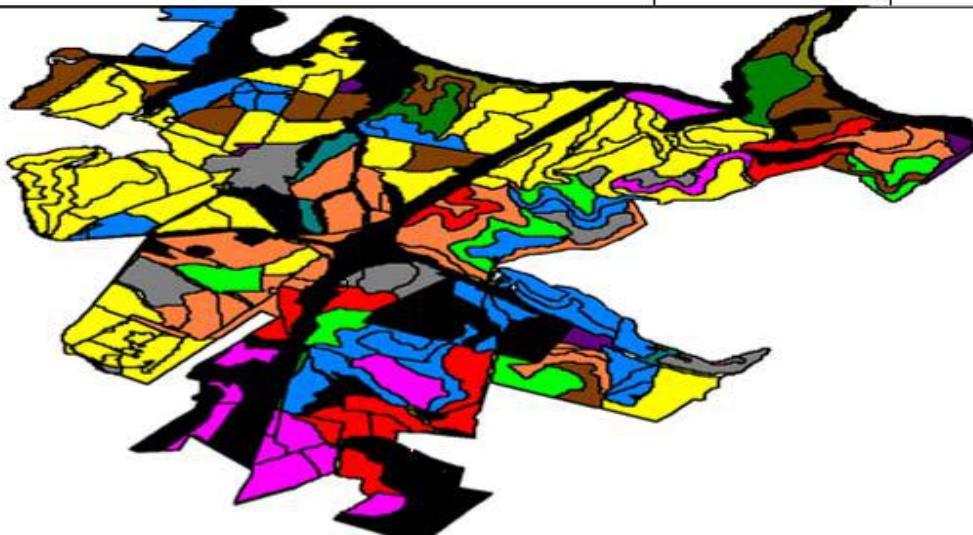
Izindlela zokwakha uhlelo oludidiyelwe lokulawula utshani obenabayo zichaziwe kwikhasi elilandelayo.

Example of a six-step guide to prepare a farm-scale IWM plan for creeping grasses.

Esokuqala	<p>Yakha uhla lwezinhla zamasimu, isitshalo, nokhula.</p> <ul style="list-style-type: none">• Imininingwane ngensimu: uhlobo lomhlabathi, isimo sendawo, ukwehlela, ubumanzi/izindawo ezingosawoti.• Imininingwane ngesitshalo: uhlobo, iminyaka, ubude, inani lezitshalo ensimini, izindawo ezingamapheshu, usuku lokuhlahla, isivuno (esitholakalayo nesingatholakala).• Imininingwane ngokhula: uhlobo lotshani, ubungako bendawo embozekile namandla okukhula kwalo. <p>Lemininingwane kumele ifakwe kwibalazwe lepulazi. Lomsebenzi ungenzeka kalula ngobuchwepheshe bokubuka umhlabu (GIS software).</p>
Esesibili	<p>Yakha uhla lwezinsiza kusebenza onazo.</p> <ul style="list-style-type: none">• Imishini• Abasebenzi• Imininingwane ngezinhlolo zokunisela uma unisela
Esesithathu	<p>Hlonza indlela yokulawula insimu ngayinye ngokubheka:</p> <ul style="list-style-type: none">• Isimo sensimu, sesitshalo kanye nesokhula• Izinsiza-kusebenza ezikhona.
Esesine	<p>Bheka izindleko nenzozo zezindlela zokulawula ngayinye ..</p> <ul style="list-style-type: none">• izindleko: izibulala-khula, abasebenzi, amanzi, ugandaganda, imishini, umonakalo wokusetshenziswa kwezibulala-khula kwisitshalo• inzozo: ngokunyuka kwesivuno, nokubheka ngokohlolo lomhlabathi
Esesihlanu	<p>Hlanganisa uhlele amasimu ngokuhlaseleka kwavo ubheka:</p> <ul style="list-style-type: none">• Insimu, isitshalo kanye nesimo sokhula• Inzozo nezindleko (gxila kumasimu azokunika inzozo ephezulu).- Amasimu okuqalwa ngawo asuke ehlaseleke kancane ukhula noma asuke ezotshalwa kabusha.- Kulandele amasimu asuke ehlaseleke kancane utshani noma asuke engakhipha isivuno esiphezulu kodwa utshani buhlasele kakhulu.- Amasimu okugcinwa ngawo asuke ehlaseleke kancane futhi asuke ezolaliswa
Esesithupha	<p>Hlela izindlela zokulawula ngokulandeleta</p> <ul style="list-style-type: none">• Ugxila kukhula olungafanga• Kuhlelo lonyaka nakekela amasimu angahlaselekile kakhulu

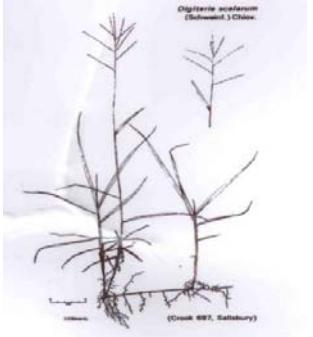
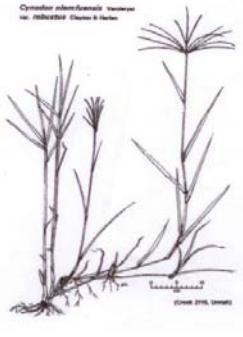
Isibonelo esingezansi esohlelo oludidiyelwe lokulawula utshani obenabayo epulazini usebenzisa ibalazwe. Lelibalazwe likhombisa ulwazi ngesimo sensimu, ukubaluleka kokulawula, izindlela zokulawula kanye nokuhlanganisa izindlela zokulawula kwinsimu nensimu ngokulandelana. Isibamasimu aphuzi iwona abaluleke kakhulu ekulawuleni ukhula ngesibulala-khula umashay'abhuqe ukhetha amabala futhi usebenzisa izihenqo, kuze kube umoba uyahlanganisa

Isiqaba sensimu (bheka kwibalazwe)	Ukubaluleka kokulawula	Izindlela zokulawula				
		Umsebenzi				
		1	2	3	4	5
Kumoba omfishane oyihlumela one-10% Ongwengwe	1	●	●	●	●	●
Kumoba omfishane oyihlumela one-10-40% Ongwengwe	2	●	●	●	●	●
Kumoba omude oyihlumela onama-63-100% Ongwengwe	4	●	●	●	●	●
Emuva kokuhlahla ungashisanga kunongwengwe kumapheshu oluyi-15%	1	●	○	●	●	●
Ukutshala ungalimanga kunongwengwe olungama-41 -60%	3	●	●	●	●	●
Ukulimela phezulu ekwindla kumasimu agcwele ungwengwe, umunxa wensimu uyi-10%	3	●	●	●	●	●
Kumoba omfishane oyihlumela ongenalo ungwengwe	1	●	●	●	●	●
Kwinsimu elaliswe isikhathi eside egcwele ungwengwe	5	●	●	●	●	●
Kumasimu alaliswe isikhathi eside anongwengwe olomile nokhula olude	5	●	●	●	●	●
Kumoba ozohlalwa ngesizini ezayo okhahlamezwe isomiso	3	●	●	●	●	●
Ezitubheni nasemadabuleni awowonke amasimu	1	●	●	●	●	●



- I-Paraquat ne-diuron noma i-paraquat nesinamathelisi noma i-glufosinate ammonium
- Futha isibulala-khula umashay'abhuqe noma i-paraquat ne-diuron noma i-imazapir noma susa ngezandla ukhula utshale imbalibhajana
- Hlakula ngegeja izindawo ezingamapheshu
- Ukufutha ngesibulala-khula umashay'abhuqe
- Ukumboza ngamahlamvu
- Nquma ukhula uluyeke lome bese uyalushisa ukuze utshani buhlume kabusha
- Ukulimela phezulu ekwindla emva kokufutha isibulala-khula umashay'abhuqe, ebusika obomile obubandayo
- Hlanza Insimu, uiyivikele ekuhlaselweni ukhula
- Futha isibulala-khula umashay'abhuqe uphindelela ukhetha amabala uze wemboze umoba
- Futha i-Arsenal GEN 2. QAPHELA ULANDELE IMIYALELO EKULEBULI

Ishadi lokuhlonza nezinkomba zokukhula kwezinhlolo ezintathu zotshani
obenabayo obuhlasela izindawo ezitshala umoba eNingizimu Afrika

Inkomba	<i>Cynodon dactylon</i> (Cynodon, kweek, ungwengwe/isinandi)	<i>Digitaria abyssinica</i> (Digitaria, Dunn's fingergrass/ vingergras, uqethu)	<i>Cynodon nlemfuensis</i> (Stargrass, reusekweekgras, uqethu)
Indela olukhula ngayo			
			
Ukuba khona kweziq zangaphansi komhlabathi (Rhizomes)	Bumila unyaka wonke futhi bune ziqu ezingaphezu komhlabathi (stolons) neziq ezingaphansi komhlabathi (rhizomes).	Umila unyaka wonke futhi une ziqu ezingaphezu komhlabathi neziq ezingaphansi komhlabathi)	Umila unyaka wonke futhi une ziqu ezingaphezu komhlabathi KUPHELA. Kuyenzeka iphambaniswe no ngwengwe. Ngakho bheka ukungabibikho kweziq ezingaphansi komhlabathi. Imbali yakhona ngathi isandla/inkanyezi
Ukusabalala	Izimpande zingashona phansi amacentimitha angamashumi amane kuya kumashumi amahlanu kumhlabathi owubumba kube amashumi ayisikhombisa kuya kumashumi ayisishiyagalombili kumhlabathi oyisihlabathi. Amahlamu aminyene, ngokuvamile abamade ngamacentimitha ayishumi kuya kumashumi amane.	Iziq ezingaphansi komhlabathi zakha okusamata ominyene ngaphansi, oshona phansi ngaphezu kwemitha elilodwa, ukuminyana kwaleziziqu kungamamitha angamakhulu amabili namashumi amabili nge skwemitha elilodwa (220 of rhizome/m ²). Leziziqu zingagoqana kwizimpande zezitshalo ezimila unyaka wonke.	Iziq ezingaphezu komhlabathi eziyizintanjana eziqinile ezingaphila noma kulinyiwe zingasabalala zifike kumamitha amahlanu noma ngaphezulu. Amaqabunga aminyene futhi ubude bawo bungafika edolweni.

Ezinye izinkomba	<ul style="list-style-type: none"> • Luthathwa njengokhula olubi kakhulu ezindaweni zonke. • Lungabulala umoba oyitshalo ohlulekayo ukwakha amaqbunga kanye nekhaba ngokushesha • Ukulahlekelwa yisivuno kungaba kumaphesenti aphakathi kwayishumi kuya kwangamashumi ayisishiyagalombili. • Luhlasela zonke izindawo ezitshalwe umoba. 	<ul style="list-style-type: none"> • Uthathwa njengokhula olunobungozi ekuvikelweni kwezemvelo eNingizimu Afrika. • Utholakala kakhulukazi kumoba owawutshalwe njengedlelo • Ukulahlekelwa yisivuno kungaba kumaphesenti aphakathi kwayishumi kuya kwikhulu • Uhlasela zonke izindawo ezitshale umoba kodwa lumandla enyakatho yogu kanye namaphakathi nesifundazwe saKwaZulu Natali. 	<ul style="list-style-type: none"> • Uthathwa njengokhula olubi kakhulu ngenxa yokusabalala lugcwale (insimu). • Ukwanda kwalo kugquqguzelwa ukulima • Ulawuleka kalula ngesibulala-khula (isib.Umashay'abhuqe (Glyphosate)) kunongwengwe noqethu • Uhlasela zonke izindawo ezitshale umoba
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**IZINDELA
ZOKULAWULA**

Indlela yokulawula yokuqala: Ukuhlakula

a) Unqenqema lwensimu (ingudla)

Ungwengwe lumila ezitubheni kanye nasemadabuleni (izindawo ezizungeze umoba ezifana nezihlukaniso zomoba nasemaceleni omgwaqo) ikakhulukazi emhlabathini ovundile onomoba osemncane noma okhahlamezekile.

Hlakula ukuze unqande ungwengwe lungakangeni ensimini yomoba. Phinda uhlakule emva kwamasonto amathathu kuya kwamane (**QIKELELA UKUTHI AWUBULAHLI ENSIMINI**).



b) Izikhala eziphakathi ensimini

Uma imvula ingakani, gwema ukufutha utshani obungenawo amaqqabunga aluhlaza ngoba isibulala-khula asikwazi ukumuncwa yisiqu kanye namaqqabunga omileyo. Lokhu kuvamise ukubonakala kumoba okhahlamezekile, ngemumva kokushisa kanye nokuhlahla uma lomisile. Uma siqapheliswa siyaye sibone ukuthi emuva kokuba imvula inile, ungwengwe nozakwabo banabela emobeni oseduzane kusuka kuzo lezi zikhala ebezomile. Uqethu yiwo okhula ngamandla kunozakwabo ngenxa yokuthi ukhula ngaphezulu nangaphansi.

Isexwayiso

Ukuhlakula kungumsebenzi ogqilazayo, ngakho-ke hlakula kuphela lezoziqeshana ezidinda ukuhlakulwa, uma kuyindawo enkulu, kungcono ufuthe ngomuthi wokubulala utshani obenabayo.

Ungahlakula kuphela ngaphansi kwalezi zimo ezibalulwe ngenhla ngoba ukuhlakula kungabanga ukuthi utshani bubuye ngamandla amakhulu emva kokuhlkula



Isithombe esingenhla: Isikhala lapho utshani buhlakulelwengaphakathi ukuze bungangeni emobeni.

Indlela yokulawula yesibili: Ukuhlanzeka kwensimu.

Veza obala utshani obenabayo ukuze ubunqande ngaphambi kokuthi benabe kakhulu.

a) Ukulawulwa kokhula olude

Ukhula olude kubalwa ubabe, umqangabhadwe kanye nomthithimbili kumele kufuthwe lona ngqo ngesibulala-khula. Gwema ukufutheka kotshani obenabayo uma bungakakhuli kahle.

Hlakula noma ufuthe ukhula olude kuphela ukuze lonke ukhula olusensimini lulingane ngaphambi kokuthi ufuthe utshani obenabayo. Lokhu kwenza umuthi ofuthiwe ukwazi ukufinyelela kahle phansi, kunciphise namathuba okuthi kube notshani obugejekayo.

Bheka ibhukwana lezibulala-khula (herbicide guide) noma uxhumane nomeluleki wezokuthakwa kwezibulala-khula ukuze ukhetha futhi usebenzise izibulala-khula eziyizo zokulawula ukhula olude.

b) Hlanza ogandaganda, amabhuzu kanye namathuluzi owasebenzisa ensimini

Utshani obenabayo busatshalaliswa ikakhulu izingcezu ezisele ensimini okungaba isiqu, izimpande noma kokubili kusabalale kubheke emaceleni. Lezi zingcezu zotshani zisatshalaliswa kalula ugandaganda. Igeja eliphendukayo elidonswa ugandaganda yilona elidala kakhulu ukusaphazeka kotshani obenabayo. Ngaphezu kwalokho, imbewu ingathathwa udaka emasondweni kagandaganda nasemabhuzwini amanzi abasebenzi basensimini. Nakuba izinga lokuhluma liphansi, ezinye zalezi zimbewu zisheshe zihlume futhi zingasabalalela emasimini ahlanzekile.

Hlola futhi uhlante ogandaganda kanye namathuluzi njalo ukuvimbela ukusakazeka kwembewu yotshani obenabayo emasimini ahlanzekile. Qinisekisa ukuthi abasebenzi bahlanza amabhuzu nezingubo zokusebenza ngaphambi kokusebenza ensimini entsha. Gwema ukulima okungadala ukuba utshani obenabayo bugcwale insimu yonke, okuncono hlukanisa iziqephu ezinotshani uziphathe ngendlela ehlukile kunensimu yonke.



c) *Khetha umquba ofaneleyo*

QAPHELA: uma usebenzisa umquba wemfuyo edla emadlelwini anotshani obenabayo, lokho kwandisa amathuba okuthi imbewu itshaleke ngenxa yokungagayeki esiswini semfuyo.

SEBENZISA UMQUBA WEMFUYO OHLANZEKILE

d) *Sebenzisa imbewu ehlanzekile*

Izimpande noma imbewu yotshani obenabayo ingasakazeka ngesikhathi sokutshalwa kwensimu entsha uma usebenzisa imbewu yomoba ethathwe emasimini analolukhula. Ukugwema lokhu, sebenzisa imbewu yomoba ephuma emasimini ahlanzekile

Indlela yokulawula yesithathu: Ukugunda utshani

Unqenqema lwensimu

Utshani obenabayo bumila ezitubheni kanye nasemadabuleni (izindawo ezizungeze umoba ezifana nezihlukaniso zomoba nasemaceleni omgwaqo) ikakhulukazi emhlabathini ovundile onomoba osemncane noma ongakhuli kahle.

Ngokugunda utshani obusonqenqemeni lwensimu kungadala ukuthi imbewu isikeke noma ilimale lokhu kunciphisa ukusabalala kwayo. Phinda ugunde utshani emva kwamasondo amathathu kuya kwamane.



Isexwayiso

Ngesikhathi ugunda utshani phezulu buyenaba buye emaceleni buze bungene ensimini, ngakho kungaba umqondo omuhle ukusebenzisa izibulala-khula onqenqemeni lwensimu ukugwema lokho.

Indlela yokulawula yesine: Ukushisa

- a) Uma utshani sebunamaqabunga amanigi nesiqu esomile abube busakwazi ukumunca isibulala-khula esinjengo-mashay'abhuqe. Kuyanconywa ukuthi utshani obome kakhulu ubushise ngomlilo ukuze buhlume kabusha kuvele ihlungu ngaphezu komhlabathi. Lokhu kuzokwenza kube lula ukulawula ngezibulala-khula, uma utshani sebunamaqabunga neziq ezanele ukuze izibulala-khula zinamathele kuwo bese zihamba imiguduyonke yotshani zilubulale.
- b) *Ngesikhathi sokuvunwa komoba*, ukushisa kuzobulala noma yibuphi utshani obusele futhi nosebomile ngaley ndlela kuvumela ukuvuseleleka kotshani, namahlumela amasha otshani azovela uma sekufika imvula. **QAPHELA** ukuthi utshani buzomila futhi bukhule ngokushesha kunomoba, ngakho-ke sebenzisa isibulala-khula ngesikhathi esifanele ukuvimbela ukwenaba kotshani. Kumele ulinde ukhula lube namaqabunga aluhlaza ukuze isibulala-khula sikhazi ukungena yonke imigudu, qikelela uma sewufutha isibulala-khula singashisa umoba kwehle isivuno kanti nokulinda isikhathi eside ungfuthi kungenza ukhula ludlondlobale kakhulu. Futha uphindelele ngesibulala-khula ukuze imiyobo yotshani ingangeni ensimini
- c) *Amasimu alalisiwe ekwindla nasebusika*, azoba notshani obungakhuli noma obukhula kancane. Kulesi simo, gunda womise bese uyabushisa ngomlilo utshani ukuze kuvele imiyobo bese ifuthwa ngezibulala-khula ngesikhathi sezimvula zokuqala zasentwasahlobo.



Indlela yokulawula yesihlanu: Ukulimela phezulu ekwindla emva kokufutha isibulala-khula umashay'abhuqe.

Ukulima ngamageja kudala ukuthi isinandi noqethu kusabalale yonke insimu ikakhulukazi kulengxene ye elinyiwe. Ukulima ngokungalistonisi igeja phansi (ukukelefa), endaweni etsheke kancane inqobo nje uma utshani bumboze yonke insimu lokhu kwenzelwa ukuthi utshani bungasabalali kwenye ingxeny e yensimu.

Ngenxa yokuthi i-glyphosate ayingeni emhlabathini kungenzeka kube khona lelo dlanzana lokhula oluluhlaza olungafuthekanga ngenxa yokuthi belungakamili ngesikhathi ufutha. Isibulala-khula umashay'abhuqe ayikwazi ukusebenza emhlabathini idinga amaqabunga aluhlaza otshani ukuze ingene kahle, ngakho-ke kubalulekile ukuthi uqale ufuthe ngesibulala-khula umashay'abhuqe ulinde imiphumela egcwele emuva kwalokho usungasebenzisa igeja lokukelefa ukuze uhlakaze utshani obubumbene ubulethe ngaphezulu buvele obala. Lokhu ukwenzela ukuvumela isimo sezulu esibandayo ebusika ukuthi somise utshani obembuliwe. Kuzothi lapho sekunokumilayo okuluhlaza emhlabathini okwanele ukumunca isibulala-khula umashay'abhuqe ufuthe.



Sebenzisa loluhlobo lwegeja ukuhlukanisa uphinde uhlephule izimpande zotshani obukade bufuthiwe. Yenza loku okungenani kibili ebusika.

Beka utshani bube amaqqwana eceleni kwensimu bese ufutha ngokukhethekile ngesibulala-khula umashay'abhuqe lokho okuhlumayo okusha (uma kukhona).



Indlela yokulima yesithupha: Ukuphendula kancane nokulalisa insimu isikhathi eside

Le ndlela yokulima kancane iyasetshenziswa kunoma iyiphi insimi noma ngabe ungewengwe lungakanani. Ukuphendula ukhula ufuthe ngesibulala-khula umashay'abhuqe kusiza ekubulaleni ungewengwe kanye nomoba omdala ongasadingeki, kuphinde kwehlise ukuhluma kongwengwe obeseluggibekile.

Siphuna ukhula olude kunotshani ukuze bulingane yonke indawo. Lapho utshani busakhula ngamandla futha konke ngisho nomoba ngesibulala-khula esihamba ngemigudu yesitshalo. Lokhu kumele ukwenze kuphela uma ubude bomoba bufinyelela edolweni, kodwa uma umoba umude udlula edolweni ungasitha utshani obungaphansi. Uma umoba umncane kakhulu ungangasimunca kahle isibulala-khula esifuthiwe yingakho kumele ufuthe uma umoba usuhlume ngokwanele. Qikelela ukuthi wonke umoba omdala ongasadingeki kanye nongwengwe kufutheke kahle, uma ngabe kukhona okugejekile buyela uphinde ufuthe (Lokhu kufutha okulandelayo ungakwenza emva kwamasonto amane noma ayisishiyagalombili).

Izibulala-khula ongazisebenzisa ukufutha yilezi ezilandelayo:

- Umashay'abhuqe
- I-Fluazifop-butyl
- I-Arsenal GEN 2® (**QAPHELA**: kunemithetho yokuyisebenzisa).

Ungathola izindlela eziningi zokwenza lokhu kwibhukwana elakhiqizwa kwa-SASRI elinesihloko esithi – “Cane stool eradication” (ukususwa kweziq zomoba ongasadingeki) ngokubheka imininingwane kwisigaba sesi-4.2

Ukususwa kweziq zomoba kanye nokulawulwa kongwengwe olugcwele insimu ngezibulala-khula ngesikhathi sasehlobo, KUFANELE kulandelwe ukulaliswa kwensimu isikhathi eside ngokwanele ukuze ukwazi ukufutha okusele uphindelela ngesibulala-khula umashay'abhuqe okungenani amahlandla amane. Uma insimu ilaliwi ikakhulukazi ebusika, kumele kube isikhathi eside esilandelwa ukufutha uphindelela ngohlobo lokufutha olukhetha amabala angashanga ngesibulala-khula umashay'abhuqe entwasahlolo.

Ukulaliswa kwensimu isikhathi eside kukunika ithuba elanele ukukwazi ukufutha uphindelela ngohlobo lokufutha olukhetha amabala angashanga ngesibulala-khula umashay'abhuqe bese ukwazi ukutshala izitshalo ezipundisa umhlabathi.

OKUBALULEKILE: UNGALINGE utshale uma ungewengwe lungakashi lonke. Ukugwema ukusabalala kongwengwe oluahluma kamumva, futha njalo emva kokuhlahla.



Ukulaliswa kwensimu isikhathi eside kukunikeza ithuba elanele lokufutha ngohlobo lokufutha olukhetha amabala angashanga ngesibulala-khula umashay'abhuqe.

Indlela yokulawula yesikhombisa: Ukusetshenziswa kukamanyolo

Ukufaka umanyolo kakhuthaza ukukhula okusheshayo kwazo zontathu izinhlobo zotshani obenabayo, ngakho-ke ukufaka umanyolo ngendlela efanele emasimini kubalulekile.

Landela izincomo zabakwa-FAS ukugwema ukufaka isikhuthaza-khaba ngokweqile ngoba ukweqisa kubhebhethekisa ukukhula kotshani obenabayo kuphinde kwandise ukuncintisana nomoba.

Kwamukelekile ukuhlwayelwa kwesikhuthazi emasimini angenalo ungwengwe kodwa lapho kunongwengwe khona sifake phezu kwamalayini omoba.



Ukufakwa kukamanyolo kolayini bomoba kuphela

Ukuhlwayela
kukamanyolo insimu
yonke (sakuuhlakaza)



Indlela yokulawula yesishiyagalombili: Ukugqugquzelu ukuhlanganisa ngokushesha komoba

Ukuhlanganisa komoba ngokushesha kulithuluzi elinamandla lokuthithibalisa utshani obenabayo.

Ungwengwe luyabhebhetheka enhlabathini evundile uma luthola ilanga, umswakamo kanye nemvundo.

Utshani uqethu (*Cynodon*) bukhula kahle uma buthola ilanga futhi iziqu ezingaphezu komhlabathi ziyenaba zize zithole ilanga.

Uqethu (*Digitaria*) umelana kangcono nethunzi kunongwengwe ngoba uneziqu ezingaphezu komhlabathi nezingaphansi komhlabathi ezikhula ngokushesha kunomoba. Lezi ziqu zikhula ezikhaleni zamalayini omoba, ziwdlule futhi ziwuthandele.



Ukungembozi kahle komoba kudala ukungabi khona kwethunzi nokwandisa ukukhula ngamandla kotshani obenabayo

Ngokwesibonelo saseNyakatho noGu laKwaZulu Natali, ukwehliswa kwezinyanga zokuhlahla komoba kukhombise futhi kwaholela ekunukeni kotshani obenabayo (usuka kwizinyanga eziyishumi nesishyagalombili kuya kweziyishumi nambili utshalile) emobeni.

Izincomo zokukhuthaza ukuhlanganisa komoba

Ukwembozeka kotshani obenabayo isikhathi eside ngokushesha kulithuluzi elinamandla ekunciphiseni ukuncintisana kwabo nomoba. Okunconya kakhulu ilokhu:

- Esimweni lapho kungekho khona isihlava umoba wakho ungawuhlaha ezinyangeni ezingaphezu kwezibekelwe isifundamshini (uma kungenzeka).
- Khuthaza ukukhula kahle komoba kanye nokwemboza (ngokulandela lezi zindlela
 - a) Esimweni lapho kungekho khona isihlava umoba wakho ungawuhlaha ezinyangeni ezingaphezu kwezibekelwe isifundamshini (uma kungenzeka).
 - b) Nisela ngokwenele
 - c) Gcwalisa izikhala lapho kunomoba ofile,
 - d) Lungisa zonke izinkinga zikamanyolo kanye neminye imisoco
 - e) Lungisa ubusawoti emhlabathini noma amapheshu/izikhala ensimini
 - f) Lungisa ubumuncu emhlabathini
 - g) Lawula izinambuzane nezifo kuzo zonke izinhlobo zomhlabathi
 - h) Lungisa ukubhebhetheka kweminyundu engabonakali ngeso lenyama (nematodes) ehlasela esihlabathini
- Lapho kunconye izinhlobo ezahlukahlukene zomoba, khetha ezisheshe zihlanganise lokhu kuzonciphisa ukuncintisana phakathi kotshani obenabayo kanye nomoba.
- Uma kungenzeka nciphisa amabhanga ukuze umoba usheshe uhlanganise.

Lokhu kwatholakala ngokuxhumana no-Stranack ngonyaka wezi-2017. Owayengumeluleki womoba kwa-SASRI kusukela ngonyaka we-1986 kuya kwizi-2010

Indlela yokulawula yesishiyagalolunye: Iztshalo ezivikelayo

Kuvamile ukuthi utshani obenabayo nobutholakala emadabulini ensimu nasemaceleni emigwaqo benabele emasimini, lokhu kwenzeka ikakhulukazi uma ngabe leyo nsimu ingenalo ithunzi. Izinguudla zamasimu zidinga impatho esezengezi eliphezulu, ukuhlale zihlolwa futhi zilawulwa. Kubalulekile ukucophelela ukuthi uyahlolisisa njalo njalo ulawule utshani obumilayo engudleni yensimu. Ukwehluleka ukwenza lokhu, ikakhulukazi ezinkathini zonyaka ezimanzi, kuzoholela ekungeneni kotshani emasimini.

Iztshalo ezivikelayo njengotshani obubizwa ngembalibhajana (*i-Melinis minutiflora*), buwutshani obuwumnsinsi wokuzimilela ezwenikazi lase-Afrika obunconywayo ekusetshenzisweni njengengxene yohlelo oliyingxube lokulawulwa isihlava. Phezu kwalokhu, imbalibhajana ivimba utshani osebuzimelele iphinde ibe uthango oluvimbela ukunabela kwesinandi emasimini.

Imbalibhanjanaikhula kahle emhlabathini owondlekile nasendaweni enelanga. Okuhle kakhulu ngotshani imbalibhajana, ukuthi abuncintisani futhi abunabungozi bokuba isidleke sezinambuzane zomoba kodwa bungenza umthunzi ositha utshani obenabayo.

Imbalibhajana ungayitshala ngokusiphuna kwenye emilayo bese uyifaka emhlabathini uzungeze insimu yomoba ukuze uvimbele ungwengwe olunyonyobela ensimini. Imbalibhajana injalo nje iyazwela emlilweni ngakho kubalulekile ukuthi uyigunde ngaphambi kokushisa umoba ukuze iphinde izimilele.



*Imbalibhajana (Melinis minutiflora) yenza
umngcele ovikela insimu ngokuvimbela ukunaba
kotshani bungene ensimini*

Indlela yokulawula yesumi: Izitshalo zokumboza insimu

Eminye imihlabathi ayinothile ngokwanele lokhu kungadalwa ukutshala isitshalo esifanayo esinjengawo umoba iminyaka ilandelana. Ukulalisa insimu ngokuyidedela imile ukhula olumila ngembewu esatshalaliswa izinyoni, umoya kanye nezinye izilwane ezidla imbewu kungasiza ukudala ithunzi ensimini elinganciphisa ukwanda kongwengwe oluqhamuka ngaphandle kwensimu, kodwa kubalulekile ukuqaphelisa ukhula oselukhiqize imbewu. Lapho kunezikhala ezimile ungwengwe ungafutha ngokukhetha amabala ukuze ugweme ukwanda kwalo.

Gwema ukulima isitshalo esisodwa, Shintshanisa izitshalo.

- Ukushintshanisa izitshalo ikakhulukazi ngezinamaqabunga amakhulu (isib. Imifino) kusiza ekusinikezeni ithuba lokulawula utshani obenabayo ngezibulala-khula ezikhethayo (isib. Fluazifop-butyl) kanye nokuthi sihlakule ngesandla.
- Ukushintshanisa ngobhontshisi, ummbila kanye nokotini kusinikeza ithuba lokusebenzisa isibulala-khula umashay'abhuqe kaningana ukuze silawule utshani obenabayo (yazi ukuthi olunye uhlobo lokhula lungazithuthukisa ukuze lukwazi ukumelana nokusetshenziswa okuqhubekayo kwalesi sibulala-khula).

Ukutshala i-oats emnyama ebusika kunikeza umthunzi ovimbela ukusabalala kongwengwe kanti futhi ikhiqiza ubuthi obuvimbela ukukhula kotshani obenabayo (bheka isithombe kwesokudla). I-oats iyatshalwa emasimini alalisiwe ngemuva kokulawula utshani nokhula ngokufutha ngesibulala-khula umashay'abhuqe noma i-fluazifop-butyl (isib. Fusilade Forte Hitech®) kodwa hhayi nge-Arsenal GEN 2®.



Izitshalo zomquba oluhlaza njengohlobo lwe-sunn hemp (*Crotalaria juncea*) kanye ne-Velvet Beans (*Mucuna pruriens*) inikeza ithunzi eliningi elicinene. Bheka kwibhukwana eliwumhlahlandela lakwa-SASRI le-Green Manuring lezitshalo ezifanelekayo zasehlobo nezasebusika kanye neminye imininingwane ephathelene nokulima umquba oluhlaza.

Lezi zitshalo zinikeza umthunzi omkhulu owenza insimu iphephe ekuhlaselweni ungwengwe. Isithombe esingezansi sikhombisa izitshalo ezigundwe ngoNdasa (March) kanye nezinsalela zazo ezisele ukuze zibole ensimini. I-oats iyatshalwa ngoMbasa (April) ukumboza umhlabathi ezinyangeni zasebusika. **QAPHELA:** Gwema ukuthela kwabhontshisi (velvet beans) ensimini.



Ubhontshisi i-Velvet beans



Gunda izitshalo ezimbozile uzishiye ensimini zibe umquba

Indlela yokulawula yeshumi nanye: Ukumboza ngamahlamu emva kokufutha ngesibulala-khula umashay'abhuqe

Ukumboza ngamahlamu kuvimbela ukukhanya okudingwa ungwengwe ukuze luhule. Kuphinde kunothise inhlabathi kugqugquzele ukwakheka kwemvundo bese kuvimbela nokulahleka kwamanzi adingwa izimpande emhlabathini okubi nje ukuthi nezimpande zongwengwe zingazuza kulokhu kuvikeleka.

- Sebenzisa izinsalela zamathophisi omoba ukuze umboze ungwengwe **olufuthiwe** uma kungenzeka.
- UNGAWASEBENZISI amahlamu ukumboza uqethu ngoba kungayisiza ukuthi isabalale ensimini.
- **Ngaphambi** kokuba wemboze inhlabathi ngamahlamu futha nge-glyphosate noma i-parquat kanye nesendlali somuthi noma i-parquat kanye ne-diuron ukuze ugxitise umuthi emaqabungeni nesiqu sotshani futhi ugweme ukugcineka kwemisoco ezimpandeni zotshani.
- **Emva** kokumboza ngamahlamu, hlola insimu njalo emasontweni amabili kuya kwamane ukuze uthole izikhala kokumboziwe bese ufutha ngokukhetha amabala ungwengwe oluvelayo nge-glyphosate noma i-parquat exutshwe nesinamatheli esifanele.
- Uma umhlabathi umbozwe ngezinsalela ebusika, kunesikhathi esiningi sokulawula ungwengwe ngenxa yokukhula kancane komoba.



Futha ungwengwe ukuze lube ntekentek uqede ulemboze ukuze lungakutholi ukukhanya lokhu kuzolenza lungakhuli.



Ukumelelana kokhula nezibulala-khula

Kuyini ukumelelana kokhula nezibulala-khula?

Kunanoma yimuphi umthamo oyinhlanganisela yokhula olutholakala ensimini kuba khona oluthile olukwaziyo ukumelelana nomuthi wokulubulala. Lokhu kwenzeka emva kokuphindaphinda ukufutha ngesibulala-khula noma izibulala-khula ezinengxube yezithako ezifanayo yokuhlasela ukhula minyaka yonke. Ngenxa yalokhu ukhula oluthize lugcina sekuyilo olulawula insimu lubuse ngaphezu kolunye uma umuthi owodwa usetshenziswa njalo ngokuphindaphindiwe ezinhlelwani zokulawula.

Singakugwema kanjani ukumelelana nezibulala-khula otshanini obenabayo?

Amalebuli amasha ezibulala-khula asenikezela ulwazi ngengxube yezithako, indlela umuthi osebenza ngayo nokwakhiwa kwayo.

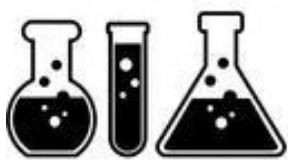
Izindlela umuthi osebenza ngayo uma kulawulwa ungwengwe zinikezwe ngezansi:

IZITHAKO	INDLELA YOKUSEBENZA
Fluazifop-butyl	A
Imazapyr	B
Diuron + Paraquat	C + D
Umashay'abhuqe	G
Glufosinate Ammonium	H

Uma kwenzeka ukumelelana nezibulala-khula kuqala kutshani obenabayo, kungenzeka onqenqemeni lwensimu yize amathuba aloku emancane ngenxa yokusetshenziswa kwezingxube ezehlukene zokuthaka ezisebenza ngendlela engafani.

Ukuze ugweme ukwanda kwezinga lokumelelana nezibulala-khula kongwengwe kanye nezinye izinhlobo zokhula ensimini, yenza lokhu okulandelayo:

1. Shintshanisa izibulala-khula noma usebenzise ingxube zethangi eziqukethe imikhiqizo enezinhlobo ezinezindlela ezaahlukene zokusebenza.
2. Hlanganisa izindlela ezaahlukahlukene zokulawula izibulala-khula (ukuhlakula, izitshalo ezimboza umhlabathi) ohlelwani lokulawula ukhula.
3. Gcina amabhuku anamarekhodi okulawula okwenzile ensimini ngayinye uphinde unikeze izizathu lapho ukulawula kungaphumelelanga kahle.
4. Landela imigomo nezincomo zokuxutshwa, ukuphathwa kanye nokusetshenziswa kwezibulala-khula.
5. Qinisekisa ukuthi izifutho zikulungele ukufutha . Unganciphisi amazinga anconyiwe noma uzame ukuzixubela ngendlela yakho.
6. Qinisekisa ukuthi amanzi owasebenzisayo ahlanzekile ngokwanele, futhi asezingeni elincomekayo lokuwasebenzisa



Izibulala-khula ezisebenza ngokumuncwa ukhula zisebenze ngaphakathi

Lezi bulala-khula zingena emaqabungeni nasezimpndeni zihambe kuyo yonke imithambo ukuze zibulale ukhula.

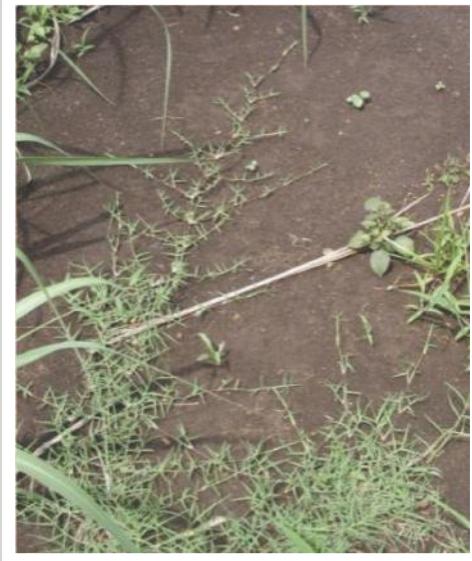
Indlela yokulawula yeshumi nambili: Ukufutha ngesibulala-khula umashay'abhuqe

a) *Ensimini elele, ukufutha ngaphansi kwamaqabunga nasonqenqemeni lwensimi*

Isibulala-khula umashay'abhuqe sisebenza ngokuncomekayo ekubulaleni ungwengwe isikhathi esingafinyelela emasontweni ayi-12 uma ulufuthe lusakhula kahle lunamaqabunga amanangi Ngenxa yobungozi besibulala-khula umashay'abhuqe kubalulekile ukuthi baqeqesheke kahle abafuthi uma befutha ukhula emobeni ukuze umsebenzi wenzeke ngendlela eseqophelweni eliphezulu. Lolu qeqesho lusiza ekuvimbelekeni kokufa noma ekukhahlamezekeni komoba osakhula. Nciphisa ubungozi emobeni osakhula ngokusebenzia izihenqo (ukuvikela umoba) noma ufuthe ngaphansi komoba osukhule wafika okhalo noma emasimini alalisiwe nas'onqenqemeni lapho kungenamoba.

Uma ukhetha ukusebenzia isibulala-khula umashay'abhuqe landela lezizincomo:

- Ngesikhathi kusashisa kunezimvula nomswakamo, futha ungwengwe olusakhula ukuze kuzoba lula ukuthi umuthi ungene kuyo yonke imigudu yokhula. Abalimi abamaphakathi nesifundazwe babika imiphumela emihle ekulawuleni uqethu masekuphela uNhlanja/uNdasa. Ungabufuthi utshani obukhahlamezekile.
- Khipha lonke ukhula oselukhule kakhulu olungavimbela ukuthi umuthi ufinyelele otshanini.
- Sebenzisa amanzi ahlanzekile uma kungamanzi anobumuncu waxube nemithi elwa nobumuncu bamanzi. Ukhula olusenqenqemeni lomgwaqo luvamisa ukuba nezintuli ngakho ke kubalulekile ukuthi ufuthe leyondawo emuva kwemvula, abafuthi kumele nabo bagweme ukukhahlela umhlabathi uma befutha
- Izinga elijwayelekile lamanzi asetshenziswayo ekufutheni ungwengwe lingamalitha angama-250 kuya ku-300 ngehheka
- Vikela insimu ekuhlaselweni ungwengwe olusuka estubheni nasonqenqemeni lwensimu ngokuthi ufuthe ngesibulala-khula umashay'abhuqe kodwa ensimini enomoba omncane kumele usebenzise ingxube ye-Paraquat ne-Diuron noma i-Paraquat nesinamatelisi.
- Uma usebenzia ngesibulala-khula umashay'abhuqe kuhle usebenzise inozolo i-dribble bar kulolo ngwengwe olumila ngaphansi komoba nasemadabulini. Kumele abasebenzi baqeqeshwe ukuze bafuthe kahle. Kungenzeka kudingeke amanzi athexaxa.
- Phinda futhi ufuthe emuva kwamasonto amathathu kuya kwamane-ubulale ungwengwe olungafanga ekufuthweni kokuqala.



Ukufutha izingudla kugwema ukungena kotshani emasimini



*Emuva kwamasonto amathathu buyela
ensimini uphinde ufuthe utshani
obungashanga*

*Ukufutha emobeni omdala
onamaqabunga ashile ezansi,
kwehlisa izinga lokulimala komoba.
Qikelela ukuthi ufutha ngaphansi
ikhaba lomoba*

b) Isibulala-khula umashay'abhuqe esisetshenziswa ukufutha okungafanga

- Utshani obenabayo obungafanga ngesikhathi kufuthwa okokuqala bunganabela kwabanye olayini bensimu, ngakho-ke kubalulekile ukufutha nge-Paraquat exutshwe nesinamathelisi ukhethe amabala anotshani. Lena indlela engcono yokulunqoba ungwengwe emobeni omfishane.
- Qikelela uma ufutha ungwengwe olusalile ngoba kungaba nobungozi emobeni.
- **Faka** isihenqo lapho ufutha ngesibulala-khula umashay'abhuqe ukuze uvikele umoba
- Uma usebenzisa ibhodlela leplastiki njengesiheqo uzodinga abasebenzi abayisishiyagalolunye noyedwa ozogada ukufutha ungwengwe olumboze amapesenti ayishumi nanhlanu ensimi. Uma ungwengwe luluningi uzodinga isihenqo esihlukile.
- Ungafutha ngaphansi kwamaqabunga omoba nge-dribble bar uma kunesidingo, kodwa lokhu akwenziwe uma utshani busebuncane buluhlaza. Abafuthi kumele baqequeshe ukuze bafuthe kahle bangabulali nomoba.

Emobeni ohlahlwu ungaschisiwe qikelela ukuthi ufutha utshani buseluhlaza ngaphambi kokuthi ubumboze ngopayi. **Ngemumva** kokumboza ngopayi, hlola insimu ukuze usheshe ubone utshani obungafanga ngaphambi kokuba busabalale bese ubufutha ngesibulala-khula umashay'abhuqe noma nge-paraquat exutshwe nesinamathelisi. Kwenze lokhu emasontweni amabili kuya kwamane uhlahlile.

- Esimweni lapho umoba usugqilazekile ngenxa yotshani obenabayo ungafutha ngaphandle kwezihenqo ukuze kufe yonke into loku kuvikela ukwenaba kotshani ezindaweni ezingenabo.



Izithombe ezikhombisa lapho usebenzisa isiheqho ukuze ufuthe utshani obungashanga



Ukusebenzisa inozolo engu L shaped dribble bar kwenza kube lula ukufutha maduzane nesiqu somoba.



Uma umoba wakho usuggilazekile ngenxa yongwewe kulungile ungafutha konke.



Khetha ithimba eliqokelwe ukugada nokufutha okusalile, loku kusiza ukwehlisa izinga lokusabalala kwesinandi

c) *Ukugawula umoba ngaphambi kokufutha ngesibulala-khula umashay'abhuqe*

Isibulala-khula umashay'abhuqe silungele ukusetshenziswa uma indawo edinga ukufuthwa incane (ilingana nehheka noma ngaphansi) inongwengwe oluningi oludlula umoba osemncane. Ukugawula umoba kungumsebenzi odinga abasebenzi abanangi ngakho kungaba isu elihle ukusika ezindaweni ezincane kuphela.

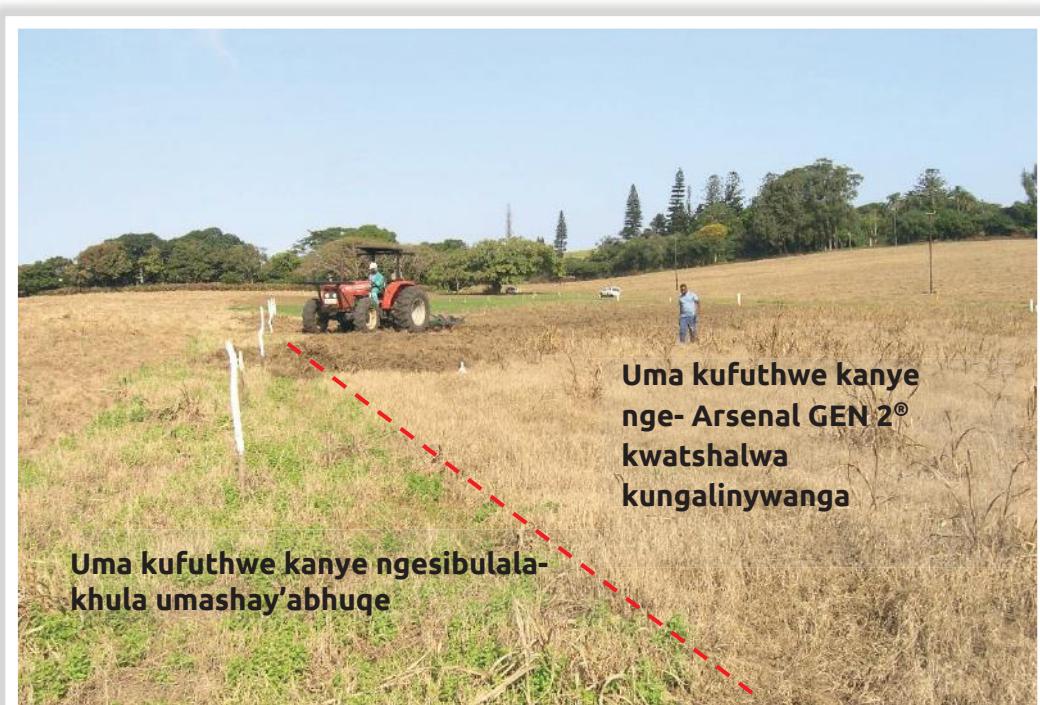
- Gawulela phansi umoba ube mufishane kodwa uqikelele ukuthi awuligawuli ungwengwe.
- Susa wonke amakhasi omoba ensimini.
- Futha konke ngesibulala-khula umashay'abhuqe emuva kwamahora anguma-24 ugawule umoba omncane.
- Qiniseka ukuthi isinamathelisi osisebenzisayo siyahambisana nesibulala-khula ozosisebenzisa.
- Kuzodingeka uphinde ufuthe uphindelela ngokukhethekile makukhona ukhula oluvelayo.
- Lendlela idinga abasebenzi abanangi ngenxa yokuthi amaqabunga kumele asuswe ngezandla.
- Ukusebenzisa lendlela kunemiphumela emihle ikakhulukazi ekwindla.



Indlela yeshumi nantathu: Isibulala-khula i-Arsenal GEN 2®

Isibulala-khula umashay'abhuqe ibhaliselwe ukulawula utshani obenabayo kanye nokubulala umoba ongasadingeki kodwa asihlali isikhathi eside enhlabathini ukubulala iziqu eziqgibekile. Lokhu kwenza kudingeke ufulthe uphindelala ngaphambi kokutshala kabusha. Lesisibulala-khula i-Arsenal GEN 2® sihamba yonke imithambo yotshani obenabayo siphinde sibulale iziqu zomoba omdala **emasimini alaliswe isikhathi eside eminyakeni enezimvula ezijwayelekile.**

- I-Arsenal GEN 2® ilungele ukusetshenzisa emasimini azolala isikhathi eside ngaphambi kokutshala umoba.
- Kunemithetho eminingi ebhaliwe esigubhini okumele ilandelwe. Isibonelo, kumele ulinde izinyanga ezine nemvula engu-600mm ngaphambi kokuba utshale. Kumele ulandele izincomo eziphathelene nokusetshenzisa komcako/kalika wabalimi.
- Xhumana nenkampani edayisa izibulala-khula ngolwazi oluthe xaxa mayelana nokuzisebenzisa ngendlela efanele.
- **Qonda lokhu:** Lomkhiqizo ukhinyabeza umoba uma kunesomiso, insimu idinga ukalala isikhathi eside.
- **Ungalokothi** usebenzise i-Arsenal® GEN 2 uma uzofutha ukhethe amabala. Sebenzisa kuphela isibulala-khula umashay'abhuqe noma eminye imikhiqizo ebhalisiwe engahlali emhlabathini isikhathi eside.
- Amanzi ofutha ngawo makube amalitha angama-250 kuya kwangama-300 ehhekeni.



Indlela yeshumi nane: Isibulala-khula i-Fluazifop-butyl

Isibulala-khula i-Fluazifop-butyl iyasiza ekulawuleni utshani obukhula unyaka owodwa kanye nobukhula unomphela, lokhu kuhlanganisa umoba, kanye nongwengwe oluneziq ezingaphezulu nangaphansi.

- Ungwengwe kumele lulinywe sakuqotshwa ukuze kunqamuke iziqu zangaphansi nezangaphezulu ngaphambi kokusebenzisa lesibulala-khula.
- Lesibulala-khula silawula utshani obukhula unyaka owodwa kanye nobukhula unomphela, lokhu kuhlanganisa umoba
- Singasetshenziswa ukulawula ungwengwe ngesikhathi sokutshalwa kwezitshalo kulaliswa insimu.
- Ukuna noma ukunisela lingakapheli ihora usifuthile kudingeka ukuba uphinde ufuthe ngoba sihlala endaweni eyodwa emhlabathini.
- Gwema ukufutha eduze kweigudu yamanzi ngoba lomkhiqizo unobungozi kwizinhlanzi.
- Qinisekisa ukuthi wonke amaqabunga ayawuthola lomuthi.
- Le mikhiqizo iyingozi, ngakho-ke gwema ukufutha insimu eseduze komoba osemncane.
- Sebenzisa amanzi okufutha angamalitha anga-200-300 ngehheka



*Phendula ungwengwe ukuze kunqamuke iziqu zangaphansi
nezangaphezulu ngaphambi kokufutha.*



Izibulala-khula ezisebenza ngokuthintana nokhula

Le mikhiqizo izobulala kuperha leyo nxenye yesitshalo efuthwe yathintana namakhemikhali.

Indlela yokulawula yeshumi nanhlanu: Isibulala-khula i-Paraquat

a) Emobeni omfushane

Utshani obenabayo buncintisana kakhulu nomoba osemncane kangangokuba bungawucindezela. Lokhu kungenzeka ikakhulukazi uma umoba ungasheshanga wamboza.

Kungasetshenziswa i-Paraquat enesinamathelisi, noma i-paraquat ene-diuron (ukuze ulawule isikhathi eside. Lokhu kunikeza ukulawulwa okuzoshabalalisa/okuzowohloza ungwengwe amasonto amathathu kuya kwamahlanu. Ukufutha okuphindaphindiwe kuyadingeka njalo emasontweni amathathu kuya kwamahlanu kuze kube umoba wakha ikhaba elizokwemboza ungwengwe.

I-Paraquat umkhiqizo obulala ngokuthinta futhi usebenza kahle, ikakhulukazi uma usetshenziswa ngesifutho esinomkhizwana omncane otshanini obenabayo obuminyene obufana ne -digitaria, stargrass nogwengwe. Nakuba i-Paraquat ingawulimazi kakhulu umoba uma ithelwe phezu kwawo njengesibulala-khula umashay'abhuqe yona ehamba ngamalunga onke esitshalo, kodwa iyawushisa/hangula umoba. Lokhu osekukubaluliwe kukhomba ukubaluleka kokuthi uma kufuthwa izibulala-khula eziqukethe i-paraquat kumele zifuthwe ziqondiswe ngqo maphakathi nolayini bomoba ensimini futhi noma usebenzise izihenqo ukuvikela umoba. Sebenzisa inani lamanzi okufutha libe amalitha angama-200 kuya kwangama-400 ngehheka.

Kunezingqinamba zezempiro nezokuphepha uma usebenzisa i-paraquat nezingxube ezinayo. Qinisekisa ukuthi abasebenzi abafuthayo nabagcini bezibulala-khula banezemba zokuzivikela ezifanele, nokuthi kukhona indawo yokugcina imithi ephephile.

b) Utshani obenabayo osebomile

Utshani osebomile abukwazi ukumunca imithi ingena emigudwini yokhula efana nesibulala-khula umashay'abhuqe ngenxa yokuthi idinga amaqqabunga aluhlaza aphilayo ukuze ingene kahle ngakho, kodwa kudingeka ukubuvuselela bukhule kabusha. I- Paraquat ihlanganiswe nesinamathelisi ingasetshenziswa esikhundleni sokushisa ngomlilo utshani osebomile ukuze bumile kabusha, sekuyothi lapho sekumile amaqqabunga aluhlaza amasha usebenzise ubuthi obusebenza ngaphakathi emigudwini yokhula, njengesibulala-khula umashay'abhuqe

c) Ukulawulwa izingudla

Vimbela ukungenela kongwengwe olusuka ekugudleni kwamasimu ngokusebenzisa i-paraquat exutshwe ne-diuron.



I-Paraquat ishisa amalunga esitshalo ethintana nawo kanti ayisiyo ingozi kakhulu emobeni omfishane inqobo nje uma ufutha ngqo okhuleni, ayifani neglyphosate yona ehamba yonke imigudu yokhula ilubulale. I-Paraquat imisa ukukhula kongwengwe kuze kukhule umoba wemboze.

Indlela yokulawula yeshumi nesithupha: Isibulala-khula i-Glufosinate ammonium

I-Glufosinate ammonium inendlela ehlukile yokusebenza kunesibulala-khula umashay'abhuqe futhi iphephile kune-paraquat. Yenza umsebenzi omuhle ekushiseni okuluhlaza otshanini kodwa idinga uyifuthe uphindelela kuze kube umoba usuqlanganisile. Isetshenziswa kutshani osebuqhumile obukhula kahle.

- Futha okhuleni oseliqhumile nolukhula ngamandla.
- Ukuze ulawule ungwengwe kumele ufuthe uphindelela
- Ngokujwayelekile awujuli ngaphezu kuka-15cm emhlabathini
- Linda amahora ayi-12 ngaphambi kokunisela. Ungafuthi uma kulindeleke imvula engaphezulu kwa 5 mm engakapheli amahora ayi-12.
- Qinisekisa ukuthi amaqabunga omoba avikelekile kumuthi ongaphaphalazi ngenxa yomoya kutheleke umoba
- Ungafuthi ukhula olungcolile, olunamazolo noma olukhombisa ukukhahlamezeka
- Futha utshani ngaphambi kokuba bukhiqize imbewu.
- Amanzi okufutha kube amalitha anga-300 kuya kwanga-800 ngehheka. Okhuleni olude, wandise umthamo wamanzi ubengamalitha angama-800 ngehheka ukuze uqiniseke ukuthi wonke amaqabunga afuthiwe.



Okufanele ukwazi ngokuphathwa kokukhula olunabayo

Ukuze uphumelele ekulawuleni utshani obenabayo, yenza lokhu okulandelayo:

1. Ungazikhohlisi

Angeke ukwazi ukuqeda nya (ububulale kungasali lutho) bonke utshani obenabayo epulazi lakho kodwa ungabulawula ukuze uthole isivuno esincono. Amasimu abaluleke kakhulu ilawo anongwengwe olusaqala ukukhula kuwo. LUVIMBE LUNGABHEBHETHEKI. Cela umeluleki wakho akuniike izeluleko ezithe xaxa nokuthi akusize ulungiselele isigubhu ukufutha kanye nethangi.

2. Landeleta

Ungafuthi kanye bese uyakhohlwa ileyo nsimu. Kodingeka wenze lowomsebenzi amahlandla angaphezulu kwelilodwa. Inhoso makube ukunciphisa ubungako bendawo egcwele utshani.

3. Hlola amasimu

Hlola amasimi njalo emavikini amathathu kuya kwamane. Hlala uqaphile bese ulawula utshani zisuka ukuze unqande ukubhebhetheka.

Bheka ukuthi azikho izindawo ezhilaseleka kabusha:

- Akuthi ulinde imvula ube uhlola futhi uvimbela ukhula olunabayo ngesikhathi.
- Qala ukuhlola maduzane nje emumva kokuhlahla, ikakhulukazi uma isimo sezulu sishisa nasekuqaleni kwezimvula zasentwasahlolo. Thumela abasebenzi (isib. induna yethimba labafuthi bokhula) ukuthi bayohlola amasimu emva kokuhlahla. Lokhu kungenziwa nangenkathi kuthathwa amasampula omhlabathi noma awamaqabunga noma kubhekwa isihlava.

Hlala uqaphe ukuqala kancane kokuhlasela kokhula oluyinkinga ikakhulukazi lapho umoba ungakhuli kahle khona. Faka uphawu ngezigxobo ezinde kulezizindawo noma lawomasismu. Sebenzisa opulasitiki abahlukahlukene ngemibala ukukhombisa ukuthi leyondawo enotshani obenabayo isifuthwe kangaki isibonelo. Upulasitiki obomvu ukhombisa ukuthi kusafuthwe kanye, ophuzi ukhombisa ukuthi sekufuthwe kabili, njalo njalo. Lokhu kuzokusiza wazi ukuthi ufuthe kangaki nokuthi ubone izindawo ezinotshani obenabayo ngisho umoba usukhule kakhulu.

4. Faka izibulala-khula ngokushesha emva kokuhlahla

Umoba onempilo nowembazole uyabusitha futhi ubukhinyabeze utshani obenabayo. Uma uhlahlala umoba, utshani buqhuma ngokushesha, amaqabunga aphenduke abe luhlaza bese buyabhebhetheka. KUMELE ubukhinyabeze lobu tshani ngenkathi uhlahlala uvimbe **nokubhebhetheka kwamahlumela enabayo**. Ukwenza lokhu, kumele:

- Usebenzise izihenqo zokuvikela umoba uma ufutha ukhetha amabala anotshani.
- Uqale, ngokuvimbela amahlumela enabayo ngokusebenza izibulala-khula ezisebenza uma zithinte ukhula njenge-paraquat. Lokhu kunciphisa ukuncintisana bese kuvumele umoba ukuthi ukhule kangcono.
- Futha izibulala-khula ezisebenza ngokumuncwa ukhula umangabe utshani busakhula ngamandla bunamaqabunga aluhlaza kuphela.

5. Gcina amathuluzi okufutha esesimeni sokusebenza

- Qinisekisa ukuthi amanozolo asebenza ngendlela. Akumele adabuke/aguge noma avuze.
- Uma usebenzisa isigubhu sokufutha esixhunywe kugandaganda (boom sprayer) qikelela ukuthi amanozolo aluhlobo olufanayo.
- Hlala uhlola ukuthi akhukho ukuklayeka kanye nokuvuza emathuluzini. Shintsha wonke amanozolo onakele/alimele kanye navuzayo.
- Wageze njalo amathuluzi okufutha emva kokuwasebenzisa, uwagcine esesimeni esikahle.
- Qinisekisa ukuthi wonke amathuluzi akhipha isilinganiso esifanele.

6. Qeqesha ithimba labafuthi

- Qeqesha abafuthi ukuze baqikelele uma besebenzisa amathulizi nokuthi bawagcine esesimeni sokusebenza. Banike izifundo zokuvuselela ulwazi lwabo ukuze bakwazi ukulungisa nanoma imaphi amaphutha abangahlangabezana nawo.
- Gcina ithimba labasebenzi elilodwa, uma kungenzeka. Lelothimba logcina selinesipiliyon kanti futhi benamakhono adingakalayo emsebenzini wokufutha.
- Impilo nokuphepha kubaluleke KAKHULU. Umsebenzi ngamuye kumele ayiqonde imigomo youkuphepha futhi ayilandele, futhi abe nezembatho zokuvikela ezifanelekile azigqoke.

7. Qikelela ukuhlanzeka kwamanzi

- Zikhathi zonke sebenzisa amanzi ahlanzekile nacwengekile uma uzofutha nanoma isiphi isibulala-khula, isib. Qongelela amanzi emvula. Amanzi angcolile athikameza ukusebenza ngendlela kwesibulala-khula kakhulu. Izibulala-khula ezifana ne-paraquat kanye nesibulala-khula umashay'abhuqe zinamathelana nokungcola nakwinzika etholakala emanzini okufutha bese zingawkazi ukumuncwa amaqbunga okhula. Lokhu kusho ukungaphumeleli kokulawuleka kongwengwe.
- Ukungcola kuvimbanisa amanozolo, amapayipi nezihlizo noma izisefo. Lokhu kunciphisa impilo kanye nokusebenza kahle kwamathuluzi. Ukungcola okusesinqeni sethange lokufutha kungathuntubeza ukusebenza kwesibulala-khula.
- Uthuli olusemaqabungeni okhula kanye nothuli oluvuka uma kufuthwa lungaholela ekungalawulekini kokhula ngendlela. Izingudla eziseceleni kwemigwaqo elubhuqu, kumele ungwengwe olukhula khona ulinde luze lunethwe imvula iluwashe bese uyafutha.
- Amanzi okufutha owathatha emadanyini noma emapitsini kungenzeka engabi uhlolo olukahle ukulungela ukufutha izibulala-khula. Kungenzeka amanzi abe nosawoti omningi ngokweqile (isib.i-calcium, i-magnesium, i-sodium kanye ne-potassium). Usawoti uvimbela ukusebenza kahle kwesibulala-khula umashay'abhuqe Uma amazinga alabosawoti emanzini edlula izingxenye ezili -150 kwisigidi, KUMELE uwelaphe nge-ammonium sulphate eseqopheleni eliphezulu (uma kusho ilebuli) ngaphambi kokuba ufake isibulala-khula umashay'abhuqe.
- Ungalokothi ufake isibulala-khula esingaxutshiwe nqo emanzini. Qala ngokusixubela eceleni namanzi amancane kuhle kwembiliso kuyima usifaka esigubhini esivele sesinamanzi amaphakathi angagcwele.
- UNGALOKOTHI ufake isibulala-khula sizwa emanzini. Uzobe usugwcalisela ngamanye amanzi ngokwesidingo

8. Ngokujwayelekile

- Qinisekisa ukuthi ulandela imiyalelo ekwilebuli nokuthi usebenzisa izibulala-khula ezigunyaziwe ngazikhathi zonke.
- Futha isibulala-khula NGOKULINGANAYO ukuze onke amaqabunga otshani atheleke wonke.
- Khetha amanozolo akhipha amanzi okufutha ngendlela isib. Amalitha angama-300 ngehheka.
- Sebenzisa isilawuli-mfutho esigubhini sokufutha ukuze kukwazi ukufutheka NGOKULINGANA amaqabunga otshani.
- Qinisekisa ukuthi abafuthi bahamba ngendlela efanayo (abasheshi futhi abanyonyobi) nokuthi inozolo iphakeme ngokwanele uma befutha.
- Sebenzisa izifutho ezihenqiwe uma ufutha emobeni osakhula. Ungasebenzisa uhlobo lwestienqo olubizwa nge-elliptical uma ufutha okwenabayo noma ibhodlela lakanemenayidi uma ufutha ukhetha amabala anongwengwe (lokhu kuqukethwe ekhasini lama-27).
- Izibulala-khula eseziphiwe mazingagcinwa zize zilalelw ebuzuku.
- Ungavumeli uthuli nezinsalela zeziphalo ziyoqelane esinqeni sesigubhu sokufutha.
- Urukalela nokuxubela amanani amancane esigubhini sokufutha kungaholela ekwenzeneki kwamaphutha. Okuncono ukukala uxubele emphongolweni ongamilitha angama-210 ozolingana isigamu sehheka.



South African Sugar Association
South African Sugarcane Research Institute
170 Flanders Drive, Mount Edgecombe, 4300
Tel: (031) 508 7400 Fax: (031) 508 7597
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