

PULA IMVULA

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Phetogo e ka se thibelwe – kgolo e a tlhophiwa

AGO NA LE MAIKUTLO, TIRAGALO KGOTSA MO-KGWA MO BOPHELONG BA GAGO O, FA GONGWE, O TLHOKANG GO FETOGA? MME GO NA LE ENG MABAPI LE MEKGWA YA DITIRAGALO TSA KGWE-BO LE TSA MO POLASENG – A LE TSONA FA GO-NGWE DI TLHOKA GO NTSHWAFATSWA, GO SUTA KGOTSA GO NETEFATSWA GO GO KGONISA GO KGONA LE GO KGONA GO BONA DITLHOMAMISO TSE O DI BATLANG?

E le go feta dingwaga tse tharo fa ntate yo a balang dingwaga tse 86 a tlhokafalelw a ke mogatsa, a wela mo kutlobotlhokong e e botengteng mme lefifi la boitlhobogo la bopela go mmetsa ka a ne a re bophelo ba

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gagwe bo ne bo sa nne le maikaelelo. Ka bua le ene ka re, 'A o a itse rra, Mme o ne a se na tlhopho ya go sala mo lefatsheng, mme wena ... wena o na le tlhopho ya go phela ka mokgwa o o tlol lang maphe lo a lona ka bobedi ka go phela bophelo ba gago ka tshwanno!' Ntate a



MAFOKO A GA...

Jannie de Villiers

GONNILE NGWAGA WA BOLOEMIRUI O O SIAMENG MO AFORIKABORWA KA SETLHA SE SE FETILENG. DIJWALWA DI NE DI SIAME, KWA NTLE GA BONNETE BA GORE PULA E NELE MORAGO GA NAKO. TEBELELOPELE MABAPI LE BOSA E SUPA MAEMO A A SIAMENG TOTA. KGAOLO E BALEMIRUI BA BA SIMOLOLANG BA BONANG MATHATA TOTA MO GO YONA KE GO ADIMA GA MADI GO JWALA DIJWALWA. TEKO YA GO LEKA GO BA THUSA YA DIBANAKA E A SWABISA. FA DILO DI SA FETOGE, RE KA SE BONE TSWELELOPELE MO KGAOLONG E YA BOLEMIRUI.

Fa gongwe ke nako ya go lebelela Molaokadimo go repisa mela-wana ya go uma dijo. Gape re bona boatla fa re lebelela ditiragalo tsa mmuso mabapi le diporojeke tsa bolemirui. Madi a a lekaneng a teng, mme go reng a tlhola a fitlha morago ga nako ka ngwaga le ngwaga ke karabo e re ntseng re sa e amoge. Botlhokwa ba boedi ba madi mo Banka ya Naga le bona ga bo thus. Ke thulaganyo ya mmuso e tshwanetseng go dira ka tshwanno fa tlhabololo e le tiro ya yona. Ke na le mathata go dumela gore mmuso o na le kgono ya go epolola SAA gape le gape, mme e seng Banka ya Naga.

Etswa, go sita mathata otthe a a go bona madi a a ka dirisiwang ke balemirui, bokana ba kumo ka ditono e ntse e oketseg. Mowa wa go tswelela wa balemirui ba Aforikaborwa o itsege mo lefatsheng ka bophara mme e ntse o le teng le mo balemirui ba ba simololang. Seane sa '*Molemirui o tlhola a loga maano*', se mo nameng ya molemirui monge le mongwe, kwa ntle ga gore o dirisa naga e kana kang. Lenaneo la Tlhabololo ya Balemirui ya Grain SA le saenile ditumelano tse dintshwa le banei go tshegetsa balemirui ba rona ka go ba adima madi. Ditumelano tse dingwe tse di tswelela ka dingwaga tse di ka nnang tse nne. Go tlhotlheletsa e le ruri. Balemirui ba ba leng mo lenaneo le le loalwang ke Grain SA ba kgonne go tswelela sentle mme banei ba tlhotlheletsa ke ditswamorago tse ba di bonang.

La bofob, Grain SA e loketse madi gape go tlhabolola balemirui. Re rulagantse khamphani e ntshwa e e leng: Phahama Grain Phakama. Khamphani e e tlaa lebelea fela tlhabololo ya balemi ba tlhaka mme e tlaa etelvelwapele ke baeteledipele ba Grain SA e bile e tlaa laolwa ke badiredi ba Grain SA.

Ke batla go le eleletsa thobo e e lekaneng ka 2021. A Modimo a re nesetse pula ka go lekana. Le jeng Keresemose e e monate mme le bone ngwaga o moswa o o siameng o o se nang COVID. ■

Phetogo e ka se thibewe...

didmala, mme letsatsi le le latelang a tlhoma kopano gore ba sekaseke go utlwa ka ditsebe tsa gagwe, mme gape a tlhoma kopano go lebelelwa sentle ke ngaka. Gape a tlhomamisa gore kwa ntle ga go emela batho gore ba mo leletse mogala, ene o tlaa leletsa mogala mongwe le mongwe yo a mo itseng ka letsatsi le letsatsi go utlwelala dikgang tsa bona ... mme a dira jalo!

Ka beke e e latelang a tsaya e nngwe ya difenitshara tsa kgale a simolola go e gotlha le go e baakanya mme morago ga diawara ya fetoga gonna jaaka e ne e le e ntshwa – go fitlhelela gore bana ba kope go e tsaya. Tiragalo e ya simolola tatelano ya ditiragalo tse di makatsang. A simolola go ya kwa dithekisong mo a rekang difenitshara tsa kgale tsa kong tse a di baakanyang sentle go di naya batho. Fela jalo matsatsi a gagwe a ne a tletse ka ditiragalo tsa boitumelo. Ka nako ya lottelelo o ne a sa kgone go ya dithekisong mme gape le ope yo a ka buang le ene, mme jalo kwa ntle ga go se dire sepe a simolola, le fa a ne a se itse go betla dikgong, go bopa dilwana tsa go tshameka tsa bana. Ka nako ya bophelo ba gagwe ya go bala dingwaga tse 86 o ntse a ithuta dikgono ka letsatsi le letsatsi. Boikanyo ba gagwe bo ntse bo oketseg ka letsatsi le letsatsi. Ntate o fetogile. O a ratega mme o ntse a tsweleletsa letswo la gagwe la go rata batho ka letsatsi le letsatsi. O sa nagana Mme ka letsatsi le letsatsi – mme o phela bophelo bo bo siameng ebile o tlhotlheletsa ba bangwe go phela ka boitumelo jaaka batlhogolo ba gagwe fa ba tshameka ka dikoloi le dillori tse a di bopang! Ga go na tswelelopele fa go se na phethogo; mme bao ba ba sa kgoneng go fetola tlhalganyo ya bona ga ba kgone go fetola sepe!

Bogotlhe ba metswedi ya batho le dilo tsa thulaganyo bo tshwanetseng go dirisiwa ka mokgwa o o tshwenetseng mme le ka nako e e rileng go rulaganya kumo e e siameng ka tlhotlhwa e e kwa tlase.

'MME RE NTSE RE DIRA KA MOKGWA O!'

Polelo e ke puo e e kotsi tota. Mekgwa e mengwe ya kgale e siame mme o tlhoka go sekaseka tlhotlhwa ya go dira dilo jaaka di ne di dirwa mme wa botsa dipotso gore a ga go na mekgwa e mentshwa, e e farologaneng, e e leng botoka go dira. Go iphetola kgotsa go fetola maano a gago ke tlhaselo, mme go dumela go tlwaela le go fetola mekgwa ke go ipaakanya go dira tse dintshwa tse di tlhokiwang go aga bokamoso bo bontshwa bo bo botoka. Phethogo e botlhokwa mme fa gongwe re tlhoka go emanyana go sekaseka bophelo ba rona, kgwebo ya rona, maikaelelo a rona mme le dikeletso tsa rona. Re tlhoka go ipotsa gore re nagane eng mabapi le phethogo. Winston Churchill o kile a re: 'Go tokafala ke go fetoga; go nna le bosenaphoso ke go fetoga gape le gape!'

GO UMA KA KGONO

Theo e e botlhokwa ya bolaodi ba kgwebo ya re: 'Bogotlhe ba metswedi ya batho le dilo tsa thulaganyo bo tshwanetseng go dirisiwa ka mokgwa o o tshwenetseng mme le ka nako e e rileng go rulaganya kumo e e siameng ka tlhotlhwa e e kwa tlase'. Ke go re go nna seša le go tsentsha phethogo ka nako e e rileng, e le sekao, go rulaganya thoto ya dijo tsa go



jesa diruiwa tsa rona e e lekaneng go fokotsa kgatelelo le tshenyegelo ya madi fa re tlhoka go jesa diruiwa tsa rona ka dikgwedi fa go omile thata mme jalo re tshwanetse go lebelela go oketsa bokana ba majwang le mafulu a re a jwalang.

Go uma ka kgono mo kgwebong e nngwe le e nngwe go ka sekasekwa ka go botsa dipotso jaaka:

- Kmono ya go uma ka tshwanno – ke kgona jang go bona dikeletso tsa kgwebo ya ka?
- Kmono ya go dira ka tshwanno – tlhotlhwa ya go bona dikeletso tsa ka e kana kang?

Molaodi ke motho yo o logang maano, yo o rulaganyang, yo o supang tsela mme le yo o laolang tiriso ya batho, kitso ya ditšelete le metswedi fa go salwa morago dikeletso tsa kgwebo mme fa wena o le molemirui, go teiwa WENA! A wena o kgona go sekaseka le go tlhokomela ditiragalo tsa gago fa o loga maano go tsweleletsa tsa bolemirui tsa gago? A o kgobokanya kitso, o tlholo o sekaseka tikologo ya bolemirui, o lekalekantsha kgono ya badiredi ba gago, dikoloi le didiriswa tsa gago, ditshimo tsa gago? O tlisa dikakanyo tse di tseneletseng tse kana kang go ditiragalo tsa bolemirui tsa gago?

Go tsuolola dikaelo tse di tlwaetsweng mo kgaolong ya bolemirui

Fa gongwe phethogo ga e a tsenelela e le tlhopho ya gago, e le sekao, fa gongwe re tlhoka go tsentsha dijwalwa tsa mofuta o mongwe mo maemong a boraro mo lenaneong la rona la thefosano ya dijwalwa kgotsa re tlhoka go hira tshimo e nngwe gape go kgona go simolola go tsweleletsa lenaneo la thefosano ya dijwalwa la rona; mme gantsi bothhokwa ba go fetola bo ‘mo sefatlhegong sa gago’ mme go a go tena ebile ke tlhaselo tota. Ga go na ope mo go rona yo o laletsang komelelo kgotsa phethogo ya tlelaemeti mo bophelong ba rona mme ka nnete re tshwanetse go lebagana le dintlha tse ra tlwaetsa dithulaganyo tsa rona tsa bolemirui go kgona dithaselo tse.

Go botoka go re go se fetole mme ga se go re go tlhalefile

Netefatsa gore dintlha tsa go se batle go fetola ga se diipato tsa gago fela mme e le go leka go sala mo maemong a o a tlwaetseng: Ga ke

na nako; ga go na madi a a lekaneng; ke tsofetse, ga go na nako ya go fetola; ga ke itse go fetola jang; ke itse jang gore go tlaa siama ... phethogo e tlhoka sebete.

Ke gakae re tshwanetse go lebelela dikakanyo tse dintshwa mo kgaolong ya bolemirui?

Mo dingwageng tse 40 tsa go dirisa bolemirui re setse re bone dipethogo tse dintsintsi tse re neng re tlhoka go di dirisa, jaaka tsa thekenoloji, dipethogo mo maemong a topo ya badirisi ba kumo, dithulaganyo tse di tokafaditsweng, kgatelelo go uma ka tshwanno mo sefatlhegong sa phokotsa ya tlhotlhwa e re e bonang, dipethogo mabapi le tsa diinshorensen le ditshono mabapi le tiriso le kadimo ya ditšelete. Ra utlwa:

- ‘Botona ke botoka’ – a ke go re ditiragalo tsa ka tsa bolemirui tse dinnye ga di a siama mme di ka se kgone go tswelela?
- ‘Go suga ganny’, ‘go se suge gope’, ‘tshugotshomarelo’ – lefoko le lentshwa ke ‘bolemirui bo bo iphedisang’; – ke mokgwa ofe o o tshwanetseng nna? Ke mokgwa ofe o nka kgonang go o duelang?
- ‘Bolemirui mabapi le go tlhaloganya tlaemeti’ – ke molemiruinnye; nka kgona jang go tlwaela bolemirui mabapi le go tlhaloganya tlaemeti? Ke mang yo o itseng gore ke eng se se leng botoka mo kgaolong ya lefatshe e ke leng mo go yona? Ke utlwelela mang?

BOKHUTLO

Nna le sebete mme o lemoge gore kgatelelo ya go fetola e ntse e sala e le teng. Ga se go re tsotlhe di tshwanetse go fetoga. Le gale, re tshwanetse go kopana, ra ithuta, ra reetsa fa ba ba itseng ba bua mme ra lemoga gore go tlwaela mefuta e e farologaneng go pinagare mo bophelong le mo ditiragalang tsa molemirui. Balemirui ba ba kgonang ba bothhokwa go aga lefatshe la rona. Go itlhabolola o le mongwe fela mme le fa o le molemirui ke ntlha e e bothhokwa tota. Go nna le tumelo ya go utlwalela, ya go ithuta le ya go fetoga ke tshimologo ya go kgona. Ntlha ya bofelo: ‘Maabane ke ne ke tlhalefile mme ka batla go fetola lefatshe. Gompieno ke tlhalefile mme ke a iphetola!’ ■

TlhokOmela MALWETSE A MO MATLHARENG a mmidi

KA NAKO E YA NGWAGA BONTSI BA DITOKELELO TSA GO UMA MMIDI DI TSHWANETSWE GO SALA DI LOKETSWE MO DIKGALONG TSA BOTLHABA TSA LEFATSHE LA RONA. TIRISO YA DIBOLAYAMEFERO LE TOKELELO YA MONONTSHATHOKO A KA SALA E DIRWA MO DIKGALONG TSA GO UMA TSA BOGARE JAAKA TSA KWA FORESETATA LE BOKONEBOPHIRIMA. GAPE GO BOTLHOKWA GO SALA GO TLHOKOMETSWE DIPHETLHU MO DIKUTUNG TSA MMIDI.

Go na le mefuta ya disenyi e e farolganeng mo kgaolong e mme jalo kopana le moemedi wa malwetse go netefatsa gore o dirise khemikale e e tshwanetseng ka tshwanno.

Go kopa thuso ga se tshupetso ya bokoa mme ke tshupetso ya thata. Gape go ntse jalo mabapi le malwetse a matlhare a mmidi. Go dirisa khemikale ka phoso go ka se laole malwetse, tatlhego ya kumo e ka bonwa mme o tlaa nna o duela khemikale eo. O ntse o betswa ka seme se se gonaganeng.

Marothodi a matlharemasetlha, motšhalomatlhareng wa dibakteria le ditshupetso tsa phisego/komelelo mo matlhareng gantsi ga di farologangwe fa di bonwa ke motho yo o se nang kitso e tseneletseng. Bolaodi ba mathata bo farlogana gagolo, mme fa gngwe ga go kgonegwe. App ya founo ya ba peo ba Pannar, e e bitswang *Sprout*, ke motswedii wa kitso e siameng tota. E khutswafatsa ebile e tlhalosa bontsi ba malwetse a a bonalwang mo mmiding mo Aforikaborwa. E kgonisa balemirui mabapi le baemedi ba balemirui le dikhemikale go laola malwetse ka dikhemikale tse di tshwanetseng ka tshwanno.

Pele malwetse a mo mathareng a mmidi a kgona go tswelela a tlhoka maemo a a rileng mo tikologong a a siametseng. Gape, dikgato tsa go mela tsa dimela di tshwanetse go tshwanelo malwetse a mangwe pele a kgona go tswelela.

Malwetse a matlhare a mmidi a molemirui a tshwanetseng go a tlhokomela a supiwa mo **Lenaneo la 1**.

BOLWETSE BA POPOLOGO YA MATLHARE BA BOKONE

Bolwetse bo bo bonalwang gantsi mo dikgaolong tsa go uma mmidi mo Aforikaborwa ke bolwetse ba popologo ya matlhare ba Bokone (phori e thsweu) **Setshwantsho sa 1**. Maemo a tikologo a a tsweleletsang



1

Bolwetse ba popologo ya matlhare a mmidi ba Bokone.

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bolwetse bo ke maemo a themperietsha ya bogare (18°C - 27°C), maemo a metsi a mantsi le dinako tse telele tsa monyo. Nngadule e phela mo disalela tsa matlhare a mmidi, mme go simolola dikgato tse di farolganeng tsa bolwetse jaaka setlha se ntse se tswelela go tswa mo dithhomamiso tsa bolwetse bo.

Dintho ka tlwaelo di bonwa ka fa tlase ga matlhare a ntlha, mme jaaka difeteletsi di kolopiwa fa maemo a tikologo a di tshwanetse, matlhare a kwa godimo a simolola go supa bolwetse mme o ka re bolwetse bo tswelela go tloga tlase ka go ya godimo mo semeleng.

PHORI E E TLWAETSWENG

Phori e e tlwaetsweng (**Setshwantsho sa 2**) ka tlwaelo e bonwa la ntlha mo dijwaleng tsa mmidi tse dintshwa. Maemo a tikologo a a tsweleletsang bolwetse bo ke themperietsha ya maemo bogare (16°C - 25°C) le metsi a mantsi mo moweng (>95% ya metsimoweng). Phori e e tlwaetsweng e tsweleletswa ke maemo a monyo/mouwane – tota bosigo fa di ditsweleletsi mo godimo ga matlhare di simolola go tlhoga mme di tsenelela mo matlhareng ka go tsena ka diphatlhanyana tsa go hema tsa matlhare.

Ditshupetso tsa ntlha di bonala mo go ka nnang matsatsi a a leng a matlhano go tloga go simolola ga bolwetse fa go bonala dimarothodi a mannye mo matlhareng, mme dithompola tsa nnate (morago ga matsatsi a a ka nnang 10 go 14) (**Setshwantsho sa 2**) di simolola go mela mme di kolopa ditsweleletsi tsa tsona go tsweleletsa bolwetse. Fa di kolopiwa ditsweleletsi tse di tseiwa ke phefo mme di tlala tshimo yotthe. Di ka lwadisa semela se di tswang mo go sona gape le gape.

MAROTHODI A MATLHAREMASETLHA

Bolwetse bo bongwe ba matlhare a mmidi ke marothodi a matlharemasetlha (**Setshwantsho sa 3**). Maemo a tikologo a a tsweleletsang bolwetse bo ke maemo a themperietsha bogare kgotsa godimo le metsimoweng gagolo (>95%).



2

Phori e e tlwaetsweng.

| Bolwetsematlha-reng/sesupo | Mofuta | Dikgato tsa go mela | Maemotikologo | Dibola-yanngadule | Bolaodi |
|--|--|---|--|--------------------|--|
| Phori e e tlwaetsweng (Setshwantsho sa 2) | Nngadule | Dikgato tsa V tsa bofelo (V8+) | Thempereitša ya bogare (16°C - 25°C). | Ee | Dibolayanngadule le tlhopho ya mefuta ya dijwalwa. |
| Popologo ya matlhare a mmidi ya Bokone (Setshwantsho sa 1) | Nngadule | Dikgato tsa V6 go tsa R | Thempereitša ya bogare (18°C - 27°C); dinako tse telele tsa monyo/metsimoweng ka bontsi. | Ee | Dibolayanngadule, tlhopho ya mefuta wa dijwalwa, thefosano ya dijwalwa le mokgwa wa go suga mmu ka go dirisa disalela. |
| Marothodi a matlharemasetlha (Setshwantsho sa 3) | Nngadule | Nngadule go tloga dithunya di bonala (VT - R1+) | Thempereitša ya bogare go e bollo (22°C - 30°C); dinako tse telele tsa monyo/metsimoweng ka bontsi (>95%). | Ee | Dibolayanngadule, tlhopho ya mefuta wa dijwalwa, thefosano ya dijwalwa le mokgwa wa go suga mmu ka go dirisa disalela. |
| Bolwetse ba motšhalommiding (Setshwantsho sa 6) | Mogare | Dikgato tsa V | Dikgaolo tsa boboatsatsi mo masomosomo a leng teng ka ngwaga otlhe, mme le ka maemo a a oketsang go tswelela ga meagre (tota mo dikgaolong tsa go nosetsa tse di bollo). | Nnyaa | Laola difeteletsi mo mathareng (tsholo ya peo le kgasetso) le bolaodi ba mefero. |
| Motšhalomathareng wa dibaketeria (Setshwantsho sa 5) | Bakteria | Go tlhoga dithunya di bonala (VT - R1+) | Bollo, dikgaolo mo go osetswang. | Nnyaa | Thefosano ya dijwalwa, masimo a a sa lengweng le go tlosa disalela tsa dimela tse di neng di supa dibaketeria. |
| Phisego ka ntlha ya letsatsi (Setshwantsho sa 4) | Tikologot | Dikgato tsotlhе | Bollo/Thibelo ya marang a letsatsi. | Nnyaa | Tlhopho ya mefuta ya dijwalwa le bolaodi ba bokana ba metsi. |
| Marothodima-tlhareng a Phaeosphaeria | Nngadule fa gongwe thulaganyo ya bakateria | R3+ | Dikgaolo mo metsimoweng a le mantsi mme bosigo go le tsididinyana ka themperietšha e e kwa tlase. | Phokotso ya kgonon | Ka tlwaelo ga go tlhogew, mme tlhopho ya mefuta ya dijwalwa e ka tlosa disalela tsa dimela tse di neng di lwala le go fetola nako e go jwalwang go ka thusa. |
| Mouta o o boleta | Nngadule | Dikgato tsa V tsa ntlha | Dikgaolo tse di bollo ka metsi a mantsi mo moweng (dikgaolo tsa boboatsatsi), tota mo masimong mo bolwetse bo bonweng pele. Thempereitša ya mmu godimo ga 20°C e tsweleletsa bolwetse. | Ee | Tsholo ya mmu ka metalaxyl, go jwala pele ga nako mo masimong a a supang olwetse, tiriso ya peo e e saimeng tota le go tila thefosano ya dijwalwa ka go dirisa mabele. |
| Motšhalomathareng wa diplodia | Nngadule | Dikgato tsotlhе | Dikgaolo tse di bollo ka metsi a mantsi mo moweng le phokotso ya go suga mmu. | Ee | Thefosano ya dijwalwa, tiriso ya go suga mmu e e siameng le go lemelela disalela mo mmung. |
| Dimala | Nngadule | R3+ | Maemo a a tsididinyana, metsi a mantsi mo moweng, phokotso ya go suga mmu, mefuta ya ditsenekegi jaaka dinwamatute di ka tsweleletsa bolwetse. | Ee | Thefosano ya dijwalwa, go lemelela disalela mo mmung le go laola ditsenekegi. |
| Phori ya polysora | Nngadule | R3+ | Dikgaolo tsa boboatsatsi tse dibollo (24°C - 28°C), metsi a mantsi mo moweng. | Ee | Dibolayanngadule le go jwala pele ga nako. |

Ditshupetso tsa bolwetse bo di bonalwa ka nako ya dithunya – mme fa gongwe di ka bonolwa pele ga kgato e ya go mela fa maemo a e tshwanetse tota. Ke bolwetse ba matlhare bo bo bonalwang gagolo mo KwaZulu-Natal le mo Nagagodimo ya kwa bothaba, mo mouwane le/kgotsa metsimoweng o montsi le thempereitšha e e kwa godimo e fithelwang.

Kgang e e seng ya nnete ke go dumela gore ditsweleletsi di ka tsweleletswa fela mo moweng fa phefo e foka kgotsa fa pula e na. Ditsweleletsi di ka gasagasiwa ke phefo ee, mme gantsi ke ditsweleletsi tsa maemo tlase tse di ka simololang go tswelela fa go jwalwa go mafelelo a setha – ka tlwaelo mo tshimong fela go se kgakala.

Motswedie wa nnete wa bolwetse bo ke disalela tsa dimela tsa setha se se fetileng mo dinngadule di phelang, mme fa maemo a tikologo mo setlheng a di tshwanna, di kolopa ditsweleletsi tse di ka tsenang mo mathareng a a fa tlase a dimela.

Dintho tse di kolopa ditsweleletsi tse dintshwa tse, jaaka go mela ga dimela go tswelela, di kolopiwa mme di tsweleletswa pele ke marothodi a pula le phefo go tsenelela mo magodimong a semela. Bolwetse ba marothodi a matlharemasetlha gantsi ga bo faralogangwe le go fisa ga letsatsi kgotsa komelelo (**Setshwantsho sa 4**). Ga go thuse go re tshe-nyego ka ntlha ya komelelo ga e kgone go fodiswa mme fa molemirui

Tlhokomela malwetse a...

3

Marothodi a matlharemasetlha.



5

Motšhalomatlhareng wa dibaketeria.

a simolola go dirisa sebolayanngadule o itshenyetsa madi. Ga go na bolwetse bo re bo lebeletseng bo bo tswelelang ka go dirisa peo.

MOTŠHALOMATLHARENG WA DIBAKETERIA

Motšhalomatlhareng wa dibaketeria (**Setshwantsho sa 5**) ke bolwetse bo bo bonalwang tota mo dikgaolong tsa go uma tsa kwa bophirima mme ditshupetso tsa tsona gantsi di tlhakangwa le tsa marothodi a matlharemasetlha. Bolwetse ba dibaketeria ga bo kgone go laolwa ka go dirisa dibolayanngadule mme go di gasetsa go ka ja madi a mantsi mme go sa thuse sepe e le phoso e e turang tota – go sa bonalwe ditswamorago tse di tlhokiwang.

BOLWETSE BA MOTŠHALOMMIDING

Bolwetse ba motšhalommiding (**Setshwantsho sa 6**) bo tlisetswa ke mogare wa motšhalommidi. Ke bolwetse bo bo marara, ka bo tswelediswa ke setlolatlola sa mo mathareng. Maemo a tikologo a tsamaelana le kgono ya settlolatlola go gola, go phela le go tswelela – mo go rulaganyang go bonalwa le go tswelela ga boletswe.

Bolwetse ba motšhalommiding ga bo kgone go laolwa ka sebolayanngadule. Go laola mogare wa bolwetse ba motšhalommiding go tlhoka kompanyo ya mekgwa e e farologaneng go fokotsa kgotsa go tlosa diphatsha tsa bolwetse. Le fa dibolayanngadule di kgona go dirisiva go tlabela peo go thibela ditlolatlola go ja dimela fa di sa le nnye mme le go tsweleletsa mogare, ga go tlhomamise bonneta ba go tlosa bolwetse bo.

BOKHUTLO

Go na le mefuta e e farologaneng ya malwetse a matlhare a mmidi a re sa a lebelceleng mo athikeleng e ka gore ga a bonale gantsi mme a bonalwa fela fa le fao. Le gale, ga se go re ga a kgone go senya gagolo mme a tlisa tatlhego e kgolo ya kumo fa maemo a tikologo a a tshwanela. Go kgona go simolola ka bonako, go botlhale go botsa moemedi wa dikhemikale kgotsa mmankgakga fa go banalwa dilo tse di makatsang mo matlhareng a mmidi. ■



4

Ditshupetso tsa phisego/komelelo tsa boingago mo matlhareng a mmidi.



6

Bolwetse ba motšhalommiding.

Go dira gore o bona badiredi ba ba ikanneng ba ba mafolofolo

BALEMIRUI BA MO MAEMONG A KGATELELO YA TLHOTLHWA E E TLISWANG KE KOKETSO YA TLHOTLHWA YA DITOKELELO TOTA LE KOKE-TSO YA TUELTLASE YA BADIREDI. MOKGWA O MONGWE WA GO KGONA GO FENYA KGATELELO YA MOFUTA O KE GO OKETSA BOKANA BA KUMO E UNGWANG. MO ATHIKELENG YA PELE RE TLTLILE KA ME-KGWA E E FAROLOGANENG E MENGWE GO OKETSA LETSENO LE/KGOTSA GO FOKOTSA TSHENYEGO GO KGONA GO TSWELELA GO BONA POELO E E LEKANENG.

Ka theo, balemirui ba tshwanetse go leka go oketsa bokana ba kgwebo ya bolemirui ya bona go kcona go bona ya poelo e e lekaneng ka go tswelela. Jalo go botlhokwa go atamela kgonon e ya go bona poelo ka mekgwa e e farologaneng.

Mo athikeleng e re tlaa lebelela badiredi ba kgwebo mme le botsalano gare ga bona le molemirui mo re itseng e le dikutlwano. Kgatelelo ka ntlha ya ditšelete e pateletseng beng/balaodi ba kgwebo go lebelela badiredi ba bona ka mokgwa o mongwe. Tuelo ya badiredi e oketsegile gagolo mme mo matsatsing a segompieno ke tlholtlwa ya kgwebo e e kwa godimo.

Go uma mo polaseng go tsamaelana le palo ya badiredi ba ba dirang tiro, nako e e tseiwang go e dira mme le ditswamorago tsa tiro e ba e dirang. Fa badiredi ba kcona tiro ka tshwanno, ba boloka nako mme/kgotsa ba dirisa didiriswa le metswedi ka kcona ka ditswamorago tse di kgotsa-fatsang. Jalo tlholtlwa ya go uma e a fokotsega mme poelo e a oketsega.

NKA TOKAFATSA GO UMA JANG?

Go kcona go fetsa tiro re dirisa batho mme ba dirisa metswedi (didiriswa le ditiragalo), jalo **tiro = batho x metswedi**. Batho jalo ke kgaolo e e bothlhokwa go kcona go fetsa tiro mme jaaka mowa wa bona o ntseng go botlhokwa. Ditshupetso tse re yang go di lebelela di ka dirisiwa kwa ntlae ga palo ya badiredi ba o ba dirisang.

Pele badirisai ba ne ba sa lemoge botlhokwa ba maemo a mowa wa badiredi mabapi le go uma. Go ne go tseiva ka bophara gore batho ba ne ba sa rate go dira, ba ne ba tshwanetse go gatelelwa go dira mme ba ne ba kgalwa go ba dirisa tiro. Ditswamorago di ne di le dikutlwano tiro tse di sa siameng. Dilo tsa senyega go fitlha mmuso o simolola go laola dikutlwano-tiro ka go dirisa molao. Mo Aforikaborwa re na le melawana ya ditiro e e farologaneng e e kopaneng mo Molao wa Kutlwano. Ka go utlwana le molao o, badirisai ba setse ba tokafatza dikutlwano. Le gale, go na le dintlhla tse dintsing kwa ntlae ga tse di leng mo molaong tse di ka dirisiwang go tokafatza dikutlwano.

Go setse go supilwe gape le gape gore maemo a mowa wa badiredi a tsamaelana le koketso ya maemo a go uma. Kutlwano tiro ya badiredi ke ntlha e e bothlhokwa mo tikolong ya ditiro go itumela go dira tiro le go ultwana. Ka bolaodi bo bo sa siameng, setswamorago ke mowa wa badiredi o o sa siameng mme tota go boela morago go molaodi. Badiredi ba ba se nang mowa o o sa siameng ba tlaa dira ba iketlile, ba fetsa tiro fela go e fetsa, ba senya didiriswa le metswedi, ba dira ka mokgwa o o sa tshwannang, ba goroga morago ga nako mo tirong, ba tsaya matsatsi a go lwalwa gape le gape, jalo le jalo. Tsotlhla tse di busetsa tiro morago mme go fokotsa kcona ya go uma.

Fa badiredi ba tlhotheletswa ka tshwanno mme ba laolwa sentle, ba tlaa nna le maikutlo a a siameng mme ba tlaa batla go dira ka boikarabelo ebole ba tlaa ikgolaganya le modirisai wa bona. Ditswamorago – koketso ya go uma. Bothata go badirisai ke go tshola badiredi jang go ba tlhotheletsa

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Go nna le kutlwano e e siameng le badiredi ba gago go tlaa oketsa bokana ba go uma mme jalo le poelo e e bonwang.

go dira ka tshwanno. Go dirisa batho go ka nna thata tota ka gore batho ga ba tshwane, ba farolaganana ka dintlhla tse dintsing jaaka maikaelelo, maikutlo, dikgona, maemo le ditiragalo.

Ka bokhutswane, o tshwanetse go tshepho badiredi ba gago e le batho jaaka wena o batla molaodi wa gago a go tshepho. Tshola badiredi ba gago ka go ba tshepho, ka go ba tlhompha mme o sale o ntse o ba siametse ka dinako tsotlhla ka go lekana, supa gore o lemoga gore ba batla go dira ka tshwanno, ba nee boikarabelo, ba rute ka tshwanno go kcona go dira ditiro mme ba nee tuelo ka go lekana. Buisana le bone gape le gape mabapi le ditebelelopele tsa gago mabapi le kgwebo ya gago mme ba tlhalosetse gore ba bothlhokwa go kcona tse o di batlang. Se lebale go buisana le badiredi ba gago mabapi le kgonon ya bona ya go uma mme ba supe gore o itumelela tse ba di dirang fa go tlhogegwa. Se tsotlhla badiredi ba gago. Mme gape, gagamatsa dikgole fa o batla go ba bontsha gore o tlhoka gore ba dire jang. Fa modiredi a le phoso, tsaya dikgato tse di leng bothlhokwa mabapi le mokgwa wa go mo tshwara jaaka go supiwa mo molaong. Ba tshware ka go tshwana ke kelotlhoko.

Fa re re o tshole badiredi ba gago e le batho ga re re o ba tshole jaaka dithaka tsa gago, nnyaa kgakala le moo.

Go kcona go uma ka tshwanno le go netefatsa kcona e e siameng mo kgwebong ya gago, o tshwanetse go utlwana le badiredi ba gago. O tlhoka badiredi ba ba batlang go dira. Go kcona ntlha e, o tshwanetse go lebelela gape mokgwa o o tlhomang batho. Netefatsa gore o itse gore o tlhoka gore motho a nne le dikgona tse dife tse o di tlhokang. A o na le tshekatsheko ya gore tiro e o batlang gore a e dire e ntse jang? A o ka mo ruta mo tirong? A o itse dikgona le diphoso tsa modiredi yo mongwe le yo mongwe mme o mo dirisa ka go di nagana? Ke go re, o ka laola badiredi ba gago jang fa o sa itse modiredi wa gago yo mongwe le mo mongwe? Go kcona go uma ka tshwanno motho o tshwanetse go tlhotheletswa mme a nne le mowa o o siameng le dikgona tse di tlhokiwang.

Laola badiredi ba gago ka tlhalefo go oketsa kcona ya go uma mme jalo go oketsa poelo. Koketso ya kcona ya go uma e tisa phokotsa ya ditshenyegelo mme le/kgotsa e oketsa letsenyo, mo go tlisang tokafatso ya poelo, mo go tlaa nnang mosola go bothle ba ba leng mo kgwebong – modirisai le badiredi. ■

Maemo a dimakhete tsa go rekisa mmidi a setlha se se latelang

M

O ATHIKELENG E RE TLAA LEBELELA SETLHA SA DIMAKHETE SA 2020/2021, GO YA LE NEE-LO LE TOPO MME LE TLHOTLHWA.



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MAEMO A DIMAKHETE MO LEFATSHENG KA BOPHARA

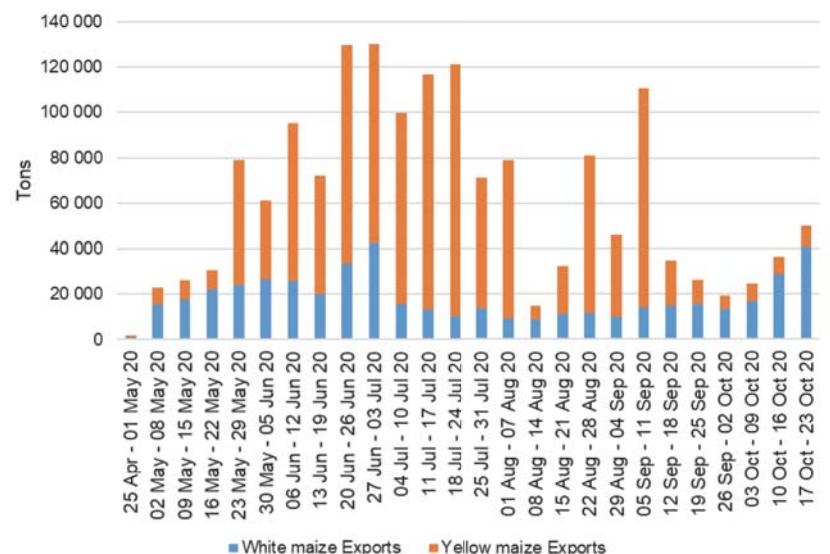
Tebelelopele e e supang gore go ka bonwa mmidi o mo kana kang mo setlheng se sentshwa e siame tota, ka go re kumo e e ka bonwang e ka feta ya setlha se se fetileng ka 2,8%. Le gale, go na le ditshupetso tsa gore bosa bo ka fetoga mo dikgaolong tsa go uma tse dingwe mo lefatseng la rona mo go thibelang go roba le go jwala, ebile go tsamaelana le topo e e kwa godimo, tota go tswa mo Tšhaena. Maemo a a supiwa ke koketso ya tlhotlhwa mo mafatsheng a a umang mmidi ka bontsintsi jaaka Amerika, Ukraine, Borasele le Argentina; e le setswamorago, re bone koketso ya tlhotlhwa le mo Afrikaborwa, ka ntlha ya maemo a go uma mo tikologong mme le ka ntlha ya maemo a kakanyo ya tšelete mo mafatsheng ao e ba-pang le dimakhete tsa mo gae.

MAEMO A DIMAKHETE MO GAE

Go ya le ditlhaka tsa SAGIS, ka mafelo a kgwedi ya Diphalane go gorogile ditono tse di ka nnang dimilione tse 13,8 e le dimilione tse 7,9 tsa o mosweu mme le dimilione tse 5,9 tsa o mosetlha, mo go kopanang go nna 93,6% ya bokana bo bo supilweng ke Komiti ya Tekanyetso ya Tlhaka (CEC) (Thulaganyo ya 1).

1

Thomelontle ya mmidi o mosweu le o mosetlha ka beke.



Motswedi: SAGIS

1

Neelo le thoto mo gae.

| | 2019/2020 | 2020/2021 |
|--|-------------------|-------------------|
| Neelo | | |
| Thoto ya go simolola | 2 663 086 | 1 000 601 |
| Thoto e e gorogang | 10 887 053 | 14 750 220 |
| Thomeloteng | 509 684 | 0 |
| Kgorogo pele ga nako | 15 057 | -1 241 |
| Lefetiso | 22 336 | 28 000 |
| Neelo ka bogotlhe | 14 082 159 | 15 777 580 |
| Topo | | |
| Topo mo gae | 11 106 412 | 11 269 000 |
| Thomelontle | 1 745 000 | 2 560 000 |
| • Ditswammidi | 360 812 | 300 000 |
| • Tlhaka ya mmidi | 1 448 761 | 2 150 000 |
| Topo ka bogotlhe | 13 081 558 | 13 890 500 |
| Thoto ka mafelelo (30 Moranang) | 1 00 601 | 1 887 080 |

Ga go makatse fa re se na thomeloteng ya mmidi, fa re tsaya tlhaka e ntsi ya setlha. Tebelelopele ya thoto ya mafelelo e e tlaa salang ka mafelelo a setlha (30 Mopitlw 2021) e supiwa gore e ka nna ditono ka dimilione tse di ka nnang 1,887. Fa re dirisa ditono tse di ka nnang 939 083 ka kgwedi, e le bogare, go raya gore re tlaa nna le thoto e e lekaneng go dirisiwa dikgwedi tse pedi kgotsa matsatsi a le 61 kwa mafelelong a setlha, pele thoto e ntshwa e goroga kgotsa e romelwateng.

Topo ya mmidi mo gae e sala e siame. Ditono tsa dimilione tse 5,6 tsa mmidi, di fetotswe go jewa ke batho, go jewa ke diruiwa le go silwa, mme ke koketso e e ka nnang 4,5 % mabapi le lebaka le tshwanang la ngogola. Fa re lebelela **Thulaganyo ya 2**, go fetola ga mmidi o mosweu go oketsigile ka 25%, ka gojesa diruiwa go tsereng bontsi ba mmidi o mosweu. Go nile phokotsa ka bophara ya 14% ya go fetola mmidi o mosetlha fa go bapisiwa le lebaka le tshwanang la ngogola, mme phokotsa e kgolo e le ya go silwa.

Go ya ka tebelelopele ya neelo le topo, bokana ba go romelwantle ba mmidi e ka nna ditono ka dimilione tse

2

Mmidi o o fetotsweng go dirisiwa mo gae.

| | 2019* | 2020* | ngw/ngw phetogo ka % | 2019* | 2020* | ngw/ngw phetogo ka % |
|--------------------------------|-------------------|-------------------|-------------------------|---------------------|---------------------|-------------------------|
| Phetogelo makhete ya mo gae | Mmidi o mosweu | Mmidi o mosweu | | Mmidi o mosethla | Mmidi o mosethla | |
| Batho | 2 322 589 | 2 655 545 | 14,34 | 312 310 | 311 126 | -0,38 |
| Diruiwa | 206 218 | 519 948 | 152,14 | 2 562 390 | 2 159 822 | -15,71 |
| Go silwa | 5 325 | 5 664 | 6,37 | 5 539 | 3 224 | -41,79 |
| Total | 2 534 132 | 3 181 157 | 25,53 | 2 880 239 | 2 474 172 | -14,10 |

Motswedi: SAGIS

*Moranang - Lwetse

2,150 ka setlha sa 2020/2021 mme ditono ka dimilione tse 1,613 di setse di rometswe ntle. Mo go ka nnang ditono tse 475 915 tsa mmidi o mosweu di supilwe go ya Vietonamo, Taiwano, Japane, Korea le mafatshe a a bapileng le rona (**Sesupetso sa 1**). Gape go na le ditono tse 300 000 tsa mmidi o o fetotsweng tse di supiwang go romelwa ntle ka setlha sa thekiso sa 2020/2021 mme ebile ditono tse 148 927 tdi setse di rometswentle.

PHETHOGO YA TLHOTLHWA

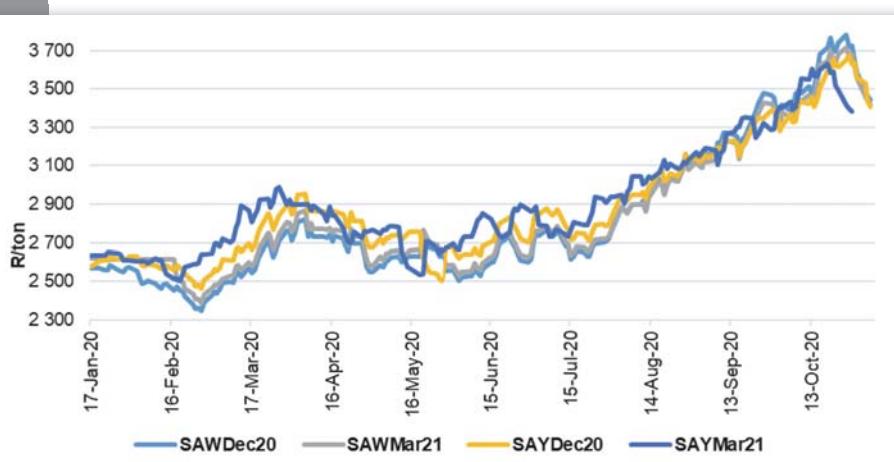
Tlhottlhwa ya mo gae e ntse e oketsega ka dikgwedi tse di fetileng; tlhottlhwa e ne e le koketso ya tlhottlhwa ya mo lefatsheng ka bophara mme le maemo a kwa tlase a kakanyo ya tšelete. Go tloga Seetebosigo 2020, tlhottlhwa ya mmidi o mosweu wa Sedimonthole e oketsegile ka 37,8% mme tlhottlhwa ya mmidi o mosethla wa Sedimonthole e oketsegile ka 29,5%. (**Sesupetso sa 2**).

Tebelelopele ya setlha se sentshwa go ya le maano a go uma e supa tshiamo tota, mme jalo, go solofelwa gore go uma mo gae go tlaa siama tota ka setlha sa 2020/2021. Go ya le tebelelopele ya CEC,

boikanyo ba go jwala ba 2021 e ka nna diheketa ka dimilione tse di leng 2,746 tsa mmidi mo go leng diheketa tse di leng 135 200 go feta bokana ba ngogola. Ka nako ya go kwala athikele e, bontsi ba go jwala bo sa tlhoka go dirwa mme jalo go sa na le diphatsha tse dintsio tseleng go ya pele, jalo maemo a bosa a sa kgona go fetoga gare ga dikgwedi tse di latelang.

2

Phethogo ya tlhottlhwa ya mmidi o mosweu le o mosethla.



Motswedi: Grain SA

Topo ya mmidi mo gae e sala e siame. Ditono tsa dimilione tse 5,6 tsa mmidi, di fetotswe go jewa ke batho, go jewa ke diruiwa le go silwa, mme ke koketso e e ka nnang 4,5 % mabapi le lebaka le le tshwanang la ngogola.

Fa re lebelela bogongwe ba go fetoga ga tlhottlhwa, fa go bonwa tlhaka e e lekaneng, tlhottlhwa e ka tlhatlhoga go ya gaufi le ya tekatekano ya thomelontle, mme dintlha tse dinngwe tsa go rulaganya tlhottlhwa ke maemo a kakanyo ya tšelete le maemo a tlhottlhwa ya bophara ba lefatshe. Fa tlhottlhwa ya mo lefatsheng e sala e le kwa godimo mme kakanyo ya tšelete e le kwa tlase jaaka maemo a leng jaanong, re ka bona tlhottlhwa ya tono gare ga R2 800 le R3 400 ka setlha sa 2020/2021.

Fa tlhottlhwa ya mo lefatsheng e fokotsega mme kakanyo ya tšelete e oketsega, tlhottlhwa ya mo gae e ka fokotsega mme ya ya tlase ga R2 500. Go khutsafatsa, tlhottlhwa e ka tsamaya-tsamaya gare ga tlase ga R2 500/tono go oketsega godimo ga R4 500/tono. Fa re tsaya maemo a dimakhete jaaka di eme jaanong tlhottlhwa e tshwanetse go nna gare ga R2 800/tono le R3 200/tono. ■



KGATALESEGO ya go se lokele kalaka mo mebung e e botšarara

RE SETSE RE LEBELETSE GO NONA GA MMU, GO LAOLA KUMO YA GAGO MME LE THEFOSANO YA DIJWALWA MO DITHULGANYONG TSA GO UMA GO BOPA HUMASE, E E LENG KOTLO YA NTLHA YA GO MEDISA DIMELA E E TSHWARWANG MO MMUNG KE DIKGAOLO TSA MOTLHABA, MMOPA LE MOKATA MME E TSWELELETSANA DITSHETSANA TSA MO MMUNG MABAPI LE MONONTSHA O RE O LOKELANG MO MMUNG MO ATHIKE-LENG E NNGWE YA *PULA IMVULA*. RE KOPA GORE O BUISE ATHIKELE E GAPE GO NTSHWAFATSA KITSO YA GAGO MABAPI LE DINTLHA TSE.

Ntlha e e bothokwa ya go medisa dijwalwa mo mebung ya gago ke go itse le go tlhaloganya gore pH kgotsa maemo a botšarara mo mmung ke eng, mo mebung e e farolganeng, e e fitlhelwang mo polaseng ya gago ka go lekalekantsha fa o rulaganya diteko tsa mebu kgotsa pele ga go simolola go loga maano go dirisa lenaneo la go lokela kalaka. Fa e le botšarara kgotsa alekale thata e ka ‘baakangwa’ ka go dirisa mefuta e e farologaneng ya di kopantsho jaaka kalaka ya kalesitiki kgotsa ya dolomitiki mo lenaneo la nako khutswane, nakotelelegare kgotsa nakotelele le le rulgantsweng ka kelothoko mo tshimong e nngwe le e nngwe ka go feteletsa.

1 Bokana ba tlhaka go ya le maemo a pH.

| Mofuta wa dijwalwa | Maemo a pH mo mmung | | | | |
|---|---------------------|----|-----|-----|-----|
| | 4,7 | 5 | 5,7 | 6,8 | 7,5 |
| Bokana ba tlhaka (100 ke kwa godimo mme 0 ke kwa tlase) | | | | | |
| Mmidi | 34 | 73 | 83 | 100 | 85 |
| Korong | 68 | 78 | 89 | 100 | 99 |
| Disoya | 65 | 79 | 80 | 100 | 93 |
| Habore | 77 | 93 | 99 | 98 | 100 |
| Luserene | 2 | 9 | 42 | 100 | 100 |
| Majwang | 31 | 47 | 66 | 100 | 95 |

Richard McPherson, Mokwadi wa Pula Imvula. Romela e meile go richard@agrimetrix.co.za



Fa mebu ya gago e e nang kgono e e kwa godimo e e leng boteng e le botšarara thata o ka fosa go bona bokana ba tlhaka bo bo kwa godimo ka ngwaga o pula e nang ka go lekana. Ka go oketsa tlhaka e o e bonang ka ngwaga ka tono e le nngwe kgotsa go feta o ka di kopantsha go nna ditono tse di leng tse dintsia tota morago ga dingwaga mo go ka oeketsang letseno la gago mme jalo go ka go kgonisa go tswelela go dirisa bolemirui jaaka dingwaga di tswelela. Ka tlhotlhwa e e leng R2 500 ka tono mo dingwageng tse di ka nnang tse tlhano o ka bona R12 500.

Go dia tshekatsheko ya bothata ba botšarara le tisro ya lenaneo la go lokela kalaka o ka latlha madi a mantsi, tota fa poelo e e bonwang ka go uma tlhaka e ntse e fokotsegia mme koketso ya bokana ba kumo e ntse e tlhoka go oketsegia. Tlhotlhwa e e tlhameletseng ya mmidi go ya le bokana ba tlhaka e e ka bonwang kgotsa kgono ya mmu o dirisiwang e ka nna gare ga R7 000 le R10 000 ka heketara mo masimong a a sa nosetsweng. Ke go re bokana ba tlhaka ba 2,8 t/ha go 4 t/ha ke bokana bo bo tlhokwang go busetsa tlhotlhwa ya ditokelelo ka heketara. Fa bokana bo bo bonwang bo feta bokana bo o tlaa kgona go duela sekoloto sa tuelo ya polase, tsa go hira masimo, motlakase le go hira tse dingwe jaaka go supiwa mo mokgweng wa gago wa go lekalekantsha dibuka. Go bothokwa go athola kgono ya go uma ya gago ka go dirisa dipego tsa polase jaaka o di rulagantse. Bontsi ba balemirui ba tlhoma bokana go feta kgono ya bona ya go uma fa ba rulaganya kgono ya bogare ya bona ka dingwaga.

GO TLHALOGANYA MAEMO A PH

Maemo a pH a ka lekalekantshwa mo thulaganyong ya metsi kgotsa mo thulaganyong ya thibelelo ya dikhemikale kgotsa mo tlhakatlhakanong ya metsi le kalsiamo kolorite. Nnetefatsa gore o itse gore o dirisa efe. Maemo a pH a a tshwanetseng go mela ga dimela ka tshwanno le pH pH (CaCl_2) a supiwa mo **Setshwantshisong sa 1.**

Lenaneo la 1 le naya tshupetso ya kgono ya bokana ba kumo mo mmung o o siameng mabapi le maemo a pH. E le sekao, fa o jwala mmidi mo tshimong e e nang pH ya maemo a a leng 4,7 go tshwantsha le pH ya maemo a a leng 6,8 o ka bona fela 34% ya kgonogodimo e e ka bonwang mo mmung oo. Mo mmung o o boteng wa maemo a botšarara a le kwa godimo mo KwaZulu-Natal bokana ba kumo bo oketsegile go tloga 2,5 t/ha go feta 8 t/ha ka go baakanya maemo a pH fa go dirisiwa lenaneo la nakotelele la go lokela kalaka. Go ka tlhoka go lokela kalaka gape le gape go fitlha ditono tse tlhano go tse supa tsa kalaka ya mofuta wa kalisitiki kgotsa dolomitiki. Kalaka ya dolomitiki e e nang magenisiamo e dirisiwa fa maemo a kalsiamo go magenisiamo mo mmung wa gago a tlhoka go tokafatswa.

Tse ke ditshupetso ka bophara tse di supang maemo a a rileng. Molemirui mongwe le mongwe o tlaa ikutlwya gore ke tiriso efe ka ditswamorago dife fa a lokela kalaka mo mmung wa gagwe jaaka dingwaga di tswelela. Maemo a a rileng ke gore fa kalaka e lokelwa mo mmung go ka tsaya dingwaga tse di ka nnang tse tharo pele maemo a pH a a tlhokiwang a bonwa. Go tsaya diteko ka setlha le setlha ka tatelano mo masimong a gago go ka supa tswelelopele go maemo a a siameng a pH ya 6,8. Koketso ya tlhaka e e bonwang gape ke tshupetso ya gore lenaneo le o le dirisang la go lokela kalaka le siame.

Ka go tsamaelana le bogotlhе ba kgono ya go tsweleletsa katione (CEC) diteko tsa gago di ka boa di supa maemo a go kgora ga botšarara ka 30% go 40% mo go leng mmu o o botšarara thata. Ka mafoko a mangwe ke go re 30% go 40% ya dibaka, mo thulaganyong ya kolodiale, tse di tshwereng kotlo e e bottlhokwa jaaka potsiamo, sebabole, le kalsiamo di tserwe ke diione tsa haiderojene. Jalo mmu ga o kgone go tshwara kgotsa go tshwarela kotlo e e tlhokiwang dimela go mela go bona kgono e e siameng ya go naya kumo e e lekaneng. Go lokela kalaka go tlaa oketsa kgono ya mmu go tshwara kotlo e dimela di ka e dirisang ka dikgato tsa go medisa matlhare le go uma tlhaka.

LEANO KGOTSA TIRAGALOY YA GO BAAKANYA MMU

Tiragalo ya go baakanya mmu ka bogotlhе e ka tlhoka tiriso ya kalaka ya kalisitiki kgotsa ya dolomitiki go tokafatsa maemo a pH, maemo a gepise go lekalekantsha sebabole, MAP go tokafatsa maemo a fosofate le KCL



Go loga leano – go gasetsa kalaka ka segasetsa sa monontsha.
Setshwantsho sa: Jenny Mathews

1 Maemo a pH a le 5,2 go 8,0 a naya maemo a a kgonogodimo go dijwalwa tsa bolemirui tse dintsi.

| Acidity pH | Increasingly acid from pH of 6 to 1 | | | | | | Neutral 7 | Increasingly alkaline from pH 8 to 14 | | | | | | |
|---------------|-------------------------------------|--|--|--|--|--|---------------|---------------------------------------|---------------------------------|--|--|-------------------|--|--|
| | No plant growth possible below 3,7 | | | | | | | ALKALINE | | | | | | |
| | ACID | | | | | | Slightly acid | | Ideal pH range for plant growth | | | Slightly alkaline | | |

go baakanya maemo a potasiamo. Fa go lokelwa ke mokonteraka go ka ja madi a a ka nnang gare ga R1 850 le R2 500 ka heketara. Go ka nna go tura go feta go balemirui ba bantsi mme maemo a a siameng a mmu, bogolo a ka rulagangwa ka go tsaya dingwaga tse di rileng.

Go tsaya go lokela kalaka fela, tlhotlhwa go ya le bokgakala kgotsa bogaufi ba molemirui mongwe le mongwe go mo go tseiwang kalaka teng go ka ja R600 go R700 ka tono fa e foloswang teng mme go e lokela mo mmung go ka ja R200/ha fa molemirui a dirisa mokonteraka. Balemirui ba kwa KwaZulu-Natal gagolo ba dirisa didiriswa tsa bona go lokela kalaka.

Tlhomamisa tlhotlhwa ya go dirisa lenaneo la go lokela kalaka, mabapi le senatla sa mebu le dimela se o se itseng, mme o lekalekantshe tlhotlhwa e le poelo e koketso ya tlhaka e e ka bonwang e ka e tlisang go ya ka ditlh tse di latelang. Simolola ka mmu wa gago wa kgono e kwa godimo mme loga maano go baakanya tshimo e nngwe le e nngwe mo polaseng ka o tsaya e nngwe le e nngwe jaaka dingwaga di tswelela go phatlhala tlhotlhwa ya lenaneo le diphatsa tse di ka bonwang go kgwebo ya bolemirui ya gago. ■

BOKHUTLO

Balemirui ba ba nang kitso, dinatla tsa go itse mebu le dimela, barekisi ba monontsha, baemedi, le dinatla tse dingwe ba ba nang kitso, ba ntse ba re ‘tirisokalaka’ e siame tota. Mme lebelela ditswamorago tsa maemo a ditšelete le diphatsa pele o simolola go dirisa lenaneo la go lokela kalaka. Le dirise ka dikgato ka go tsaya tshimo e nngwe le e nngwe ya mmu o o maemo godimo mo polaseng ya gago. Balemirui bao ba ba nang kgono ya go dirisa madi a a fiwang ke mmuso ba tshwanetse go dirisa kgono e, ka bonako jaaka go ka kgonegwa, go lokela kalaka mo mebung ya bona go le tshimologo go aga mmu o o siameng o o tlaa netefatsang go bona kumo ka go lekana kwa pele. ■



Kgasetso ya kalaka. Setshwantsho sa: Jenny Mathews

Tlhogwana e e reng CEC mo TEKONG YA MMU wa gago e raya eng?

KHOLOMO E NNGWE MO PEGONG YA TEKO YA MMU WA GAGO E NA LE TLHOGWANA E E RENG 'CATION EXCHANGE CAPACITY (CEC)', KE GO RE KGONO YA GO FETELETSANA LE GO TSHWARA MEFUTA YA KOTLO E E FAROLOGANENG, MME GANTSİ GA E TLHALOGANGWE. KE NTLHA E E BOTLHOKWA THATA YA MEBU E E TSHWANETSENG GO ELWA TLHOKO GO KGONA GO LEBELELA GO NONA GA MMU, PHETHO YA TIRISO YA KALAKA MORAGO GA DINGWAGA TSE DI KA NNANG TSE THARO KGOTSA GO FETA, GO LEKALEKANA GA DIMINERALE TSE DI MO MMUNG MME LE GO NNA TENG GA MONONTSHA O O LOKETSWENG EBILE LE MAEMO KA BOPHARA A GO NONA GA MMU.

MEBU

Mebu yotlhe e bopilwe ka dikgaolo tse nne go simolola – diminerale, mowa, metsi le dibodi. Mmu wa mofuta o o rileng ka tlwaelo o bopilwe ka 45% e le diminerale, 25% e le metsi, 25% e le mowa mme le 2% go 5% e le dibodi. Diminerale di ka nna tsa dikgaolo tse di faroganeng tse tharo ka ntlha ya bokana tse di leng mothaba, mmukgogodi le mmopa. Bontsi ba kgaolo e nngwe bo dirisiwa go taya mofuta wa mmu e le mothaba, mothaba wa mokata, mokata wa mothaba, mothaba o mosesane wa mokata, mokata, mmukgogodi, mmukgogodi wa mmopa wa mokata, mmopa wa mokata le mmopa.

DITSHETSANANNYE TSA MO MMUNG

Mo thulaganyong e e raraaneng e e supiwang fa godimo mmu o tletse ditshetsanannyne tse di faroganeng tse di ka nnang dibakteria, diakatinomisete, mekobo, meuta, malele, porotosoa, dinematode, ditsenekegi, diboko, mme le medi. Boima ba ditshetsanannyne tsotlhe tse mo kgaolong ya mmugodimo e ka nnang dimilimetara tse 175 bo ka nna 7 000 kg/ha. Mmu jalo ke tikologo e e phelang mo re jwalang dimela tsa rona go bapa le menontsha ya dikhemikale.

DIBODI LE HUMASE

Dibodi ke kgaolonye ya mmu e e bopiwang ka ditshetsanannyne tse re di supileng fa godimo mme le fa disalela tsa dimela tse di tshelang tsa dimela tse di robilweng tsa pele di sala mo mmung ka go bola ka maemo a a late-lanang. Humase ke molekule e e marara thata e e gokaganeng ka botelele e e ka atlholwang fela fa go dirisiwa maekorosekoupu mme e bopiwa ka kgato ya go bola ya bofelo ya dibodi. Humase e ka bopiwa ka dikgaolo tse ditshetla kgotsa tse dithokwa mme di ka bonwa di le mo mmung morago ga go simolola go dirisa mekgwa ya go suga mmu ga nnye fela kgotsa ya tshomarelommu.

Lebelela mmu o o nyerolositsweng go feta ka go dirisa mogoma o o segang, o o se nang disalela tsa dimela mme tota le dibodi tse palonnye mme o di tshwantshe, fa go ka kgonegwa, le mmu wa moagisani kgotsa wa tshimo e e gaufi mo go dirisitsweng mokgwa wa go suga mmu wa tshomarelommu. Tshwantsha mesima e mebedi mo go tserweng diteko tsa mmu. Dillaga tsa humase di ka bonwa. Nagana gore go tsaya dingwaga tse di latelanang tse dintsinyana tsa go dirisa mokgwa wa tshomarelommu go kgona go rulagana go nna teng ga humase. Mmu o o nang 4% ya dibodi go kopana le humase e e leng teng o ka naya naiterojene e e ka nnang dikilogeramo tsa 200 e eka dirisiwang ke dijwalwa. Ke poloko e e siameng ya madi a tshwanetseng go reka naiterojene (N) go e lokela mo mmung.

Richard McPherson, Mokwadi wa Pula Imvula. Romela e meile go richard@agrimetrix.co.za



Fa o ka balabala makwalo a dipatlisiso tsa Dr William Albrecht mabapi le mebu o tlaa lemoga gore o amogela kitso le thuso ya go tokafatsa mebu mo polaseng ya gago. Mebu le bolaodimmo ke kgang e e bokete tota.

DIKATIONE KE ENG?

Kotlo ya dimela e tshwarwa mo mothabeng wa mmu, mmopa le mmukgogodi kgotsa thulaganyo ya dikgaolonye. Mo mmung mo dikgaolopopego di lekalekane thulaganyo ya dikgaolonye e ka tshwara didiriswa le tse dingwe tsa dikgaolonye di le mo lefelong le le lengwe.



Dimela di ka dirisa kotlo e fa di e tlhoka ka dikgato tse di faologaneng tsa go mela le go thuntsha dithunya.

Dikatione ke dikgaolonne ye tse di tlhatlhetsweng ka kgaolo ya motlakase ya koketso tsa khemikale tse di fitlhelwang go bapa le dikgaolonne ye tse dingwe tsa khemikale kgotsa mo dikgaolonne ye tsa mmu. Dikgaolonne ye tse, di thola di sutasuta go tswa mo kopanong e nngwe go ya mo go e nngwe mo popegong ya motheo ya dikgaolonne ye tsa mmu le thulaganyo ya mmu ya sedikobophelo sa ditshedinnye tse di leng mo mmung.

Mebu e tsewa diteko go bona kalsiam (Ca), magenesiam (Mg), potasiam (K), sodiam (Na), amoniam niterojene, dikgaolonne ye tse dingwe le dikgaolonne tsa dimineral tse di leng botlhokwa. Dikgaolonne ye tse di tlhatlhetsweng ka kgaolo ya motlakase ya koketso (+) tsa kotlo di itsewe di le metheo. Di ka nna le tlhatlhetso ya koketso e le nngwe kgotsa tse pedi. Dikgaolonne ye tse di tlhatlhetsweng ka kgaolo ya motlakase ya phokotso (-) di itsewe e le dianione.

Fa o akanya dimakenete tse pedi, e nngwe le e nngwe ka kgogedi ya borwa le bokone – fa o kopantsa dikgogedi tsa bokone kgotsa tsa borwa dikgogedi tse di tshwanang di tlaa tlhalwana ke maatla a bomakenete.



Kgogedi ya bokone le kgogedi ya borwa fa di kopantswa di tlaa kgatlhana mme di tlaa gogana go kopana. Fela jalo, ka mafoko a mangwe, dikgaolonne tsa kotlo tse di tlhatlhetsweng ka kgaolo ya motlakase ya koketso kgotsa katione di tlaa batla go kopana le sefatla se se tlhatlhetsweng ka kgaolo ya motlakase ya phokotso.

Difatla tse di tlhatlhetsweng ka kgaolo ya motlakase ya phokotso di fitlhelwa mo dikgaolonne tsa mmung tota mo popegong ya dikgaolonne tsa humase. Dikgaolonne tsa katione di farologana ka bokana ba popego le bokana ba motlakase. Tlhakatlhakanyo ya dikgaolopolekgolo ya e nngwe le e nngwe mo thulaganyong ya dikatione tsotlhe mo mmung e itsewe e le petiso ya motheo. Kgotsa, ka mafoko a mangwe, ke bokana bo bo kana kang ba kotlo ya mofuta mongwe le mongwe bo bo tlhokiwang ke dimela bo bo tshwerweng mo mmung o rileng.

Tekatekano e siameng jaaka e supilwe ke Dr Albrecht le babatlisse ba bangwe ke:

Kalsiam 60% go 70%, magenesiam 10% go 20%, potasiam 2% go 5%, sodiam 0,5% go 3%, dikatione tse dingwe kgotsa tsa motheo 5%.

Botšarara kgotsa maemo a pH a mebu mo lenaneong la go lokela kalaka gagolo bo tlaa supa gore tekatekano e e filweng fa godimo ya kotlo e kgonwe. Ditekatekano tsa fa godimo di supiwa ke dilaboratori tse dintsi kgotsa di ka balabalwa ka go dirisa dipalo tse di kgaogangweng tse di supiwang mo pegong ya teko ya mmu. Tshwantsha maemo a teko ya mmu wa gago le tse di tshwaneseng tse di filweng fa godimo. Dipalo ka tlwaelo di supiwa ka dimiligeramo tsa kotlo e nngwe le e nngwe e leng teng mo kilogeramong ya mmu.

Jalo, CEC ke selekanyo sa gore mmu wa gago o siame ka bokana bofe go tshwara kotlo e e tlhokiwang ke dimela. Dilaboratori tse dingwe di supa ntlha e e le 'Total Exchange Capacity' (TEC), ke gore kgono ya kananyo. Mmu o o motlhaba thata ka dikgaolonne tsa humase tse di seng tse dintsi kgotsa tse di seng teng gagotlhe o tlaa supa palo ya CEC e e kwa tlase thata mme mmu o noneng thata ka dikgaolonne tse dintsi o tlaa supa palo ya CEC kgotsa TEC e e kwa godimodimo.

BOKHUTLO

Lebelela dipego tsa diteko tsa mebu tsa gago mme o bone gore di lekalekana jang le tse di supiwang gore di siame tota. Mme tlisetsa diphethogo tse di tlhokiwang mo mokgweng wa gago wa go suga mmu le lenaneo la tiriso ya monontsha la gago go tokafatsa mmu wa gago go bona bokamoso bo mo wena o ka tswelelang pele. ■

LEBAGANA LE MATHATA A DITŠHELETE a Aforikaborwa

TLHOTLHELETSO YA GO KWALA ATHIKELE E KE ATHIKELE E E KWADILWENG KE ANDRIES WIESE – ‘JAAKA MATHATA A DITŠHELETE A AFORIKABORWA A AMANANG LE KGEBO YA GAGO’, E E GATISITSWENG MO FARMER’S WEEKLY YA 29 NGWANATSELE 2019. MATHATA A A LEBELELWANG KE PHOKOTSO YA TLHOTLHWA YA MAD, PHOKOTSO YA MAEMO A KGONO YA GO DIRISA MAD, BOIKANYO BA BABEELEDI BA MAD LE BOELEDINTLE BA MAD. RE KA RE LE MAEMO A GO GOLA A A KWA TLASE KGOTSA GDP E E KWA TLASE KE BOTHATA BO BONGWE GAPE.

Go setse go fetile ngwaga, mme ditebelelopele tse di filweng mo athikeleng di nnile nnete. Ranta e fokotsegile, ke go re tlholtlhwya yone e ile tlase mme ga tisa koketso ya tlholtlhwya dilo tse di romelwang teng, jaaka ditokelelo tse dingwe tsa rona fa re jwala dijwalwa. Aforikaborwa e fokoditswe go nna mo maemong a matswapo. Ke go re babeledi ba madi mo lefatsheng ka bophara ba bona Aforikaborwa e le lefelo la bodiphatsa go boloka madi. Go fetola boikanyo ba babeledi, ba mo gae le ba mo lefatsheng ka bophara, mo Aforikaborwa go fokotsegka gore babeledi ga ba na tlhomamiso ya gore ba tlaa bona poelo e siameng fa ba dirisa madi a bona mme tota fa ba ka bona madi a bona a boela mo go bona.

Ka tshimologo ya ngwaga gape go supilwe gore Aforikaborwa e mo maemong a kgaotsa ka gore GDP, e le maemo a go uma, e kwa tlase thata. Go tshwantshanya le bokgwebo go raya gore lefatsheng la rona ga re supe poelo – tsenyo e tlase ga tiriso. Jalo, re tshwanetse go oketsa bokana ba madi a re a adimang go duela ditiragalo tsa mmuso jaaka go duela dituelo tsa badiredi ba mmuso. Go kgwebo maemo a ke tshupetso ya bolaodi bo sa siameng.

Gape, re tlhasetswe ke mogare wa korona le lottelelo e e tlisitseng. Kwa ntle ga dithaselotse di tlisitseng ke lottelelo, jaaka re supile mo athikeleng ya pele, (*Pula Imvula Lwetse 2020*) le mathata a a supilweng mo temaneng ya pele ga e, setshwantsho se se letobo se se supang tshenyetsoetshaba ka ntlha ya thuso ka madi mabapi le mogare wa Covid-19 se ntshe se phuthologa. Tshenyetsoetshaba gape e ntse e fokotsa maikutlo a a siameng go Aforikaborwa mo lefatsheng go ya le tiriso ya madi.

Dintla tse ke dintla tse di maswe thata tse di ntseng di kolopelwa go balemirui ba rona, ba banny le ba bagolo. Go ya le bolaodi ba kgwebo ya gago ya bolemirui o ka lebagana le dintla tse kgotsa o ka leka go di tla. Tlhaselo ke gore dintla tsotlhe tse di kwa ntle ga kgono ya molemirui, ke dintla tsa kwa ntle ga ditiragalo tsa gagwe.

Ka mafoko a mangwe, ditswamorago tsa mathata a go ya le tsa mo polaseng ke mathata a a tsamaelanang le ditokelelo jaaka mafura, dikhemikale, menontsha le didiriswa mme tlhotlhwya tsona e ntse e oketsiga ebile madi a o ka a dirisang mo kgwebong ya gago a ntse e fokotsegaa gagolo. Ka fa gongwe, gape ke nnete gore fa tlhotlhwya ranta e fokotsegaa o neiwa tshono ya go romela dilo ntle.

A re nne le boikanyo ba go batla go tswelela pele mme ra ipakanye go lebagana le dintla tse di maswe tse ebile ra sekaseka ditshono tse di tlaang le mathata a. Bogolo o ka leka go sireletsatira tsa gago kwa ntle ga go lebelela gore di thubiwa jang. Ga re kgone go tsaya dintla tse ka go re ga di kotsi fa re lebagana le bonete ba tsona mabapi le tiriso ya madi, mme di ka nna setsoselotso maikutlo a rona. Go ka nna tshwanelo go lebagana le dintla tse

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go kgona go nna molemirui yo o kgonang go tswelela pele. Batho ba tshwanetse go ja.

NNETEFATSA GORE DITEKANYO DI NNE TENG

Go lebagana le dintla tse apara ditshireletso tse o di tshotseng mme o lebagane le tsona:

- Tlhokomela gore o nne le **thulaganyo ya dipego e e siameng** go kgona go sekaseka dintla tsa tirisomadi mo polaseng ya gago ka tshwanno. Ka go dirisa ditshupetso tsa go dirisa bolemirui ka tlhamaelo go tlaa thusa go netefatsa go rulaganya dipego tse di siameng mme go tlaa tokafatsa tiriso ya kitso.
- Laola kelelomadi ya gago ka tlhokomelo ka go dirisa **lenaneo la kelelomadi** la gago tota go ya le go reka dilo. Tlhokomela sentle go se reke gore go rekiwe fela tota go ya le dilo tse di jang madi a mantsi (didiriswa, metshene). Phokotsotlholtlhwya gantsi ga se ya nnete. Ka go se nne le **lenaneo la kelelomadi** le siameng o ka se kgone go laola go elela ga madi a gago ka tshwanno.
- Loala tirisomadi ya gago kgotsa ya mo ntlong ya gago – go thusa gagolo ebile go siame go nna le ditekanyetso tse pedi tse di farolaganeng tsa tirisomadi. Se tshele ka maemo a o sa kgoneng go a duela.
- Loala tlhotlhwya ya ditokelelo tsa gago ka go dirisa leano la kgwebo ya polase mme tsaya dikgato tsa go fokotsa tiriso ya madi. Ka go rulaganya **setlamo sa letseno la madi le le siameng**, go ka kgonegwa. Netefatsa gore o dirise bokana bo bo lekaneng ba ditokelelo jaaka go supilwe kgotsa jaaka go logetsweng leano.
- Sekaseka maemo a madi a bofelo a kgwebo ya bolemirui ya gago ka kelothoko. Dirisa **sesupatekatekano** sa gago mme lebelela ka kelothoko kgono ya gago ya go duela tse o tshwanetseng go di duela. Kadimo ya madi ga se tsala ya gago mme sekoloto se se kwa godimo go feta se usitse balemirui ba bantsints. Jaaka go ntse tsalo ya madi e kwa tlase ka ntlha ya segajaja, mme se bone ntlha e e le tshono ya go oketsa bokana ba madi a o ka a adimang. Maemo a tsalo a tlaa oketsiga gape kwa pele. Fa o tlhoka go adima madi ruri, leka go bofa maemo a tsalo a a kwa tlase jaaka go ka kgonegwa.
- Sekaseka mekgwa ya go uma ya gago. Dirisa bolemirui mabapi le tlhago mme tswelela go tokafatsa boitekanelo ba mebu ya gago. Dirisa ditshupetso tsa bolemiruitshomarello, go tlaa tshegetsa phokotsa ya tirisomadi mabapi le ditokelelo tse o di dirisang.
- Botlhokwa thata – a o na le **leano la kgwebo le le lolameng?**

BOKHUTLO

Ditekanyo tse dingwe tse di supilweng fa di setse di tlhalositswe mo dia-thikeleng tsa pele go tloga mo maemong a a farolaganeng mme go di busetsa gape go gatelela fela botlhokwa ba ditekanyo tse. Gakologelwa gore thuso ya go fetola le go sekaseka gape maemo a kgwebo ya gago e teng. Dirisa bonatla bo bo leng teng mo bokgwebo ba bolemirui le dithulganyo tsa bolemirui jaaka Grain SA. ■

Itse direpodi tsa go jwala tse di lebaneng le ditlha tsa go mela tsa gago

KA GO DIRISA TSE RE DI ITSENG, SEREPODI KE MO BODILONG MO BOTSENO BO LENG TENG FA RE TSENA MO MOAGONG KGOTSA PHAPSI – FA MONGWE A TSE MO SEBAKENG SEO, O TSHELA SEREPODI. GAPE GO KA SUPA KGAOLO YA SEBAKANYANA SA NAKO SE SE RILENG, E LE SEKAO FA NGWAGA E FELA KA 12H00 BOSIGO RE EME MO SEREPADING SE SENTHSWA SA NGWAGA O MOŠWA, MME FA MONYADIWA A APERE MOSESE O MOSWEU WA LENYALO A IPAACKANTSHE GO NYALWA O EME MO SEREPADING SA BOPHELO O MONTSHWA MABAPI LE MOGATSE.

Fela jalo re ka lebelela tshupadikgwedi ya molemirui mme ra lemoga gore go na le metsots e e rileng e leng botlhokwa mo setlheng e leng dinakonyana tsa serepodi. Molemirui yo a nang kitso ya ditsamaiso tsa mo polaseng o tlaa nna le kitso ya boitelo go itse gore direpodi tse ke dife, mme molemirui yo o simololang yo a sa ithutang o tshwane-tse go ithuta mabapi le direpodi tsa mo polaseng le mo tikologong e a nnang ka go tlholo go botsa balemirui ba ba nang kitso dipotso. Ka go itse letlha la serepodi sa sejwalwa se sengwe le se sengwe go botlhokwa thata ka go mo naya sediriswa se a ka se dirisang ka nonof!

Mme jalo, direpodi tse ke dife tse molemirui a tshwanetseng go di itse? Go na le direpodi tsa go jwala, tsa go laola mefero, tsa go laola disenyi le tsa thobo. Mo athikeleng e re ya go lebelela direpodi tsa go jwala.



Go tshwanetse ga nna leano la tiriso mo tlhogong
ya molemirui mongwe le mongwe ka ntlha ya
gore o tlaa tshwara diphethogo jang le jang.



NAKO E E TSHWANETSENG YA GO JWALA

Tlhaselo e e tlvaetsweng e e tlhaselang balemirui ba ba tlhabololwang ke go rulaganya ditšelete go reka ditokelelo tse di tlhokiwang ka nako e di tshwanetseng go dirisiwa. Balemirui ba tlhoka go simolola go dira pele ga nako go rulaganya leano la tiriso ya kgwebo le le siameng eibile le le ka amogelwang mme a le naya ba ba ka mo adimang madi. Gape

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re bone dikai tse dintsi mo balemirui ba supilwe go nna baamogedi ba madi go tsweleletsa porojeke e siameng tota – mme fa gongwe madi a neiwa morago ga nako kgotsa ditokelelo di goroga morago ga nako mme jalo molemirui o thibelwa go simolola ka ditiragalo mo masimong ka nako e e rileng eibile jalo ga a kgone go dirisa nako e e tlhomilweng ya go jwala ka botlalo.

Go kgoreletsa go feta ka gore dijwalwa tse di setse di sala morago pele di jwalwa mme bokana ba kumo e e ka bonwang bo setse bo fokotsega. Morwalo wa boikarabelo o mongwe o rona re o tsereng tsia gagollo, re le setlhophsa sa Lenaneo la Tlhabololo ya Balemirui la Grain SA, ke go tswelela go dira le go ruta ba bangwe mabapi le botlhokwa ba serepodi sa dinako tsa go jwala tse di tshwanetseng go kgona go bona poelo mo polaseng.

Dikgwedi tse di leng bollo

Ka tlwaelo re itse gore mmidi ke dijwalwa tse di ratang fa go le bollo. Mmidi o tlhoka dikgaolo tsa bollo tse di tshwanetseng go nna teng go mela le go gola. Thepereitsha e tshwanetse go nna gare ga 10°C go 15°C go kgona go jwala mmidi. Jalo ga go thuse go jwala mmidi pele ga nako fa go sa le tsididinyana.

Sephiri ke go ema pele gore setlha se kgone go nna se lekalekane mabapi le maemo a bosa le thepereitsha ka gore go netefatsa go tlhoga le go mela ga dimela tse dintshwa ka go lekana. Fa go na ga pula go go gatelela go jwala morago ga nako ya go jwala e e rileng, go botlhokwa go itse gore o tshwanetse go kgona go fetola maemo a gago mme fa gongwe o ka tshwanna go lebelela go jwala mofuta wa mmid wa go mela ka bonako kgotsa gape go tlogela mmidi mme go lebelela mofuta o mongwe wa dijwalwa o o melang ka bonako. Dibeke tse tharo tsa ntlha pele ga go jwala di botlhokwa go kgona go bona dimela tse di siameng mme maemo a tikologo a a tlaa nnang teng a tlaa rulaganya kgono ya go bona thobo e e lekaneng.



Success isn't always about greatness.
It's about consistency. Consistent hard work
leads to success. Greatness will come.

~ DWAYNE "THE ROCK" JOHNSON



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PULA/IMVULA E TENG KA DIPUO TSE DI LATELANG:

Setswana, Se  semane, Sesotho, Sezulu le Sethosa.

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

Itse direpodi tsa go jwala tse di...

Netefatsa gore o itse nako ya serepodi sa go jwala se se rileng mme gape le sa 'go morago ga nako go jwala jaanong'.

Dikgwedi tse di leng tsididi

Ga re kgone go lebala gore go na le mmopo o monngwe go dijwalwa yo o gorogang ka mafelelo a nako ya go mela e le tshimologo ya dikgwedi tse di leng tsididi. Semela sa mmidi se tlhoka matsatsi a a ka nnang a le 120 go a le 140 go se na serame go ya le mofuta mongwe le mongwe. Ka jalo o ka se jwala peo ya mmidi morago ga nako ka gore serame mo dimeleng tsa mmidi tse di sa omeng se ka tlhagisa tatlhego ya tlhaka e ntsi.

Gape go na le nako ya go roba e e tshwanetseng e e leng serepodi sa go roba – motsotsi oo mo nakong fa bontsi ba dimela di godile mme di omile. Re itse gore balemirui ba ba simololang ba bantsi ba gatelelwa ke barui ba diruiwa go tlosa dijwalwa tsa bona mo masimong a lefatshe la kwa magaeng gore ba kgone go simolola go fudisa dikgomo tsa bona mo masimong a mmidi. Gape le gape go tsosa molato. Seako sa mmidi se se tloswang pele ga nako mme se sa le metsi se tlaa swaba, se tlaa latlha bioma mme go tshosa gape gore ka nneta se tlaa senyega mme sa bola. Tatlhego ya thobo e tlaa oketsega fa nako ya go roba e sa elwe tlhoko.

Nako e e totobetseng ka dikgaolo

Re bua ka nako e e totobetseng mme go botlhokwa gape go gakologelwa gore nako ya go jwala e e tshwanetseng e tsamelana le dikgaolo tse di totobetseng. Nako ya go jwala mmidi mo kgaolong ya Mpumalanga e ka farologana gagolo le nako e e tshwanetseng go jwala mo kgaolong ya Bokonebophirimma. Maemo a bokana ba metsi mo mmung mme tota le themperietsha ya mmu di tshwanetse go nna mo maemong a serepodi se se siameng gore peo e kgone go simolola go tlhoga ka tshwanno.

Fa o itse direpodi tsa go jwala tse di siameng mme wa kgona dirisa matsatsi ao go jwala dijwalwa tsa gago, dijwalwa di tlaa nna le kgono e e siameng go uma kumo e e maemo godimo ka bontsi bo bo tlhokiwang ka gore di ka mela mme tsa gola ka maemo a a tshwanetseng a bosa mme le ka pula e e nang ka go lekana (ka tsholofelo), letsatsi le le fisang ka go lekana tota le bollo bo bo lekaneng mme gape le ka dinako tsa maitsiboa tsa themperietsha e e seng godimo thata.

ITSE DIKGETHOLOLO TSA GAGO

Balemirui ba tshwanetse go nna le kitsobile ba tshwanetse go tlhola ba tsipatsipa. Go tshwanetse ga nna leano la tiriso mo tlhogong ya molemirui mongwe le mongwe ka ntlha ya gore o tlaa tshwara diphethogo jang le jang. ■



Go kgona go fetsa go lokela tokelelogodimo.
Setshwantsho: Jenny Mathews