



MINAGRI



RAB

UBUHINZI BW'IBISHYIMBO BISHINGIRIRWA

**IMFASHANYIGISHO IGENEWE
ABAKANGURAMBAGA B'UBUHINZI**



Werurwe 2014



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**IMFASHANYIGISHO IGENEWE ABAKANGURAMBAGA
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Ugushimira

Turashimira abagize uruhare mu iyandika ry'aka gatabo bose:

- Abakozi b'ikigo cy'igihugu gishinzwe guteza imbere ubuhinzi n'ubworozi "RAB"
- Umushinga AGRA-SHP-Climbing bean ukorera muri "RAB",
- Umushinga SPAT II wa BTC,
- Abakozi b'ikigo gishinzwe gukusanya no gusakaza amakuru ku buhinzi n'ubworozi "CICA".

0. INTANGIRIRO

Ibishyimbo ni kimwe mu bihingwa by'ingenzi mu Rwanda. Abanyarwanda bari mu bantu bake ku isi bafungura ibishyimbo byinshi. Niho rero abenshi bavana intungamubiri nyinshi zikenewe zo mu rwego rw'ibyubaka umubiri (Proteins).

Kubera akamaro kabyo mu mibereho no mu bukungu, u Rwanda rwashyize ibishyimbo mu bihingwa by'ingezi bigomba kwitabwaho mu rwego rwa gahunda y'imbaturabukungu. Minisiteri y'Ubuhinzi n'Ubworozi "MINAGRI" ifatanyije n'Ikigo Gishinzwe Guteza Imbere Ubuhinzi n'Ubworozi "RAB" ndetse n'abandi bafatanyabikorwa bamaze gukora byinshi mu rwego rwo guteza imbere iki gihingwa. Bimwe muri ibyo bikorwa ni uko hamaze gushyirwa ahagaragara amoko mashya y'ibishyimbo bitanga umusaruro mwinshi mu Turere tw'ubuhinzi dutandukanye.

Gahunda yo guteza imbere ubuhinzi bw'ibishyimbo bishingirirwa nayo ni kimwe muri ibyo bikorwa. Uretse akamaro kabyo gasanzwe kimwe n'ak'ibishyimbo bigufi, ibishyimbo bishingirirwa bifite umwihariko wo gutanga umusaruro mwinshi k'ubutaka buto kuko byera bijya hejuru.

Mu rwego rwo kuvugurura ubuhinzi bw'ibishyimbo mu Rwanda, abahinzi barakangurirwa kwitabira ibishyimbo bishingirirwa cyane kuko umusaruro wabyo kenshi wikuba inshuro zirenze ebyiri ugereranyije n'ibigufi.

Aka gatabo kiswe ubuhinzi bw'ibishyimbo bishingirirwa kaje kunganira abamamazabuhinzi batandukanye mu kazi kabo ko gufasha abahinzi b'ibishyimbo kongera umusaruro w'ibishyimbo bishingirirwa. Gakubiyemo:

- Akamaro k'ibishyimbo bishingirirwa,
- Imihingire y'ibishyimbo bishingirirwa,
- Kurinda no kurwanya indwara n'ibyonnyi,
- Gusarura no guhunika.

Aka gatabo kagenewe abamamazabuhinzi kandi kunganirwa n'akandi gatabo kagenewe abahinzi nyirizina.

I. AMAKURU RUSANGE KU BISHYIMBO BISHINGIRIRWA

1.1. Akamaro mu buhinzi no mu bukungu

Mu Rwanda ibishyimbo bihingwa hafi kuri 1/4 cy'ubutaka buhingwa mu gihugu. Ibishyimbo bishingirirwa bifata 1/3 cy'ubutaka bwose buhinzeho ibishyimbo.

Umusaruro w'ibishyimbo bishingirirwa uboneka kuri hegitari uri hagati ya toni 1.5 na toni 3 mu gihe ibishyimbo bigufi byera hagati y'ibilo 700 kugera kuri 800 kuri hegitari.

Mu mwaka wa 2012 igiciro cy'ibishyimbo ku masoko cyari hagati y'amafaranga 300 na 500 hakurikijwe amabara y'intete, ubunini n'uko zivanze.

1.2. Akamaro mu mirire

Ibishyimbo ni ibinyamisogwe bifite:

- Ibyubaka umubiri bigera kuri 65%;
- Imyunyu (ubutare) myinshi umubiri ukenera nka Feri, Zenki n'indi;
- Ibisigazwa bigaburirwa amatungo, bivamo isaso cyangwa bigatunganywamo ifumbire y'imborera;
- Bizanira umuhinzi amafaranga iyo byahinzwe neza;
- Mu bishyimbo niho haboneka intungamubiri n' imyunyu ngugu(Fe & Zn) umubiri ukenera.

1.3. Ibishyimbo byera hehe mu Rwanda?


Ibishyimbo byera ahantu hari ubutumburuke buri hagati ya metero 800 (nko mu Bugarama) na metero 2100, hari ubushyuhe buringaniye (hagati ya dogere 20 na 28) hagwa imvura igihe kinini (iri hagati ya mm 900 na mm 1200). Muri rusange ibishyimbo byera mu Rwanda hose.





Ibishyimbo byera mu butaka buseseka burimo urusekabuye rujya kuba ibumba kandi bufumbiye neza.






Icyitonderwa:






Ibishyimo ntibyera mu butaka burekamo amazi nko mu bishanga bidatunganyije, ahantu hakonja cyane bikabije no mu butaka busharira cyane butarimo ishwagara.

1.4. Amoko y'ibishyimbo bishingirirwa ari mu Rwanda n'ibiyaranga

IZINA	AHO BYERA	UMUSARURO BITANGA KURI HA	IMINSI BYERERA
 Inshutiniza (RWV 3006)	Imisozi miremire n'iciriritse	3800 kg/ha	110

IZINA	AHO BYERA	UMUSARURO BITANGA KURI HA	IMINSI BYERERA
 <p>Vuzimpundu (RWV 3316)</p>	Imisozi miremire	4000 kg/ha	115
 <p>Mpanguhe (RWV 3317)</p>	Imisozi miremire	4000 kg/ha	110
 <p>Girubuzima (RWV 2887)</p>	Imisozi miremire	3800 kg/ha	106
 <p>Kazeneza (RWV 2269)</p>	Imisozi miremire n'iciritse	4000 kg/ha	106

IZINA	AHO BYERA	UMUSARURO BITANGA KURI HA	IMINSI BYERERA
 <p>Rukundo (RWV 2361)</p>	Imisozi miremire	3800 kg/ha	108
 <p>Zanisuka (RWV 2872)</p>	Imisozi miremire n'iciriritse	4200 kg/ha	96-108
 <p>Kaki (RWV 2070)</p>	Imisozi miremire n'iciriritse	3000-4000 kg/ha	90-120
 <p>Kiryumukwe (RWV 1129)</p>	Imisozi miremire n'iciriritse	3000 kg/ha	90
 <p>Gasilida</p>	Imisozi miremire n'iciriritse	4000-4500 Kg/ha	90-96

IZINA	AHO BYERA	UMUSARURO BITANGA KURI HA	IMINSI BYERERA
 <p>(MAC 42)</p>	Imisozi iciriritse n'imigufi	3500-4000 kg/ha	81
 <p>Gikundiro 2 (MAC 49)</p>	Imisozi miremire n'iciriritse	2500-3000	87
 <p>Gikundiro 3 (MAC 9)</p>	Imisozi iciriritse n'imigufi	3000 kg/ha	83
 <p>Gikundiro 1 (MAC 44)</p>	Imisozi iciriritse n'imigufi	3500 kg/ha	87
 <p>Mamesa (G2331)</p>	Imisozi miremire n'iciriritse	4000 kg/ha	90-106

II. IMIHINGIRE Y'IBISHYIMBO BISHINGIRIRWA

2.1. Imyiteguro yo guhinga ibishyimbo bishingirirwa

2.1.a. Ibishyimbo bihingwa ryari?

Ibishyimbo by'Umuhindo bihingwa mu mezi ya Nzeri-Ukwakira (Igihembwe cya A), iby'Itumba ni mu mezi ya Gashyantare-Werurwe (Igihembwe cya B) naho iby'Impeshyi (icyi) ni mu mezi ya Gicurasi-Kamena (Igihembwe cya C) mu bishanga. Mu bihembwe bibiri bya mbere (A na B), ibishyimbo biterwa imvura imaze gusomya ubutaka (ku rugero rwa mm 30).

Icyitonderwa:

Guhinga kare, ugatera kare byongera amahirwe yo kweza neza kandi byinshi.

2.2 Kwitegura imbuto n'imishingirizo

Umuhinzi ugiye guhinga ibishyimbo bishingirirwa agomba gushaka imbuto y'indobanure.



Imbuto y'indobanure yo gutera.

2.2.a. Imbuto y'indobanure igomba kuba yujuje ibiki ?

- Kuba yarashyizwe ahagaragara n'Ikigo cy'Igihugu gishinzwe guteza imbere Ubuhinzi n'Ubworozi mu Rwanda (RAB);
- Imbuto icuruzwa ifite icyemezo cy'ubuziranenge gitangwa na RAB;
- Kuba ifite ibisobanuro bya ngombwa byanditswe ku cyo ipfunyitse;
- Igomba kuba iberanye n'akarere igiye guhingwamo;
- Ifite ibishyimbo by'ibara rimwe kandi intete zose zingana;
- Kuba ihungiyeye kandi intete zayo zitaratobowe n'udusimba, zitaraboze cyangwa ngo zimeneke;
- Kuba ari nzima imera byibuze kugera ku kigero cya 85%;
- Kuba itavangiye (idafite imyanda) nibura ku gipimo cya 98% (pureté spécifique) ;
- Kuba yumye neza ifite ubuhehere bukwiye ni kuvuga ku gipimo cya 15% (taux d'humidité).

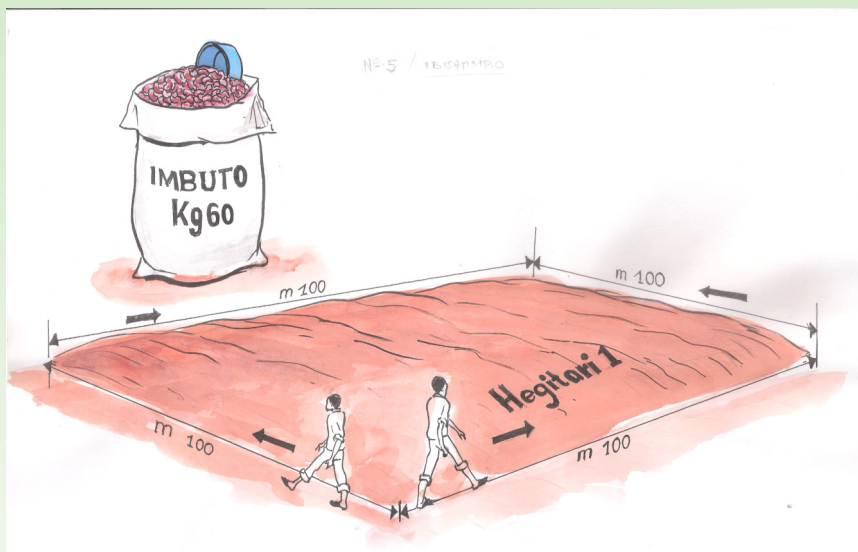
Kugira ngo usuzume ko imbuto yumye neza ufata intete ukayishinga iryinyo. Iyo ryinjiye iba itaruma. Iyo yumwe iryinyo ntirinjira ahubwo intete ihita isaduka mu kabiri mu buhagarike. Aha ariko tugomba kwitondera imiti yahungijwe.

2.2.b. Imbuto y'indobanure umuhinzi yayikura hehe?

Imbuto y'indobanure ishobora guturuka

- Ku mutubuzi wemewe na RAB cyangwa ishyirahamwe rifite icyemezo cy'ubutubuzi;
- Ku mucuruzi w'inyongeramusaruro wemewe na RAB.

2.2.c. Umuhinzi ategura imbuto ingana iki ?



Ku murima ufite intambwe ijana z'ubutambike n'intambwe ijana z'ubuhagarike (hegitari 1) umuhinzi yitegura imbuto ingana n'ibilo biri hagati ya 40 na 60. Ni ukuvuga ibilo 40 kugeza kuri 60 ku bishyimbo bigira intete ntoya nka Vuninkingi (G685) na Mamesa (G2331), n'ibilo 50 kugera ku bilo 60 ku bishyimbo bifite intete nini nka Gikundiyo (MAC 44).

2.2.d. Imishingirizo imara iki mu buhinzi bw'ibishyimbo bishingirirwa?



Ibiti by'mishingiriro.

Mu buhinzi bw'ibishyimbo, imishingirizo ifite uruhare runini mu kwiyongera k'umugaruro kuko ariyo ibishyimbo bizamukiraho, ikabifasha kugira imisogwe idakora ku butaka bityo ntibore ngo umugaruro ugabanuke.



Ibishyimbo bishingiriye mu murima.

2.2.e. Imishingiro myiza iba imeze ite kandi iva hehe?

Imishingiriro myiza yagombye kuba ireshya n' **intambwe ebyiri n'igice** (2.5m) z'uburebure. Iyo ibaye migufi igabanya umusaruro, yarenga igatuma ibishyimbo bitinda kwera.



Ifoto igaragaza uko umushingiro mwiza ugomba kuba ureshya.



Ibiti bivangwa n'imyaka bivamo imishingiro.

Imishingiro myiza ishobora guturuka ku bitu bivangwa n'imyaka biva biteye ku mirwanyasuri nka gereveriya, kaliyandara, lesena, imigano, urubingo, alunusi, n'ibindi.



Ibishyimbo byamaze gutondagira imishingiriro.

2.2.f. Umuhinzi yategura imishingiriro ingana iki?

Ubusanzwe umuhinzi yitegura ibiti **50,000** ku murima ufite intambwe ijana z'ubutambike n'intambwe ijana z'ubuhagarike (hegitari 1). Ni ukuvuga ibiti 500 ku murima w'intambwe icumi ku icumi. Ariko hari ubundi buryo umuhinzi yakoresha uruzitiro rugizwe n'ibiti bikomeye bihagaze n'ibitambitse bizamukaho imigozi (ibirere by'insina, ubudodo bukoreshwa mu kuboha imipira y'imbeho, imigwegwe n'ibindi) akaba yagabanya umubare w'ibiti ukagera ku 16,000.

2.2.g. Imishingiriro itegurwa ryari?

Umuhinzi agomba kuba azi aho azavana cyangwa se afite imishingiriro **mbere y'uko atera**. Imishingiriro ikunze gukoreshwa ni amashami y'ibiti bisanzwe nk'inturusi, gereveliya, cyangwa se imigano n'ibindi. Hari n'ibiti bivangwa n'imyaka byagaragaye ko

usibye kuba bikoreshwa mu gufata neza ubutaka no kugaburirwa amatungo, bishobora no gutanga imishingirizo myiza.

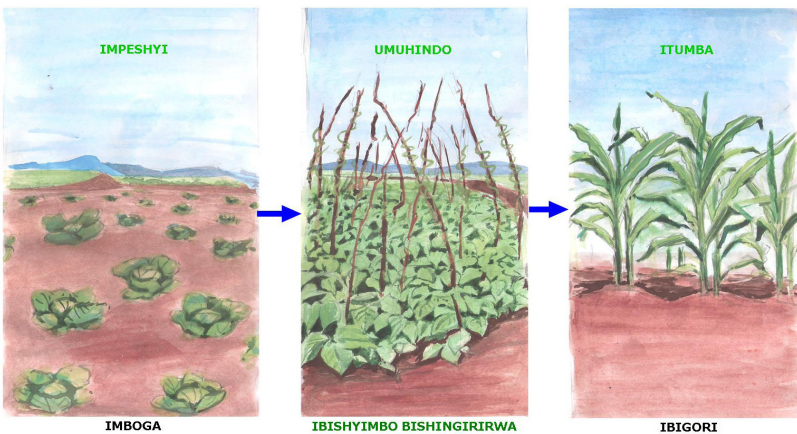
2.3 Gutegura umurima

2.3.a. Umurima uzaterwamo ibishyimbo utegurwa ryari?

Umurima utegurwa **ibyumweru 2** mbere y’uko imvura igwa. Ni ukuvuga nko mu **mpera za Kanama** ku bishyimbo by’Umuhindo, mu **mpera za Mutarama** ku bishyimbo by’Itumba no mu **mpera za Mata** ku bishyimbo byo mu Mpeshyi bihingwa mu bishanga. Ibi bikorwa kugira ngo ibyatsi bibashe kubora kandi n’imvura izabashe gucengera mu butaka no kububobeza.

2.3.b. Umurima uzahingwamo ibishyimbo ugomba kuba umeze ute?

Ubutaka bweramo ibishyimbo ni ubuseseka butarekamo amazi kuko byatuma indwara z’imizi ziyongera. Ni byiza rero gushyira ibishyimbo mu murima uvuyemo **ibigori, amasaka, ibijumba, imyumbati, imboga**.



Umuhinzi ntiyagombye guhinga ibishyimbo mu murima **uvuyemo ibindi ibishyimbo**, soya cyangwa se **ibindi binyamisogwe** mu rwego rwo kwirinda indwara n’ibyonyi. Ntiyagombye kandi kubihinga mu murima wari **umushike**.

Icyitonderwa

Guhinga ibishyimbo mu murima wari uhinzemo ibishyimbo cyangwa ibindi binyamisogwe cyangwa se umurima urekamo amazi bituma ibishyimbo bifatwa n’indwara n’ibyonyi. Bituma kandi umusaruro ugenda ugabanuka kuko imyunyu ntungabihingwa y’ibinyamisogwe iba yarashizemo.

2.3.c. Umurima w’ibishyimbo utegurwa ute?

Iyo bategura umurima ugiye guterwamo ibishyimbo babanza **kurima** (gusekera) ibyumweru 2 mbere y’uko imvura igwa. Bahinga neza **bageza isuka hasi** kugeza byibuze ku bujyakuzimu bungana n’amasuka abiri (cm20-30) kugira ngo birinde isuri ya nyamurigita kandi imishingiriro izabone aho ifata. Ibi bifasha imizi y’ibishyimbo gucengera neza mu butaka ikanakoresha neza imyunyu ntungabihingwa n’amazi. Ni ngombwa **kumara mu murima ibyatsi** bituma ibihigwa bidakura neza nk’urwiri n’uruteja. Mbere yo gutera barabanza bagasanza.

Icyitonderwa:

Iyo umurima ufite ubutaka bugufi (isi ngufi) ugomba kongererwa ubujyakuzimu hanyuma ugafumbirwa cyane.

2.4 Gufumbira no kugabanya ubusharire mu murima w'ibishyimbo

Umuhinzi ashobora gufumbira umurima we ku buryo bubiri :

- **Mu gihe cyo gusekera** : Iyo umuhinzi afite ifumbire y'imborera ihagije afumbira mu gihe cyo gusekera. Muri iki gihe agenda avanga ifumbire n'ubutaka uko agenda ahangana. Ifumbire mvaruganda ayikoresha mu gihe cyo gutera agenda ayishyira muri buri kobo cyangwa se mu murongo agiye guteramo;
- **Mu gihe cyo gutera** : iyo umuhinzi afite ifumbire y'imborera itari nyinshi ayikoresha mu gihe cy'itera akayivangira n'ifumbire mvaruganda mu kobo cyangwa se mu murongo agiye guteramo imbuto.

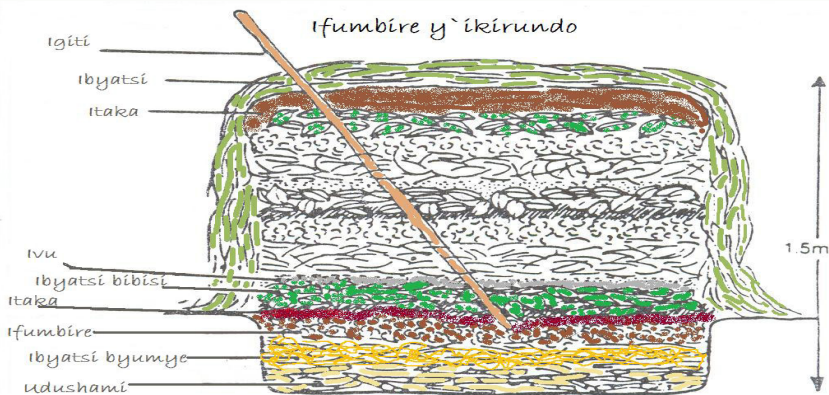
Icyitonderwa:

Kuri ubu buryo bwa kabiri umuhinzi agomba kuba afite **ifumbire iboze** neza cyane kugira ngo itazababura ibishyimbo mbere y'uko bimera bikagabanya umusaruro.

2.4.a. Ifumbire y'ikirundo

Iyo umuhinzi adafite ifumbire y'amatungo ihagije, ashobora gukora ifumbire y'ikirundo ikoze mu byatsi.

Igishushanyo gikurikira kirerekana uko iyo fumbire ikorwa.

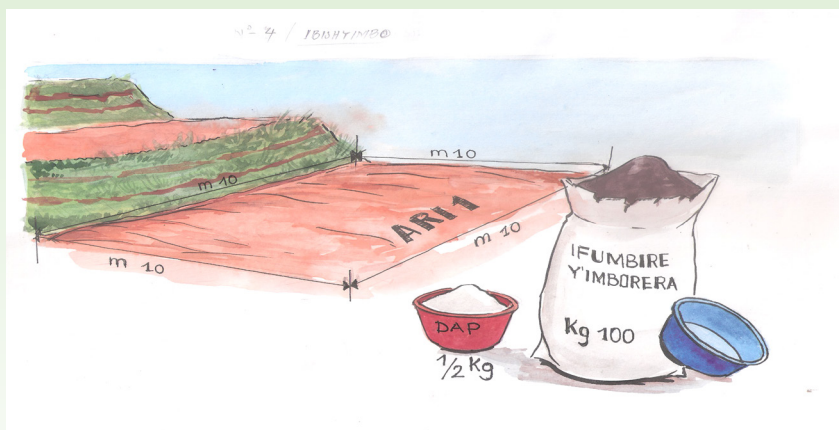


Uko bakora ifumbire y'ikirundo

2.4.b. Bakoresha ifumbire ingana iki?

Mu murima ungana n'intambwe ijana ku ijana (m 100 X m 100=ha 1) hakoreshwa ifumbire y'imborera iboze neza ingana n'ibilo 10,000-15,000 (Toni 10-15) ni ukuvuga ko mu murima w'intambwe icumi ku icumi (m 10 X m 10= ari 1) bakoresha ibilo 100.

Muri uyu murima kandi bakoresha ifumbire mvaruganda ya DAP ingana n'ibilo 50, ni ukuvuga inusu kuri ari 1.



Icyitonderwa:

Iyo nta fumbire mvaruganda bari bukoreshe bashyiramo imborera ingana na toni 20 kuri hegitari (ari 100).

Umuhinzi kandi utabonye DAP ashobra gukoresha NPK 17-17-17, ibilo 200-300 kuri ha. Ni ukuvuga ibilo 2-3 kuri ari.

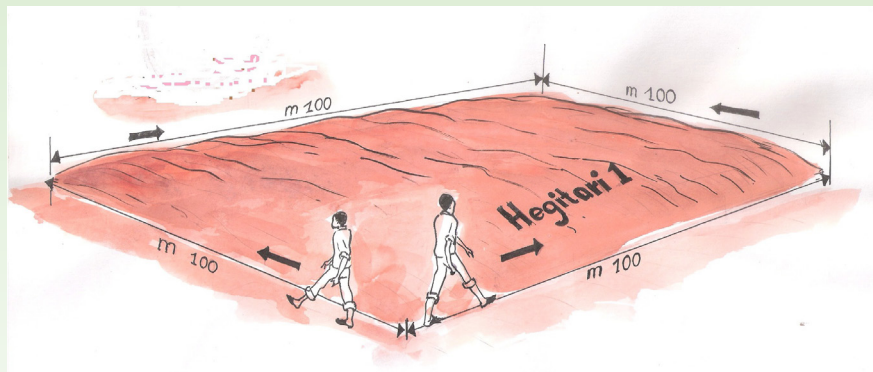
2.4.c. Batera ishwaraga bate?

Iyo umuhinzi agiye guhinga ibishyimbo mu murima ufite ubusharire (buri hasi ya 5.0) agomba gutera ishwaraga kugira ngo agabanye ubu busharire.

Bagenda banyanyagiza ishwaraga ku buryo bungana mu murima hose hanyuma bakayitwikiriza ubutaka ku bujakuzimu bwa cm 15.

2.4.d. Bakoresha ishwagara ingana ite?

Mu murima ufite intambwe 100 z'ubutambike ku ntambwe 100 z'ubuhagarike hakoresha ishwagara ingana n'ibilo 5000 (toni 5). Ni ukuvuga ko kuri ari 1 (intambwe 10 z'ubutambike n'intambwe 10 z'ubuhagarike) hajya ibilo 50.



Icyitonderwa :

- Iyi shwagara iba ihagije ku bihembwe 3 by'ihinga. Niba wenda uyikoresheje mu ikungira (Ukwakira-Ukuboza) ishobora gukomeza kugira akamaro kugeza ku ijagasha rikurikiyeho (Werurwe-Kamena) ndetse n'igihe cy'ikungira ry'umwaka ukurikiye ;
- Ifumbire y'imborera ntigomba kwanikwa ku zuba kuko riyangiza rikayikuramo imyunyu ntungabihingwa ;
- Iyo ifumbire y'imborera ari nkeya ibyiza ni ugufumbira igice gikwiranye n'uko ingana nyuma igice gisigaye kikazafumbirwa nyuma;
- Iyo ifumbire y'imborera ari nkeya ni byiza ko umuhinzi ayishyira mu myobo agiye guteramo aho kuyinyanyagiza mu murima wose;
- Ifumbire ya DAP niyo nziza mu guhinga ibishyimbo.

2.5 Gutera

2.5.a. Batera ryari ?

Batera ibishyimbo bishingirirwa **imvura imaze gusomya neza** ubutaka. Imaze wenda nk'ibyumweru bibiri igwa mu masinde. Mbere yo gutera umuhinzi agomba kubanza **gusanza neza intabire, agafumbira ubutaka** nk'uko byavuzwe haruguru.

2.5.b. Batera bate ?



Uko batera imbuto y'ibishyimbo.

Mu gutera ibishyimbo bishingirirwa umuhinzi atera kuri **cm 50** (intambwe ebyiri n'igice z'ikiganza) hagati y'umurongo n'undi na **cm 20** (intambwe imwe y'ikiganza) hagati y'utwobo tubiri. Utera ibishyimbo agenda ashira **intete 2** muri buri kobo ku buyakuzimu bwa cm 5.

Ni ngombwa **gutera ibishyimbo bishingirirwa ku murongo** kubera ko :

- Bituma **hakoreshwa imbuto nke** isaranganyije kimwe mu murima wose;
- Byoroshya imirimo yo **kubagara, gushyiramo ifumbire no kuvanamo ibyatsi** bibi ndetse n'ibihingwa birwaye;
- Bituma **urumuri rwinjira mu bihingwa**, ntihabemo ubuhehere buhoraho butuma indwara ziyongera;
- Byorohera abagenzuzi bakabasha gusura umurima ndetse no gutera imiti;

Icyitonderwa:

- Ni byiza ko **intabire yose itererwa rimwe** kuko bituma ibishyimbo bikurira rimwe n'isarura rikazabera icyarimwe;
- Iyo ubutaka bubyuka cyane umuhinzi **yongera intera yo gutereraho** (akaba yageze kuri cm 60 hagati y'umurongo n'undi);
- Iyo ubutaka bukennye, umuhinzi ashobora **kugabanya intera** hagati y'ibishyimbo (agakoresha cm 40 hagati y'imirongo).

2.6 Kubagara

2.6.a. Babagara ryari?

Ibishyimbo bitangira kubagarwa bwa mbere bimaze ibyumweru 3 kugera kuri 4 bitewe.

2.6.b. Kubagara bikorwa bite?

Kubagara bisaba kumaramo ibyatsi. Ibishobora kubora bikarundwa hamwe bikazavamo ifumbire aho kunyanyagizwa mu murima. Ni ngombwa kongera kubagara indi nshuro imwe cyangwa ebyiri bitewe n'ubwinshi bw'ibyatsi bigaragara mu murima w'ibishyimbo.



Umuhinzi uri mu gikorwa cyo kubagara.

Ibyatsi byona ibishyimbo bikabicura imyunyu ntungabihingwa ndetse n'urumuri. Bishobora kandi kuba indiri y'indwara n'ibyonnyi.

Icyitonderwa

- Si byiza kubagara ibyatsi byaramaze kurenga ibishyimbo kuko biba byarabibujije gukura neza n'igikorwa cy'ibagara kikaba cyagorana kuko ushobora kubirandurana n'ibyatsi ndetse n'ibishyimbo;
- Ku butaka bubyuka cyane, ibagara rishobora gukorwa mbere y'igihe cyavuzwe hejuru.

2.7 Gusukira

Gusukira bihita bikorwa nyuma yo kubagara. Umuhinzi **azamurira igitaka ku bishyimbo** akakigeza hejuru gatoya y’aho imizi itangirira.



Ibishyimbo bisukiriye itaka.

Iki gikorwa gifasha:

- Igishyimbo **gushibuka indi mizi** ahageze itaka bityo bikagifasha mu kurwanya indwara z’imizi;
- Igishyimbo bigifasha **gukomera** ku buryo kidapfa kunyeganyezwa n’umuyaga;
- Kubona **aho ushinga ibiti** bishingirira ku butaka bufite isi ngufi;
- **Kurwanya amazi areka** mu murima yashoboraga gutuma imizi idahumeka neza bityo ikaba yabora, igishyimbo kigapfa;
- Mu **kurwanya isuri** kuko amazi atembera neza hagati y’imirongo y’ibishyimbo.

2.8 Gushingirira

Gushingirira ibishyimbo bikorwa nyuma yo kubagara ariko hari abahinzi bahita bashingirira nyuma yo gutera.



Ibishyimbo bibagaye bigeze igihe cyo gushingirirwa.

Gushingirira bishobora gukorwa ku buryo 2:

- Gukoresha **imishingirizo**
- Gukoresha **uruzitiro rw'ibiti** rwongerwamo imigozi

Iyo umuhinzi yakoresheje imishingirizo isanzwe, umushingirizo ushingwa hagati y'imyobo 2 ku murongo umwe kugirango ubashe gushyigikira ibishyimbo 4.



Ibishyimbo bishingiriwe.

Iyo hakoreshejwe uruzitiro, umuhinzi agomba gushaka ibiti bifite umubyimba munini ugereranije n’umubyimba w’imishingirizo izanzwe. Ibyo bita bishingwa kuri buri **metero 4** cyangwa **5** kuri buri murongo cyangwa se **ukarenga umurongo umwe**. Kuri ibyo bita hashyirwaho imbariro z’ibiti (zizirikishije imigozi cyangwa se ziteresheje imisumari) cyangwa se imigozi ireze cyane iyo ufite ibiti bikeya. Abahinzi benshi bahitamo gukoresha urubariro rumwe rutambitse hejuru, hasi bagatambikaho umigozi ureze cyane.

Kuri uru rubariro hazirikwaho imigozi ihagaze kandi ireze cyane ibishyimbo bizazamukiraho. Uburebure bwayo ntibugomba kurenga metero **ebiyiri n’igice**(2.5 m) kugeza kuri metero **eshatu** (3m) zavuzwe ku mishingirizo isanzwe.



Gushingirira ibishyimbo hakoreshejwe uruzitiro.

Icyitonderwa:

Ibishyimbo byurira bikenera ibiti bireshya na metero **ebyiri n'igice** (2.5 m) kugeza kuri **eshatu** (3m) z'uburebure. Ibirebire kurenzaho bituma ibishyimbo bitinda kwera.

III. KWIRINDA NO KURWANYA INDWARA N' IBYONNYI

Intambwe ya mbere mu kwirinda indwara z'ibishyimbo ni ukubahiriza imyiteguro n'imihingire yabyo nk'uko yavuzwe muri iyi mfashanyigisho.

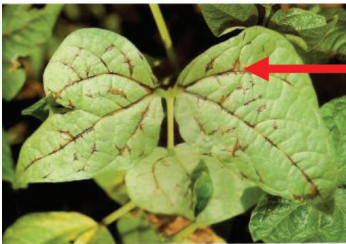
3.1. Akaribata



Ibimenyetso by'Akaribata

Ku misogwe hazaho amabara ajya gusa n'iroze (rose) asa n'agenda acukura agana ku ntete, ku buryo iyo indwara ikabije zibora.

Ku miteja ho hazaho amabara y'umukara ajya kuba uruziga y'umukara ariho agafu kajya kuba ikigina.

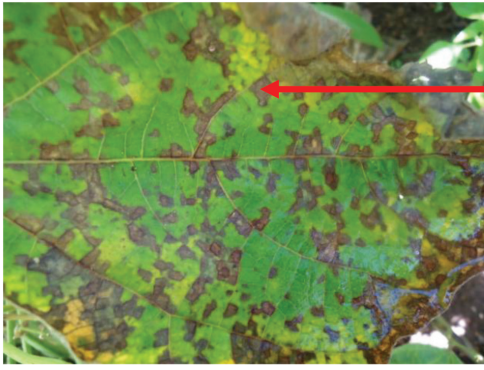


Ku mababi hazaho amabara ajya kuba umutuku. Iyo ndwara igitangira akaba umukara nyuma akagenda akurikiye udutsi tw'ikibabi.

Uburyo bwo kuyirwanya

- Gukoresha imbuto itarwaye kuko iyi ndwara igenda mu mbuto;
- Gukoresha ubwoko bw'ibishyimbo bwihanganira iyo ndwara;
- Gukoresha imiti nka Benomyl/Benlate.

3.2. Indwara ikora inguni



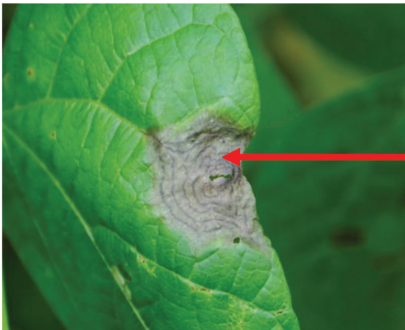
Ibimenyetso

Ku mababi haza amabara y'ikigina akora inguni ku miyoboro y' amatembamazi.

Uko wayirwanyanya

- Gukoresha imbuto yavuye mu murima utarwaye;
- Kubera ko iyi ndwara igenda mu bishogoshogo, ni byiza kubivana mu murima kandi ntubifumbize imirima izaterwamo ibishyimbo;
- Gukoresha imbuto zihanganira iyi ndwara.

3.3. Asikoshitoze(Indwara ikora ibiziga)



Ibimenyetso:

- Amabara y'ikigina yeruruka agenda akora uruziga rugenda ruba runini uko indwara yiyongera akora inziga;
- Ku miteja haza ibibara binini by'umukara;
- Ku mashami no mu ngingo haza naho amabara y'umukara.

Uburyo bwo kuyirwanya

- Gutera imbuto ihungiywe hakoreshejwe imiti yabugenewe;
- Gukoresha amoko yihanganira indwara;
- Gukoresha umuti imiti imeze nk'ikoreshwa ku ndwara zavuzwe hejuru.

3.4. Bacteriose a Halo (Halo bright)

Iyi ndwara ikunda kugaragara ahantu hakonja cyane.



Ibimenyetso

- Amabara abengerana ku mababi nk'aho bamennyeho amavuta y'ubuto ku kibabi hejuru;
- Uko indwara yiyongera amababi agenda ashwanyagurika yose bikagabanya umusaruro.

Uko wayirwanya

- Gukoresha imbuto zitarwaye, n'ukuvuga izitaturutse mu mirima irwaye kuko iyi ndwara igenda mu mbuto;
- Gusimburanya ibihingwa mu murima;
- Kubagara uko bisabwa kuko ibyatsi bishobora kubika udukoko dutera indwara;
- Gukoresha ubwoko bw' ibishyimbo butarwara cyangwa bwihanganira iyo ndwara.

3.5. Ububembe bw'ibishyimbo



Ibimenyetso

- amababi ata ireme, akaba mato, akihinanahina cyangwa akaba icyatsi kerurutse;
- Igishyimbo kirasyigingira.

Uko wayirwanya

- Gukoresha ubwoko bw' ibishyimbo butarwara iyo ndwara cyangwa buyihanganira;
- Gukoresha imbuto zizewe ko zavuye mu mirima itarafashwe n' iyo ndwara kuko igenda mu mbuto.

3.6. Indwara z'imizi

Ibimenyetso

Zimwe mu ndwara z'imizi zifata ibishyimbo bikiri bitoya mu gihe izindi zibifata bitangiye kuzana indabo. Izi ndwara zihuriye ku bimenyetso bikurikira:

- Kubora kw'imizi;
- Kuraba kw'ibishyimbo hanyuma bikuma, amababi akaba umuhondo.

3.7. Ubuhunduguru bwirabura:



Ibimenyetso

- Ibishyimbo byafashwe bikura nabi;
- Amababi agahinduka umuhondo.

Uko waburwanya

- Guhinga kijyambere ku buryo ibishyimbo bikura vuba;
- Kurwanya indwara hakoreshejwe imiti yabugenewe iboneka mu maduka acuruza inyongeramusaruro.

IV. GUSARURA NO KUGEZA UMUSARURO KU ISOKO

4.1. Gusarura ibishyimbo

Gusarura bikorwa ibishyimbo bimaze kwera neza, imisogwe imaze kuba ikigina. Ubwo haba ari nyuma y'iminsi yavuzwe hejuru mu mbonerahamwe ku moko y'ibishyimbo bishingirirwa.

Si byiza gusarura ibishyimbo bimaze kumira mu murima cyane.

Ibishyimbo byanikwa ku mbuga za sima cyangwa se ku mashitingi. Si byiza kwanika ku butaka kuko ibishyimbo bihura n'ubukonje cyangwa se imyanda. Uburyo bwo guhura bugomba kuba budatuma intete zimenagurika,

4.2. Guhunika ibishyimbo

Ibishyimbo bihunika ahantu hagera umwuka uhagije, humutse kandi hatagera udusimba tubyangiza. Ibishyimbo bihungizwa imiti yica udukoko tubyangiza nka Actellic cyangwa se Super skana super. Actellic ikoreshwa ku gipimo cya g 100 ku biro 100 naho Super skan super igakoreshwa ku gipimo cya g 50 kuri kg 90.

4.3. Kugeza ibishyimbo ku isoko

Umusaruro w'ibishyimbo ugomba gucuruzwa wumye neza kandi usukuye (ugosoye). Mu gihe umuhinzi cyangwa Koperative bashaka isoko ry'umusaruro bagomba kwita kuri ibi bikurikira:

- a) **Ubwoko bw'ibishyimbo:** ibishyimbo birimo amoko menshi. Dushobora kubitandukanya duhereye ku mabara yabyo, ubunini bw'intete, uko bivanze n'ibindi. Ibi byose bishobora gutuma umuguzi ahitamo ubu bwoko cyangwa se buriya. Umuhinzi agomba kumenya neza icyo abaguzi bashaka ku bijyanye n'iby byiciro by'ibishyimbo.
- b) **Aho abicururiza:** Mu mijyi ntibahitamo kimwe no mu cyaro. Ntibanatanga igiciro kimwe. Hari igihe ubwoko

bw'ibishyimbo bikunzwe mu muji atari kimwe n'ibikunzwe mu cyaro. Mu muji kandi bakunze kuba batanga ibiciro biri hejuru ugereranyije no mu cyaro. Umuhinzi agomba gufata ingamba zituma aho acururiza ibishyimbo bye haba hari igiciro kiza kandi hari isuku ku buryo hakurura abaguzi.

c) **Igiciro:** Umuhinzi agomba kugena igiciro cy'umugaruro we ashingiye ku byo yashoye. Iyi niyo mpamvu yo kugira ikayi yandikwamo ibijyanye n'ubuhinzi. Ariko kandi ni ngombwa ko umuhinzi amenya n'uko ibiciro byifashe ku masoko atandukanye akoresheje telefone ye. Ujya aho wandikira ubutumwa, ukandika IGICIRO, ugasiga akanya, ukandika IGIHINGWA, ugasiga akanya, ukandika IZINA RY'ISOKO ugahita wohera kuri 7656. Uhita ubona ubutumwa bukubwira igiciro cy'ibishyimbo ku isoko wanditse.

d) **Kumenyekanisha igicuruzwa:** Umuhinzi agomba kumenyekanisha ko afite umugaruro mwiza w'ibishyimbo. Ibyo ashobora kubikora ku buryo bwinshi burimo kwitabira amakoperative y'abahinzi, kwitabira ibikorwa rusange n'inama zitandukanye.

Iyo abahinzi bagurishirije umugaruro hamwe nko muri Koperative barushaho kugira ijambo.

Umaze gusoma aka gatabo ku buhinzi bw`ibishyimbo bishingirirwa, twifuzaga ko wagira icyo ukavugaho kugira ngo turusheho kunoza uburyo bwo kubagezaho amakuru y`ubuhinzi n`ubworozi!

1. Ibyo ushima kuri aka gatabo

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2. Ibyakosorwa muri aka gatabo

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3. Ubundi bumenyi bw`ingenzi wifuza kumenya ku bishyimbo bishingirirwa

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Umaze kuzura uru rupapuro ruce urwohereze kuri CICA cyangwa ku biro bya RAB bikwegereye



