



Funded by
the European Union



UBUHINZI BW'IBINYOMORO



GICURASI 2024

ISHAKIRO

1. AKAMARO K'IBINYOMORO	2
2. AMOKO Y'IBINYOMORO ABONEKA MU RWANDA	2
3. AHABERANYE N'UBUHINZI BW'IBINYOMORO	3
4. GUTEGURA INGEMWE	3
4.1. Gutegura umurama uzatanga ingemwe	3
4.2. Kwinaza mu buhumbikiro no kubukurikirana	4
4.2.1. Ahashyirwa ubuhumbikiro.....	4
4.2.2. Uko ubuhumbikiro butegurwa.....	5
4.3. Kwita ku buhumbikiro nyuma yo kwinaza	5
4.4. Gutegura pepiniyeri no gupangamo ibihoho.....	6
4.5. Kugemurira ingemwe mu bihoho no kwita ku ngemwe zagemuwe	6
4.6. Kumenyereza ingemwe zitegura guterwa	7
5. GUHITAMO UMURIMA, GUTEGURA UMURIMA NO GUTERA	7
5.1. Guhitamo umurima	7
5.2. Gutegura umurima	7
5.3. Gutera	7
6. KWITA KU BINYOMORO NYUMA YO GUTERA.....	8
6.1. Gusasira	8
6.2. Kuvomerera.....	8
6.3. Kubagara	9
6.4. Kongeramo ifumbire y'imvaruganda	9
6.5. Gukonorera ibiti.....	9
6.6. Kurwanya indwara n'ibyonnyi	10
7. GUSARURA IBINYOMORO NO GUFATA NEZA UMUSARURO	11
7.1. Igihe cyo gusarura.....	11
7.2. Amasaha yo gusarura	11
7.3. Uburyo bwo gusarura	11
7.4. Kurobanura no gushyira imbuto z'ibinyomoro mu byiciro.....	11
7.5. Gupakira no gutwara umusaruro w'ibinyomoro	12
7.6. Kubika ibinyomoro	12
8. INDWARA N'IBYONNYI BY'IBINYOMORO	12

1. AKAMARO K'IBINYOMORO

Ibinyomoro ni igihingwa kibarirwa mu muryango w'ibisantobo kimwe n' ibirayi, inyanya, intoryi, urusenda, puwavuro ndetse n'isogo. Igiti gitangira kwera imbuto mu gihe cy'amezi 8- 12 nyuma y'uko ugiteye mu butaka. Ibinyomoro bimara imyaka iri hagati yi 2 ni 3 byera ariko iyo ucyitayeho neza ukagiha ifumbire n'amazi bikwiye, ndetse ntigihure n'ibibazo by'uburwayi, gishobora kugeza ku myaka 5 kigitanga umusaruro. Nyuma yo kurabya kimara ibyumweru bigera kuri 21 (amezi 5) kugirango kube cyeze neza.

Ibinyomoro ni imbuto z'ingirakamaro mu kuzanira umubiri w'umuntu intungamubiri. Bikize kuri vitamini C, A, B6, na E ndetse no ku myunyu nka Feri, karisiyumu na Potasiyumu. Ibinyomoro bifite kandi ibituma bishobora kugira uruhare mu kurwanya indwara nka kanseri n'indwara zimwe na zimwe z'umutima; bifite kandi n'ibinyamasukari bitanga ingufu.

Ibinyomoro biterwa basiga m 2 hagati y'imirongo na m 2 hagati y'igiti n'ikindi; ni ukuvuga ibiti 2500 kuri hegitari. Ikinyomoro gifashwe neza cyera byibura kg 10 ku giti ku mwaka. Umusaruro kuri hegitari ungana na toni 25 kuri hegitari ku mwaka.

2. AMOKO Y'IBINYOMORO ABONEKA MU RWANDA

Ibinyomoro birimo amoko menshi atandukanywa, urebeye ku ibara ry'urubuto rweze, uko urubuto ruteye ndetse n'ingano yarwo. Mu Rwanda haboneka amoko y'imbuto zifite ibara ry'umutuku n'afite ibara ry'umuhondo. Ubunini bw'izo mbuto z'umutuku n'uko ziteye nabwo buratandukanye. Ku birebana n'amabara, ibinyomoro by'umuhondo ntabwo bikunzwe cyane ugereranyije n'ibitukura.

Ubwoko bubiri bw'ibibinyomoro, imbundi n'insongore nini nibwo bukunze guhingwa cyane mu Rwanda.



Ikinyomoro cy'umuhondo



Ikinyomoro cy'umutuku



Imbundi



Insongore

3. AHABERANYE N'UBUHINZI BW'IBINYOMORO

Ubutaka: Ibinyomoro byera neza mu butaka burimo ifumbire nyinshi, bufite ubutote buhagije kandi buhitisha amazi n'umwuka. Ntibyihanganira ahantu hareka amazi cyangwa humaganye. Igipimo cy'ubusharire bw'ubutaka (pH) kigomba kuba kiri hafi ya 6.

Ubushyuhe bw'ikirere: Ibinyomoro bikunda ubushyuhe bugereranyije buri hagati ya dogere 15 na dogere 22 (15-22°C).

Ubutumburuke: Ibinyomoro bikunda ahantu hari ubutumburuke buri hagati ya metero 700 na metero 3000 uvuye ku Nyanja.

Imvura: Ibinyomoro bikunda ahantu hagwa imvura igabanyije neza mu mwaka, iri ku gipimo cya mm 1200-1600 ku mwaka. Iyo nta mvura iriho cyane cyane igihe cy'izuba, ni ngombwa kuvomerera. Kuvomerera hakoreshejwe amazi arenze akenewe bituma birwara indwara zo mu bwoko bw'uduhumyo (imiyeye). Umwuzure wangiza igihingwa cy'ibinyomoro ugatuma kidakura neza. Igihe nta mvura igwa ndetse ntibivomererewe, umusaruro uba muke n'imbuto zikaba nto cyane.

Umuyaga: Ibinyomoro bikunda ahantu hatari imiyaga myinshi kuko ibivunagura. Iyo imiyaga ihaboneka bigomba gukikizwa n'inzitiro zitangira umuyaga ndetse amashami yabyo akazirikwa kugira ngo adahanguka.

4. GUTEGURA INGEMWE

4.1. Gutegura umurama uzatanga ingemwe

Umurama uzatanga ingemwe z'ibinyomoro ugomba kuva ku biti bitarangwaho uburwayi kugirango hirindwe indwara zikwirakwizwa n'imbuto.

Mu gutegura ingemwe ukurikiza amabwiriza akurikira:

- Hitamo igiti cy'ikinyomoro cyakuze neza cyera imbuto nyinshi kandi nini.
- Sarura imbuto z'ibinyomoro zeze neza zidafite ubusembwa zahishije neza (zabaye umutuku, cyangwa umuhondo bitewe n'ubwoko bwazo).
- Imbuto zimaze gusarurwa zibikwa ahantu hatari urumuri zipfundikiye kugira ngo zishye neza kandi zihugute, nko mu gihe cy'ibyumweru bibiri.
- Mbere yo kuzikata, zironge mu mazi arimo Jik yagabanyirijwe ubukana ikagera kuri 1%. Urugero: Iyo ufite jik ifite ubukana bwa 5% ufata urugero 1 rwa Jik mu ngero 3 z'amazi). Iyo nta JIK idahari, ushobora gukoresha amazi arimo umunyu w'igisoryo. Ibi byica indwara zishobora kuba ziri ku gihu.
- Satura imbuto z'ibinyomoro mo kabiri uvanemo imbuto zivanze n'umutobe ukoresheje ikiyiko cyangwa se intoki zitanduye.

- Imbuto zibonetse zirongwa mu mazi arimo Jik yagabanyirijwe ubukana ikagera kuri 1%, ibi bikorwa kugirango ibyatera indwara ndetse n'utundi dukoko bipfe. Mu kuronga ugomba kumaraho umurenda neza. Uronga byibuze inshuro 3 kugeza imbuto zikaye neza.
- Imbuto zimaze kurongwa zanyikwa ku nkoko mu gicucu iminsi 3 kugeza ku minsi 10 zikavangwa kenshi hakoreshejwe intoki kugirango zidafatana.
- Umurama ubonetse ushobora guhita uhumbikwa.
- Iyo umurama udahise uterwa, ni ngombwa kuwubika ahantu humutse ariko hahehereye mu mabashya y'impapuro ariko nturanze amezi 3 utarazitera.
- Ikilo kimwe cy'imbuto kiva mu biro 80-100 by'ibinyomoro.
- Muri garama imwe y'imbuto zibonetse zimaze kuma hashobora kuvamo imbuto zigera ku 150.



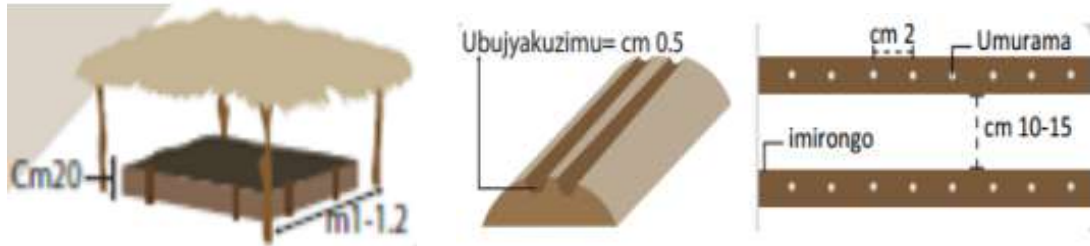
4.2.Kwinaza mu buhumbikiro no kubukurikirana

4.2.1. Ahashyirwa ubuhumbikiro

- Ubuhumbikiro bushyirwa ahantu hatigeze hahingwa ibihingwa byo mu muryango umwe n'ibinyomoro (ibirayi, inyanya, intoryi, urusenda, puwavuro, ndetse n'isogo) nibura mu bihembwe by'ihinga bibiri (2) bishize.
- Aho hantu kandi hagomba kuba hategereye imirima ihinzwemo ibyo bihingwa bivuzwe haruguru.
- Hagomba kuba hari ubutaka bworoshye, bwumutse, butarekamo amazi. Ahatari umuyaga mwinshi. Aho imirasire y'izuba igera bihagije.
- Aho hantu kandi hagomba kuba hahinze neza nibura ku bujyakuzimu bwa cm 20-30 kandi ibyatsi bibi n'ibindi bisigazwa byose bigakurwamo, ndetse n'ibinonko bikamenagurwa. Ubusharire bw'ubutaka (pH) buri hagati ya 5 na 6.
- Ubutaka bugomba kuba buseseka kugirango imizi ikure neza.

4.2.2. Uko ubuhumbikiro butegurwa

- Kora imitabo ifite ubujyejuru bwa cm 20, n'ubugali bwa m 1-1.2m;
- Koresha imborera iboze neza: amashyi atatu (ibiro 3-5) kuri metero kare imwe.
- Ca imirongo yo kwinazamo ifite ubujyakuzimu bwa cm 0.5 - 1 kandi itandukanijwe na cm 10 -15.
- Umurama ushyirwa muri ya mirongo yaciwe ku ntera ya cm 2 hagati y'intete n'indi; ukarenzeho agataka gacye, ugatsindagira gahoro.



Icyitonderwa:

- Kwinaza bishobora gukorwa mu bihoho bikoze mu birere cyangwa amashashi abora.
- Ibihoho bipakirwamo itaka n'imborera iboze neza ku ngero za 2:1 (urugero: ingorofani ebyiri z'itaka n'imwe y'imborera); Haterwa imbuto k'ubujyakuzimu bwa cm 0.5-1.
- Kwinaza kandi bishobora gukorewa mu bikoresho byabugenewe byitwa itireyi (trays), aho ingemwe zikurwa nyuma y'igihe runaka zikimurirwa mu bihoho.



4.3.Kwita ku buhumbikiro nyuma yo kwinaza

- Iyo kwinaza birangiye hakurikiraho gushyiraho isaso y'ibyatsi byumye neza.
- Ingemwe zikimera (nyuma y'iminsi 7 – 10), isaso ihita ikurwaho.
- Ubuhumbikiro burubakirwa bugatwikirwa kugira ngo ingemwe zirindwe kwicwa n'izuba ariko ugomba gusiga aho imirasire y'izuba inyura kuko ingemwe ziba zirikeneye ku rugero ruringaniye.
- Ni byiza kuvomera mu gitondo cya kare izuba ritarava.
- Iyo bibaye ngombwa, haterwa imiti irwanya indwara (mancozeb cyangwa methalaxyl: garama 2.5 / Litiro 1 y'amazi) n'ibyonnyi (Lambda-Cyhalothrin cyangwa Acetameprid: 1 ml / Litiro 1 y'amazi).

4.4. Gutegura pepiniyeri no gupangamo ibihoho

Pepiniyeri yubakwa ahagereye amazi kugira ngo kuvomerera byorohe, hafi y'inzira nyabagendwa kugira ngo bazoroshye gutwara ingemwe ariko hakaba hitaruye imirima y'ibinyomoro ndetse n'ibindi bisantobo kugirango hirindwe indwara.

Iyo umaze guhitamo ahazajya pepiniyeri hakurikiraho imirimo ikurikira:

- Kuringaniza neza ahazajya pepiniyeri;
- Gupima no guca imitabo basiga hagati y'umutabo n'undi cm 50 z'akayira naho umutabo ukagira m 1 - 1.20 z'ubugari;

Imitabo ikikizwa ingeri z'ibiti kugirango zitangire ibihoho birimo ingemwe;

Kubaka pepiniyeri no kuyisakara;

- Gupakira ibihoho itaka rivanze n'imborera iboze neza ku ngero za 2:1 (urugero: ingorofani ebyiri z'itaka n'imwe y'imborera);
- Gupanga ibihoho mu mitabo hagati y'ingiga zizengurutse imitabo.

4.5. Kugemurira ingemwe mu bihoho no kwita ku ngemwe zagemuwe

- Iyo ingemwe zigize nibura cm 5 z'ubujyejuru n'amababi 2 cyangwa 3, ni ukuvuga nibura nyuma y'ukwezi n'igice, zimurirwa mu bihoho byateguwe muri pepiniyeri bifite nibura cm 10 z'umurambararo na cm 15 z'ubuhagarike.
- Mbere yo kuvana ingemwe mu buhumbikiro, ni byiza kubanza kuvomerera n'amazi ahagije kugira ngo kuzivanamo byorohe bityo imizi ntiyangirike;
- Ingemwe zivuye mu buhumbikiro ziterwa mu bihoho byatondetswe muri pepiniyere
- Hakurikiraho kujya bavomerera mu gitondo kare.
- Ni ngombwa kwibuka kuvanamo utwatsi no kumenera ubutaka mu bihoho igihe cyose bigaragara ko ari ngombwa.



4.6.Kumenyereza ingemwe zitegura guterwa

- Kugira ngo ingemwe zikomere zizabashe gufata neza mu murima zizaterwamo, ni byiza kugabanya igihe cyo kuvomerera kandi ukagenda ugabanya igicucu cy'ubuhumbikiro mu gihe cy'icyumweru kimwe cyangwa 2 mbere yo kugemura.
- Kwimura ingemwe: Ni ukuzivana mu myanya yazo ukazishyira ahandi kugira ngo umuzi fatizo udakomeza gucengera mu butaka. Ibi bigabanya imikurire y'ingemwe, cyane cyane izashurumbutse bituma na none babasha guhitamo ingemwe nziza, bityo ingemwe mbi ndetse n'ibihoho birimo ubusa bikavanwamo.
- Ingemwe zimaze kugira cm 15-20, ni ukuvuga zifite igihe cy'amezi atatu kugeza kuri atanu (3 - 5) nyuma yo kwinaza, zishobora kwimurirwa mu murima wateguwe neza.

5. GUHITAMO UMURIMA, GUTEGURA UMURIMA NO GUTERA

5.1.Guhitamo umurima

Umurima wo guhingwamo ibinyomoro ugomba kuba utarigezemo ibihingwa byo mu muryango umwe nabyo byibuze mu bihe by'ihinga bibiri (2) bishize.

Uwo murima mushya w'ibinyomoro ugomba kandi kuba kure y'umurima urimo ibinyomoro bikuze cyangwa ibindi bisantobo.

5.2.Gutegura umurima

Ibyiciro byo gutegura umurima: (1) Gutema/Gutemurura, (2) Gutongora, (3) Kurima, (4) Gutabira/Gusanza, (5) Kurwanya isuri, (6) Gushinga imambo, (7) Gucukura imyobo, (8) Gusiba imyobo ushyiramo ifumbire. Byaba byiza umurima ushyizweho uruzitiro kuko birinda indwara, ibyonnyi bitandukanye ndetse n'umuyaga. Aha hashobora gukoreshwa ibiti bitanga ifumbire y'azote nka Calliandra (Kariyandara) cyangwa Leucaena (Resena).

5.3.Gutera

Igihe cyo gutera: Ni ngombwa gutera ingemwe z'ibinyomoro igihe imvura itangiye kugwa kugira ngo zishobore gufata neza. Ibi bikorwa mu kwezi kwa nzeri n'ukwakira.

Amasaha yo gutera: Ni byiza gutera ingemwe kare mu gitondo cyangwa ku mugoroba kugirango ubuhehere buzifashe kwisubira.

Guhitamo ingemwe: Himurwa kandi hagaterwa gusa ingemwe zidafite indwara iyo ari yo yose, zifite amababi y'icyatsi kibisi gitoshye.

Uko gutera bikorwa:

- Cukura imyobo ifite cm 40-60 z'ubugari na cm 40-60 z'ubujyakuzimu ku ntera ya m 2 kuri m 2.
- Vanga itaka ryo hejuru (30 cm) n'ifumbire y'imborera iboze neza (kg 10-20) maze ubishyire mu mwobo. Hakenerwa toni 50 z'ifumbire y'imborera kuri hegitari.

- Kura ishashi ku rugemwe urushyire mu mwobo ku buryo itaka rigera aho ryari rigeze urugemwe ruri mu gihoho.
- Tsindagira gahoro ubutaka bw’i ruhande y’urugemwe.

6. KWITA KU BINYOMORO NYUMA YO GUTERA

6.1.Gusasira

Hakoreshwa ibyatsi byumye neza

Isaso ituma ubutaka bugumana ubuhehere kandi ntibwangirike ndetse ikarwanya n’ibyonnyi. Gusasira kandi bikumira ibyatsi bibi mu murima. Gusasira bikorwa basiga cm 5-10 uvuye ku rugemwe kugira ngo hirindwe uburwayi n’udusimba byaturuka ku isaso.



6.2.Kuvomerera

Nyuma yo gutera ni ngombwa guhita bavomerera. Ibi kandi bikomeza gukorwa igihe cyose imvura itagwa cyangwa idahagije.

Ni ngombwa kuvomererera witonze udatosa amababi kugirango hatabaho kwanduza indwara zituruka mu butaka.

Igitu kimwe cy’ikinyomoro gikenera litiro 10-15 z’amazi mu cyumweru mu gihe cy’izuba.



6.3.Kubagara

Kubagara bikorwa igihe cyose ibyatsi bibi bigaragara mu murima.

Ibyatsi bibi bishobora kuba imvanyo y'indwara n'ibyonnyi mu murima kandi bikabuza igihingwa gukura neza kuko nabyo binyunyuzwa ibitunga igihingwa biba biri mu butaka ndetse bigacuranywa urumuri n'ibinyomoro byatewe cyane cyane iyo bikiri bito. Gusasira Kuvomerera Kurwanya ibyatsi bibi.



6.4.Kongeramo ifumbire y'imvaruganda

Kugira ngo ibinyomoro bikure neza, ni ngombwa gushyira mu butaka ifumbire ihagije. Ibinyomoro bikenera ifumbire y'imborera n'imvaruganda.

Si byiza ko ifumbire igihingwa gikenera ishyirwaho yose inshuro imwe igihe cyo gutera; ahubwo iyi fumbire igabanwamo ibice. Iyi fumbire akenshi ishyirwa ku muzenguruko w'urugemwe aho imizi igarukira.

Igitiki kimwe cy'ibinyomoro gikenera garama 240 za NPK 17-17-17 ku mwaka wa mbere na garama 480 mu myaka ikurikiyeho.

Ifumbire ihabwa igihingwa kimwe igabanwamo inshuro eshatu zingana igaterwa igihe cyo gutera, nyuma y'amezi atatu (3) na nyuma y'amezi atandatu (6) mu mwaka wa mbere. Mu myaka ikurikiyeho, garama 480 za NPK 17-17-17 zishyirwa ku gitiki buri mezi ane (4).



6.5.Gukonorera ibiti

- Koresha gusa ibikoresho bityaye neza nka sekateri kugira ngo ibyo bice bikatanwe isuku.
- Mbere yo kuva ku gitiki ujya ku kindi nyuza igikoresho muri Jik.
- Kuraho ibice byose by'ibinyomoro birwaye (amababi, imbuto, amashami n'ibindi).

- Ni ngombwa kwibuka ko igiti gikatwa buri mwaka bakuraho amashami aherutse kugirango gitange amashami menshi azatanga imbuto, bakagikatira ku burebure bwa metero imwe kugeza kuri 1.20 m.
- Iyo gikase neza bituma igihe cy'isarura kiyongera bikanoroshya igikorwa cy'isarura.



6.6. Kurwanya indwara n'ibyonnyi

Si byiza ko umuhinzi arindira ngo ibinyomoro bye bifatwe n'indwara cyangwa ibyonnyi kugirango azatangire ku bivura. “Kwirinda biruta kwivuza”. Mu bika bikurikira turaganira birambuye ku buryo bukomatanije bwo kurwanya indwara n'ibyonnyi.

Nyuma turaza kureba indwara n'ibyonnyi by'ingenzi by'ibinyomoro ndetse turebere hamwe uko twabyirinda n'uko twahangana nabyo bibaye byaje.

7. GUSARURA IBINYOMORO NO GUFATA NEZA UMUSARURO

7.1.Igihe cyo gusarura

Igitigi tangira kwera imbuto mu gihe cy'amezi 8-12 nyuma y'uko ugiteye mu butaka. Ibinyomoro bisarurwa bigejeje igihe cyo kwera neza, byamaze guhindura ibara byabaye umuhondo cyangwa umutuku bitewe n'ubwoko.

7.2.Amasaha yo gusarura

Ni byiza gusarura kare cyane mu gitondo cyangwa ku mugoroba igihe izuba ari rike.

7.3.Uburyo bwo gusarura

Imbuto z'ibinyomoro zigomba gusarurwana inkondo yazo kuko ibinyomoro binyunyuzamazi mu nkondo mu gihe bitarabikwahanu hafutse bityo bigatuma zongera amahirwe yo kutabovavuba.

Ni byiza gukoresha icyuma gityaye neza kugirango igiti cy'ikinyomoro kidakomeretswa.

Birabujijwe gutera cyangwa kujugunya ibyo usaruye mu bikoresho bisarurirwamo mu murima.

Ni ngombwa kwirinda ku buryo bushoboka bwose kurekera ku zuba ibyo wasaruye, haba mu gihe usarura cyangwa nyuma yo gusarura kuko umusaruro wakubiswe n'ubushyuhe bw'izuba wangirika vuba.

7.4.Kurobanura no gushyira imbuto z'ibinyomoro mu byiciro

Kurobanura bikorwa hatoranywamo iziteze, izagwingiye, izifite ubusembwa n'izigaragaza uburwayi.

Uburyo nyabwo bwo kurobanura no gushyira imbuto mu byiciro buba bugomba gutanga icyizere ku bahinzi, abaranguza, abadandaza n'abohereza mu mahanga, kugira ngo bagenzure ubwiza, ubunini no kwera neza kw'imbuto.

Kurobanura no gushyira mu byiciro bishobora kongera agaciro k'umusaruro ku rugero rwa 40 % kugeza kuri 60 %.

Kurobanura no gushyira mu byiciro bishobora kugabanya iyangirika ry'umusaruro kuko:

- Bibuza kwanduzanya indwara hagati y'imbuto kuko iyo zivangavanze izirwaye zanduza izitarwaye.
- Bigabanya kononekara guterwa n'umwuka wa etilene (urugero: gusaza imburagihe cyangwa gushya) ibyo ubusanze biba iyo imbuto zikomeretse cyangwa zahiye zavanzwe n'imbuto nzima zitangiritse cyangwa ngo zishye.

Iyo kurobanura birangiye, imbuto z'ibinyomoro zishyirwa mu byiciro hagendewe ku bunini, ibara.

7.5. Gupakira no gutwara umusaruro w'ibinyomoro

Biba byiza igihe umusaruro wapakiwe neza mu makarito akomeye, muri Kureti (isanduku zikoze mu biti cyangwa muri pulasitiki zikomeye); kuruta gupakira mu mifuka cyangwa ibitebo bifunguye kubera ko byo bitabasha kurinda imbuto kwangirika iyo bipakiye.

Ibikoresho bipakirwamo umusaruro bigomba kuba byoroshye kubitwara mu gihe birimo ubusa kandi bitwara umwanya muto iyo bipakiye. Urugero: kureti (ibisanduku bya pulasitiki) bazipanga imwe mu yindi iyo zirimo ubusa, ibikarito bikomeye bateranya n'intoki.

Bigomba kuba byinjiramo akayaga gatuma umusaruro ugubwa neza mu gihe uri mu nzira cyangwa mu bubiko.

Ibikoresho bapakiramo ntibigomba kandi kuba bigari cyane kugira ngo imbuto nyinshi zitaryamirane. Gukoresha ibikoresho bitoya nabyo bishobora guhendesha, ariko bigabanya kwangirika k'umusaruro bigatuma inyungu izamuka. Kugabanya ubunini bukabije bw' ibikoresho bapakiramo bishobora kugabanya igihombo ku rugero rwa 30%.



7.6. Kubika ibinyomoro

Imbuto zisaruwe ku binyomoro zishobora kubikwa kugeza ku byumweru 9 iyo zibitswe ku bukonje bwa dogere 1 kugeza kuri 5 hamwe n'ubuhehere bwa 90 kugeza kuri 95%. Iyo zibitswe mu bukonje buri munsu y'ubwo zirangirika.

Uburyo bwiza bwo kongera ubuhehere ni ukugabanya ubushyuhe. Ubundi buryo ni ubwo kongerera umwuka ububobere, ahazengurutse umusaruro ukahasukira cyangwa ugatosa imbuga yose y'icyumba gihunitsemo.

8. INDWARA N'IBYONNYI BY'IBINYOMORO

Indwara/	Ibimenyetso	Uko bazirinda	Ibipimo by'umuti
----------	-------------	---------------	------------------

	Ibyonnyi			bikoreshe muri L20 z'amazi + Iminsi ikenerwa kugira ngo igihingwa cyatewe umuti gisarurwe (PHI)
1	Mildiyu y'ifu (Powdery mildew) 	- Igaragara cyane ku kibabi hejuru, ku ruti ruto, ku mutwe w'igihingwa, ku ndabo no ku mbuto. - Iyi ndwara igaragazwa n'ibibara bimeze nk'ivu by'ikijuju. - Indabo zibanza kuba umuhondo nyuma zikuma, zikaba umukara zigapfa. - Amababi yafashwe ashobora kuba umuhondo kandi akikunja naho intimatima ntibumbure. Amababi yose ashobora gukokoka ku giti agashiraho iyo itarwanijwe.	- Gukuraho amababi arwaye ukayata kure y'umurima. - Gukoresha umuti wica uduhumyo urimo sufure (Urugero: thiovit) - Kutegeranya ibinyomoro mu gihe cy'itera.	- Sulphur (Thiovit): g 50 PHI: iminsi 3-15 - Copper oxychloride: g 40-60 PHI: iminsi 14 - Azoxystrobin 25% SC (Othello): g 20 PHI: iminsi 10-15
2	Kubabuka (blight) 	- Iyi ndwara ikara cyane mu gihe cy'ubukonje n'ubuhehere bwinshi buboneka mu gihe cy'imvura. - Ikwirikizwa vuba ikaba yakwangiza igihingwa mu	- Kwirinda guhinga ibinyomoro ahantu haba inyababa. - Kutegeranya ibinyomoro mu gihe cy'itera. - Kuvanoho ibisambo kugira ngo umwuka	- Mancozeb + Metalaxy (Victory, Safarizeb): g50 PHI: iminsi 30 - Copper oxychloride: g40-60 PHI: iminsi 14 - Mancozeb: g50 PHI: iminsi 7-15

		gihe gito igaragaye. - Iyi ndwara ifata igihingwa cyose. - Ibimenyestso bigaragara ku mababi biza ari nk'ibibara bitose by'ibara ry'ivu bizahinduka nyuma nk'ivu ryijimye uko igenda ikwira hose.	ubashe gutembera neza mu mababi. Gutera umuti urimo Mancozeb (Dithane), cyangwa Mancozeb + Metalaxyl (Ridomyl, Victory, Safari-Zeb, ...).	
3	Inziga ku mababi (<i>Ascochyta sp</i>) 	Irangwa n'ibiziga bito bito by'umukara byumye biza ku mababi cyane cyane amababi ashaje	- Guhinga imbuto itarwaye. - Gukuraho amababi arwaye ukayata kure y'umurima. - Kutegeranya ibinyomoro mu gihe cy'itera. - Gusimburanya ibihingwa mu murima hahingwa ibindi bitari mu muryango umwe.	- Sulphur (Thiovit): g 50 PHI: iminsi 3-15 - Copper oxychloride: g 40-60 PHI: iminsi 14 - Azoxystrobin 25% SC (Othello): g 20 PHI: iminsi 10-15
4	Akaribata (Antarakinoze) 	- Ituma ibice byinshi bihinduka umukara (dark lesions) kugera no ku mbuto; - Ituma indabyo ndetse n'imbuto zihunguka; - Imbuto zasaruwe ntizishobora kubikika igihe kirekire kuko zihita zibora; - Imbuto zirakomera kandi	- Gusimburanya n'indi myaka (nibura imyaka 2) - Kubagara (kwirinda ibyayanduza) - Gusasira - Kurandura ibyafashwe ukabitaba kure y'umurima - Gutera imiti yica uduhumyo	- Sulphur (Thiovit): g 50 PHI: iminsi 3-15 - Copper oxychloride: g 40-60 PHI: iminsi 14 - Azoxystrobin 25% SC (Othello): g 20 PHI: iminsi 10-15 - Chlorothalonil: ml20 PHI: iminsi 7

		umubiri wazo ukipfunyarika.		
5	Virusi z'ibinyomoro (Imfunyarazi, mozayike, ...) 	- Kugwingira kw'igihingwa, kwikunja kw'amababi, kubemba kw'amababi, ibibara by'umuhondo ku mababi. - Indwara ziterwa na virusi zikwirakwizwa n'imbuto zirwaye, isazi y'umweru, inda z'ibihingwa, ...	- Kurandura no gutaba ibyamaze gufatwa na virusi; - Gutera imbuto itarwaye; - Kurwanya inda z'ibihingwa n'utundi dukoko tuguruka kuko dukwirakwiza izo ndwara.	Nta miti yihariye yica virus.
6	Inda/Uburima /Ubugunduguru 	- Inda zitungwa no kunyunyuza ibimera zafasheho. zifata cyane cyane amababi n'uruti bikiri bito, indabo no ku ruhande rwo hasi rw'amababi. - Inda zikwirakwiza virusi nyinshi zitera indwara. - Umushongi w'inda ukurura uduhumyo tw'umukara dukwikira ikibabi bigatuma kidakora neza ibitungagihingwa.	- Kubungabunga inshuti z'abahinzi.  - Gukuraho amababi ashaje umurima ukinjiramo urumuri; - Kudakoresha ifumbire irimo azote nyinshi.	- Lambdacyhalothrin (Lamdex): ml 15-20 PHI: iminsi 7 - Acetameprid: ml 20 PHI: iminsi 14 - Azadirachtin (Nimbecidine): ml 20 PHI: iminsi 3
7	Isazi y'umweru	Aka gasimba kanyunyuzwa amatembabuzi y'igihingwa kandi	Kugenzura umurima kenshi havanwamo ibibabi bishaje	Lambdacyhalothrin (Lamdex): ml 15-20 PHI: iminsi 7

		kagasiga umushongi ku mababi no ku mbuto bigatuma imbuto zisa nabi. Isazi y’umweru nayo ikwirakwiza virusi nyinshi zitera indwara.	n’ibiriho isazi nyinshi mu murima; Gukoresha imitego ifite ibara ry’umuhondo (rikurura izo sazi) irimo kole yo gufata izo sazi: ishyirwa hejuru y’amababi;	- Acetameprid: ml 20 PHI: iminsi 14 - Azadirachtin (Nimbecidine): ml 20 PHI: iminsi 3
8	Tiripusi 	- Tirupusi yangiza mu gihe cy’izuba; - Zirya amababi agasigara yerurutse; - Ku mbuto aho tiripusi yariye hamera nk’ahakobotse hakaba ikigina. - Ibishorobwa birya amababi agasigara abonerana; Tiripusi n’ibishorobwa byazo byona birundaniye ku mababi bikarya amababi.	- Gukura ibyatsi bibi mu murima; - Ubutaka bugomba guhingwa nyuma yo gusarura; - Gusiga intera ihagije hagati y’ibihingwa	- Lambdacyhalothrin (Lamdex): ml 15-20 PHI: iminsi 7 - Acetameprid: ml 20 PHI: iminsi 14 - Azadirachtin (Nimbecidine): ml 20 PHI: iminsi 3

Icyitonderwa: Iyi mfashanyigisho yateguwe n’umushinga “**HINGANA UBUZIRANENGE**” ugamije kongera ubuziranenge bw’ibiribwa mu Rwanda. Uwo mushinga ushyirwa mu bikorwa n’Umuryango Nyarwanda Uharanira Inyungu Rusange Utegamiye kuri Leta “**AGRIFOP**” ku nkunga y’Umuryango w’Ubumwe bw’Ibihugu by’i Burayi “**EUROPEAN UNION**”.

Mu kuyitegura, hifashishijwe impuguke, abakozi ndetse n’imfashanyigisho zateguwe na Minisiteri y’Ubuhinzi n’Ubworozi (MINAGRI), Ikigo cy’Igihugu Gishinzwe Guteza Imbere Ubuhinzi n’Ubworozi mu Rwanda (RAB) n’abandi bafatanyabikorwa.