

Ukulapha izihlahla zisulelekile ngama-anthibhay-othiki aqeda izimpawu, kodwa awaselaphi isihlahla esisuleleke ngokufa. Ukubulawa ngokushesha kwezihlahla kunconywa kakhulu.

Uithelela kwezomnotho

I-citrus greening yehlisa izinga lomkhiqizo yezithelo ezinamanzi futhi ekugcineni izihlahla ezisulelekile zingcina zingakhqizi. Isihlahla esisulelekile sikhqiza izithelo ezingakufanele ukuthengiswa njengezithelo ezisezintsha noma zokwenza ujusti. Ubhubhane olun-gavumelekile emazweni lapho lungakabibikho khona. Ukwanda kwalokhu kufa ezweni ebelinganako ngaphambili kunqanda ukuba lelo zwe libe nemakethe yezithelo ezinamanzi elingakwazi ukuziletha zisuka kwezinye izindawo ezingenakho ukufa kwe-citrus greening. I-citrus greening ngakho-ke, inomthelela ongemuhle kuzimakethe zomhlaba zezithelo ezinamanzi, ezifana ne-United States of America kanye ne-European Union.

Imithelela yomthetho

NgokoMthetho Wobhubane Lwezolimo we-1983 (Agricultural Pest Act, 1983, Act no. 36 of 1983), Izinyathelo Zokulawula R.110 zomhla zi-27 Januwari 1984 (njengoba zichitshiyelwe), ukuhanjiswa kwezintsho ezidatala ezintsha zezithelo ezinamanzi zisuswa endaweni eyodwa ziya kwenye ngaphakathi eRiphabhlikhi yaseNingizimu Afrika akuvunyelwe ngaphandle uma ukuhanjiswa kugunyazwe ngemvume noma lezo zinto ziqinisekiwe njengezingenalo ubhubhane. UMnyango Wezolimo, Amahlathi Nezezinhlanzi uhlinzeka ngezinsizo zokuhlola futhi ukhipha izimvume zokuqinisekisa ukuhambisana nezinyathelo zokulawula ezisetshenziswayo. Lokhu kungenelela okushiwo ngenhla kuzosiza ekunqandeni ukwanda okuqhubekayo kwe-citrus greening.

Umtombo wolwazi

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isiZulu

‘*Candidatus Liberibacter africanus*’
‘*Candidatus Liberibacter asiaticus*’
‘*Candidatus Liberibacter americanus*’

Incazelo

I-citrus greening ephinde yaziwe ngokuthi isifo i-yellow dragon noma i-Huanglongbing, ingesinye sezifo ezidalwa yibhakthira eyingozi kakhulu kuzihlahla ezithela izithelo ezinamanzi. Zintathu izinhlobo ezaziwayo ezidatala i-citrus greening, eyohlobo lwase-Afrika i-*Candidatus Liberibacter africanus*, eyohlobo lwase-Asia i-*Candidatus Liberibacter asiaticus* kanye neyohlobo lwaseMelika i-*Candidatus Liberibacter americanus*. Lena yohlobo lwase-Afrika Ibonakala emazin-geni okushisa athokomele (ama-20–24 °C) ngenkathi eyohlobo lwase-Asia ivela ngaphansi kwazo zombili izimo zokushisa, esamazinga aphansi kanye nesa-mazinga aphezulu okushisa. Uncane kakhulu okwa-ziwayo ngezidingo zamazinga okushisa ohlatshe- ni lwaseMelika.

Imvelaphi kanye nokusabalala emhlabeni

I-Citrus greening cishe yavela kwelaseShayina ngeminyaka ye-1900. Uhlobo lwase-Asia i-*Candi-*

Uma udinga ulwazi oluthe xaxa?

– *Bika ukwenzeka noma ukusoleka kokwenzeka kokufa ku-*

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datum Liberibacter asiaticus' yiyo eyingozi kakhulu futhi eyande kakhulu ezweni. Ithokala kulo lonke izwekazi lase-Asia, kungxenyana yezwekazi laseNdiya kanye nakuziqhingi ezingomakhelwane, kwingasiqhingi sase-Saudi Arabia, eningizimu yase-Florida, e-California, e-Cuba, e-Mauritius, e-Reunion nase-Topiya. Kanti uhlobo lwase-Afrika i-'Candidatus Liberibacter africanus' ayinabo ubungozi obungako futhi ayitholakali yonke indawo. Itholakala e-Afrika, enyakatho ye-Sahara. Uhlobo lwasemelika i-'Candidatus Liberibacter americanus' kwaziwa ukuthi itholakala e-Brazil, e-Cuba, e-Florida, e-Belize, e-Mexico Naku-Dominican Republic.

Izimpawu

Izihlahla zamaolintshi/zamawolintshi ezisuleleke ngcwiwane ye-citrus greening kungenzeka zingakhombisi izimpawu iminyaka eminigana ngemuva kokwesuleleka. Izimpawu zokuqala esihlahleni zibandakanya ukuvela kwamahlumela aphuzi. Njengoba ibhakhthira ihamba ngaphakathi esihlahleni, umphelele wonke wezihlahla uya ngokuya ubaphuzi ngombala. Zontathu izinhlobo zebhakhthira zidala izimpawu ezifanayo. Okuyisona sici esikhulu sezimpawu kuzihlahla ezine-citrus greening ukuba nezindawana ezinamabala ambalancingi kumacembe kanye nobuphuzi emithanjeni yamcembe nakumahlumela. Amacembe asemancane angabonisa izimpawu ezingacatshangelwa ukuba zidalwe ukunganele kwe-zink. Amacembe asemadala wona aba namaba-

la. Ezinye zezimpawu zimbandakanya ukufa kwamagatsha, ukungatheli kahle kwezimbali, nokungakhulu kahle. Izithelo ezivela kuzihlahla ezisulelekile zincane, futhi kujwayeleke ukuba zibe nokusalela kobuluhlaza ngokungajwayelekile kuzithelo ezivuthiwe. Izihlahla eziphethwe yi-greening ziyababa, futhi zimuncu. Imbewu ijwayele ukufa, futhi ukwakhekha kwezithelo akukhule. Izimpawu zingehluka kuye ngesikhathi sokusuleleka, izinga lokufa, uhlobo lwesihlahla kanye nokukhula kwesihlahla.

Ukusulelana

Lokhu kufa kujwayeleke ukuba kusatshalaliswe izinhlobo ezimbili zezilokazana i-psyllid, okuyi-psyllid yase-Asia yezihlahla zezithelo ezinamanzi i-Diaphorina citri kanye ne-psyllid yase-Afrika yezihlahla zezithelo ezinamanzi i-Trioza erytraea. Zombili lezi zinhlobo zithatha igciwane eliqukethe i-citrus greening ziliise ezihlahleni ezisulelekile zilise ezihlahleni eziphilayo njengoba zidla izithelo. I-citrus greening ingadluliseka futhi nangokuxhumelela okususelwa ekuxetshulweni kwehlumela elisulelekile futhi kungadluliseka ngembewu esulelekile.

Ukuhlukana kwalapho itholakala khona

I-citrus greening eNingizimu Afrika iyisifo esitholakala kuma-olintshi anoshukela i-Citrus sinensis. Amavalencias akhombisa izimpawu kakhulu emacembeni

kunama-navels. Futhi ijwayeleke kakhulu kuma-mandarin (C. reticulata) nakuma-tangelos (C. sinensis x C. reticulata), kodwa incane kolamula (C. limon), kumabhambusi (C. paradisi) kanye nawolintshi amuncu (C. aurantium). Kodwa-ke izithelo ezikhethekile ezinjenge-lime C. aurantifolia, i-pomelo (C. grandis), kanye newolintshi elimacembentathu (Poncirus trifoliata) ziyakubekezelela lokhu kufa. Jikelele, iningi lezihlahla ezithela izithelo ezinamanzi kanye nezihlobo zazo ziyasuleleka

Izindlela zokuphawula

Indlela okuyiyona kuphela yokuphawula kwesifo kuzihlahla ezisuleleke njegciwane eliqukethe i-citrus greening (i-Huanglongbing) yindlela esaketanga yokuguqula uketshezi kodwa ungaguquli ukwakhekha kwalo (i-PCR) elabhorathi yokucwaninga isifo. ENingizimu Afrika, lokhu kwenziwa yizindlu zocwaningo zokwelapha zoMnyango Wezolimo, Amahlathi Nezezinhlanzi ezise-Stellenbosch.

Izindlela zokulawula

Ukulawula i-citrus greening kungaphunyeleliswa ngendlela embandakanyayo ukuqedwa kwezinto zezihlahla ezisulelekile, ukwethulwa kwezindawo lapho kukhuliswa khona izithombo enganako ukufa, ukubambelela kuzinyathelo zokulawula kanye nokuqeda izithwali zilokazana ngezibulala zinambuzane ezihlelekile (njengoba zidla uju lwezimbali).



Izimpawu zezibazi zobuwahlawahlala ze-citrus greening ku-citrus spp



Umonakalo wokodiwa kwamacembe odwalwa yi-citrus psyllid yase-Afrika, ku-Trioza erytraea



I-olintshi elesuleleke ngalesi sifo



Isibungu se-citrus psyllid yase-Eshiya



I-Citrus psyllid yase-Eshiya esindala



I-Citrus psyllid yase-Afrika esindala



Isibungu se-citrus psyllid yase-Afrika