

# IMFASHANYIGISHO KU BUHINZI BW'IBITUNGURU



## IRIBURIRO

Ibitunguru ni igihingwa kibarirwa mu muryango umwena Puwaro na tungurusumu.

Hari amoko menshi y'ibitunguru, ariko ibikunze ni Redi Kerewore (Red Creole) na Redi Bombeyi (Redi Bombay), ku isoko haboneka n'ibitunguru by'umweru ndetse n'iby'umuhondo. Ibitunguru byera cyane ahantu hashyuha ariko bikera neza bikurikije ubushyuhe bwa nijoro. Igitunguru gihingwa mu butaka budasharira, buseseka, butarimo ibumba ryinshi kandi buhitisha amazi. Ibitunguru bigira akamaro kanini kuko bituma ikinure cya Kolesiterori kitaba kinshi mu mubiri bityo umuntu ntagire umuvuduko mwinshi w'amaraso, birinda indwara z'umutima, bituma amaraso atavura, birinda umubiri kanseri kandi ibitunguru ni ndyosha ndyo.

## UBURYO IBITUNGURU BIHINGWA

### Ibikenerwa kuri Ari imwe

Imbuto: Garama 60

Imborera: ibiro 250

NPK 17-17-17: Ibiro3

KCl: ibiro 1.8

Urea: Ibiro 1.5

Umugozi: Umugozi 1

Inkoni: Inkoni 1 ifite m 1.2; indi ifite cm 20, n'indiifite cm 10.

### Gupimisha ubutaka

Ni byiza gupimisha ubutaka mbere yo guhinga kugirango umenye ingano y'ifumbire ikwiye uzakoreshwa ndetse n'ubwoko bw'intungabihingwa bukenewe.

### Gutegura ingemwe

#### Ahashyirwa Ubuhumkiro

- Ubuhumkiro bushyirwa ahantu hagomba kuba hahinze nibura mu bujyakuzimu bwa cm 20-30.
- Ibyatsi bibi n'ibindi bisigazwa byose bigakurwamo.
- Ubutaka bugomba kuba buseseka kugirango imizi ikure neza.

#### Ibikenerwa

- Ni byiza kugura umurama ahantu hizewe hagurirwa inyongera musaruro.
- Mbere yo kugura umwayi, nibyiza kandi kumenya igihe ubushobozzi bwo kumera buzarangirira.
- Kugirango haboneke imbuto nziza nibyiza ko hategurwa ingemwe binyuze mu buhumkiro.
- Ubuhumkiro buba bungana na kimwe cya makumyabiri 1/20 cy'ubuso bwose bw'umurima.
- Tegura umutabo ufile ubugari bwa metero 1 utarenguje m (1.2) n'uburebure butarenguje m 10, ubujyejuru bwa cm 20 kugirango amazi abashe gusohoka mu butaka.
- Shyira byibuze inzira ya cm 40 hagati y'imitabo ibiri.
- Shyiramo ifumbire y'imborera iboze neza: amashyi 3 yuzuye (kg 3-5) kuri metero kare mwe n'imvaruganda NPK 17-17-17 (g 20/m<sup>2</sup>) bigakorwa bitarenze icyumweru kimwe mbere yo guhumbika.

- Igihe cyo kwinaza, ubutaka buraringanizwa, hagacibwa imirongo yo kwinazamo ifite ubujyakuzimu bwa cm 0.5 kandi itandukanijwe na cm 10.
- Umurama ubibwa/winazwa ku murongo ku ntera ya cm 2 hagati y'intete n'indi hakarenzwaho agataka gacye.

### **Kwita ku buhumbikiro Nyuma yo Kwinaza**

- Nyuma yo kwinaza twikiriza ubuhumbikiro bwawe isaso y'ibyatsi byumye neza.
- Ningombwa kuvomerera buri munsi mu gitondo kare cyangwa ku mugoroba.
- Kuraho isaso ingemwe zikimara kumera.
- Ubakira, unatwikire ubuhumbikiro kugirango ingemwe zirindwe kwicwa n'izuba.
- Siga aho imirasire y'izuba inyura kuko ingemwe ziba zikeneye urumuri kurugero ruringaniye.
- Icira ingemwe zawe igihe ubonye harimo ubucucike
- Igihe hagaragaye indwara z'inyongobezamimero tera imiti nka MANKOZEBE (Mancozeb) cyangwa VIGITORI (Victory) cyangwa SAFARI ZEBU (Safari-Zeb): Ingano y'umuti ni garama 2.5 kuri litiro imwe y'amazi
- Iyo mu buhumbikiro hagaragaye ibyonnyi koresha imiti nka LAMUDA SIYAROTIRINE (Lambda-Cyhalothrin) ushyire ml 1 muri litiro 1 y'amazi.
- Genda ugapanya igihe cyo kuvomerera n'igicucu mu buhumbikiro mugihe cy'icyumweru cyangwa bibiri mbere yo kugemura kugirango ingemwe zikomere,
- Ingemwe ziba zigejeje igihe cyo guterwa mu murima hashize ibyumweru 6-8 nyuma yo kwinaza.

### **Gutera**

#### **Gutegura Umurima**

- Tegura umurima ukuramo ibyatsi n'ibindi bisigazwa byose nibura icyumweru mbere yo gutera kandi urwanye isuri.
- Tegura umurima ku bujyakuzimu bungana nibura na 30 cm.
- Imborera iboze neza ingana na toni 25 ivangwa n'itaka ku murima wa hegitari ni ukuvuga kg 250 kuri Ari imusozi na toni 5 z'imborera kuri hegitari k'ubutaka bwo mu gishanga.
- Koresha kg 300 bya NPK 17-17-17 kuri hegitari bivuze ko ukoresha ibiro 3 kuri Ari imwe aribyo bingana no gukoresha agafuniko 1 ka fanta gakoreshwa kuri metero 1.
- Koresha kg 180 bya KCI kuri hegitari (agafuniko kamwe ka fanta k'umurongo wa metero ebyiri).
- Vanga amafumbire (Imborera n'imvaruganda) n'itaka ryo mu murima.
- Mugutera koresha intera ya cm 10 hagati y'igitunguru n'ikindi mu murongo na cm 20 hagati y'umurongo n'undi.

- Ni byiza guhinga ibitunguru ku mitabo cyane cyane igihe ugiye guhinga ahantu hareka amazi cyangwa mu kabande ukoresha imitabo ifite cm 120 z'ubugari na cm 20 z'ubujyejuru kandi hagati y'umutabo n'undi usage inzira ya cm 40.
- Kugemura bikorwa nyuma y'ibyumweru 6-8.
- Gutera bikorwa hakirikare mu gitondo cyangwa ku mugoroba kugirango ingemwe zitarabishwa n'izuba ryo kumanywa.

### Kwita ku gihingwa

- Gusasira imitabo ni ngombwa hakoreshwa ibyatsi byumye neza mbere yo gutera.
- Nyuma yo gutera uravomerera ndetse no mugihe cyose imvura itagwa cyangwa idahagije.
- Kuvomerera bikoranwa ubwitonzi kugirango hatabaho kwanduza igihingwa cyawe indwara zituruka mu butaka.
- Bagara igihe cyose ibyatsi bibi bigaragaye mu murima wawe.
- Nyuma y'ibyumweru 6 uteye shyiramo ifumbire ya Ire (Urea) ingana na kg 1.5 kuri Ari imwe ni ukuvuga agafuniko kamwe ka fanta ku murongo wa metero 2. Ifumbire ishyirwa hagati y'imirongo ikavangwa n'itaka.

## INDWARA N'IBYONNYI

### Indwara y'imvura (Milidiyu)

#### Ibiziranga

Ibidomo cyangwa amabara byeruruka ku mababi bitwikiriwe n'agafu k'ikigina. Amababi areruruka nyuma akaba umuhondo. Imitwe y'amababi iruma.



#### Uko bazirinda

- Kvirinda gutera ingemwe zirwaye,
- Gusimburanya neza ibihingwa,
- Gutera mu butaka bwumutse,
- Kudacucika ibitunguru igihe cyo gutera,
- Kuvana mu murima ibisagazwa by'ibihingwa bigakorwamo ifumbire,

- Gutera umuti wo kurwanya uduhumyo.

### **Uko bazivura**

Gutera umuti urimo Mankozebe (Mancozeb), Metalaxile (Metalaxyl) cyangwa gukoresha imiti irimo Kopa (copper) nka Kopa ogisikoloride (Copper oxychloride).

**Ibipimo bikoreshwa:** 37.5g/15l z'amazi.

### **Indwara y'ibidomo (Ariterinariyoze)**

#### **Ibiziranga**

Iyi ndwara igaragara mu gihe cy'имвура nyinshi.

Itangira igaragazwa n'ibikomere biretse amazi ku mababi nyuma bikaba ikigina. Nyuma, irangwa n'ibidomo byijimye imbere ariko byerurutse ku muzenguruko wabyo.



#### **Uko bazirinda**

- Guterera igihe bitewe n'aho umurima uherereye,
- Amoko y'ibitunguru bigira ubwoya yihanganira ububurwayi ugereranije n'atabugira,
- Gutera kumitabo, no guteguraneza umurima.
- Kudacucika ibitunguru igihe cyo gutera,
- Gusimburanyaibihingwa,
- Kuvana mu murimaibisigazwaby'ibihingwa,
- Gutera mu butakabwumuts.
- **Icyitonderwa: Ubutaka bureka mo amazi ntibuberanyen'ibitunguru.**

### **Uko bazivura**

Gutera umuti urimo Mankozebe (Mancozeb), cyangwa Metalaxile (Metalaxyl) cyangwa

gukoresha imiti irimo Kopa(copper) nka Kopa ogisikoloride (Copper oxychloride).

**Ibipimo bikoreshwa:** 37.5g/ 15L z'amazi.

### Umugese (Rust)

#### Ibiziranga

Iyi ndwara igaragara cyane igihe cy'ubuhehere bwinshi buvanze n'ubushyuhe buringaniye cyangwa buke.

Iyi ndwara ifata ku mababi ikarangwa n'ibidomo bifite ifu ifite ibara rishyira umutuku cyangwa orange nyuma bikaba umukara.

Amababi yafashwe cyane ahinduka umuhondo nyuma agahita Yuma atarakura bityo bigatuma umusaruro ugabanuka.



#### Uko bazirinda

- Guteru kumitabo,
- Kudacucika ibitunguru igihe cyo gutera,
- Gusimburanya ibihingwa,
- Kuvana mu murima ibisigazwa by'ibihingwa,
- Kwirinda gufumbiza azote irengijeikigero cyagenwe.

#### Uko bazivura

Gukoresha imiti irimo Kopa (copper) nka Kopa ogisikoloride ( Copper oxychloride) cyangwa Copper Oxide.

**Ibipimo bikoreshwa:** 37.5g/ 15L z'amazi.

### Tiripusi (Thrips)

## Ibiziranga

Tiripusi ni udukoko duto cyane (mm1) kandi kagenda cyane. Twangiza ibitunguru turya amababi tukanyunuza amatemba y'ihingwa.

Amababi yafashwe agira amabara y'umweru avanze n'ibidomo by'umuringa. Utu dukoko dusiga umwanda ugaragazwa ku mababi nk'utudomo tw'umukara.

Utu dukoko tugomba kugenzurwa hakirikare kuko tugira ingaruka ikomeye ku musaruro.



## Uko bazirinda

- Ubutaka bugomba guhora bufite amazi ahagije;
- Kvirinda gukoresha ifumbire ya Azote irenze urugero rwa genwe;
- Kubagara neza kuko utu dukoko twihisha mu bwatsi;
- Gusukura ahakikije umurima;
- Kurandura ibyafashwe cyane;

## Uko bazivura

Gutera imiti iyica udukoko irimo profenofos (nka Profenofos 40EC, Roket), Roketi (Rocket).

**Ibipimo bikoreshwa:** 1 ml/1l y'amazi.

## GUSARURA NO GUFATA NEZA UMUSARUO

- Ibitunguru biba bigeze igihe cy'isarura igihe imitwe ireba hasi, ni ukuvuga hagati y'amezi 3-4 bitewe n'ubwoko bw'ibitunguru.

- Mbere yo gusarura ukuraho itaka ritwikiriye ikijumba k'igitunguru habura nibura ibyumweru bibiri ngo usurure.
- Gusarura ibitunguru ubirandura ukoreshjeje intoki, iyo hakomeye ugakoresha agacyamuro.
- Nyuma yo gusarura, sanza ibitunguru ku mbuga isukuye neza cyangwa ubundi bwanikiro bwabugenewe kandi wanike ahantu hagera izuba; ubireke byume kugeza igihe imizi n'amababi byumye.
- Katira amababi nko kuri cm 2.5 hejuru y'ikijumba cy'igitunguru ndetse unakate yamizi yumye.
- Ibitunguru bikomeza kwanikwa ahagera imirasire y'izuba itari myinshi kandi hagera umwuka mu gige cy'ibyumweru 2-3.
- Nyuma yaho ibitunguru bizaba bishobora guhunikwa igihe kirekire.
- Ibitunguru bibikika neza igihe ijosi ryabyo ryumywe neza kuburyo urikanda ukabona nta mazi akirimo.
- Umusaruro w'ibitunguru ushobora kugera kuri toni 25 kuri hegitaro.
- Ubusanzwe ibitunguru bibikika neza ku bushyuhe bwa dogere 0 mu cyumba gikonjesha hari ubuhehere bwa 90 bishobora kumaramo amezi 6-7.
- Birashoboka ko ibitunguru byabikika ku bushyuhe bwa dogere 25-30°C. Ibibivuze ko umuhinzi yabika ibitunguru mu kigega, ahatembera umwuka bikaba byamara amezi 3-6 bimeze neza.



**Fig 1 Ibitunguru bigeze igihe cyo gusarurwa      Fig: 2 Ibitunguru byanitse kuzuba nyuma yo gusarurwa**



**Fig 3: Ibitunguru byumye neza kuburyo byabikika igihe kirekire.**