



MINISTRY OF AGRICULTURE AND ANIMAL
RESOURCES (MINAGRI)

IMFASHANYIGISHO KU BUHINZI BW'INTORYI



SEAD
Strengthening Education for
Agricultural Development

1. NI IKI TWAKORA KUGIRANGO IMIRIMA YACU IDUHE UMUSARURO MWIZA?

- Gukoresha imbuto y'indobanure
- Guterera igihe
- Gusimburanya ibihingwa
- Kubahiriza intera
- Gukoresha ishwarara ku butaka busharira
- Gukoresha imborera n'imvaruganda
- Kurwanya isuri
- Kubagara
- Kurwanya indwara n'ibyonnyi.
- Gupimisha ubutaka kugira ngo umenye imyunyungugu iri mu butaka bwawe

2. NI IZIHE NYONGERA MUSARURO, INGANO YAZO N'IBIKORESHO DUKENERA KURI ARI (ARE) IMWE?

Ingano y'umurama	Imborera	Ire	NPK 17-17-17	Inkoni zifite	Agafuniko
g 5	Kg 250	Kg 9	Kg 3.5	cm 20 cm 45 Cm 60 m 1	1 ka fanta 1 k'amazi

3. NI HEHE DUSHYIRA KANDI NI RYARI DUKORA UBUHUMBIKIRO? BUGOMBA KUBA BUNGANA BUTE ?

Hehe?:

- Ahantu hatigeze hahingwa intoryi cg ibindi bihingwa biri mu muryango umwe mu bihembwe 2 bishize
- Ahantu hari isi ndende kandi hari ubutaka buseseka
- Hagomba kuba hahinze nibura mu buyakuzimu bwa cm 20-30 kandi ibyatsi bibi n'ibindi bisigazwa byose bigakurwamo

Ni ryari dukora ubuhumbikiro?:

- icyumweru 1 mbere yo guhumbika umurama

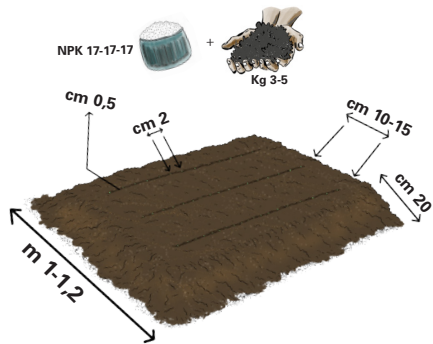
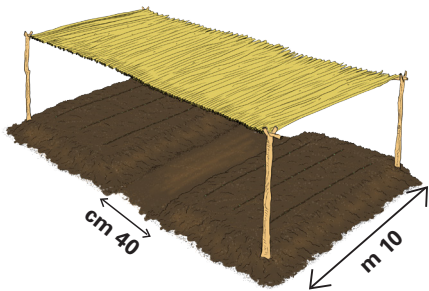
Ingano:

- Metero 1 kuri 1 y'ubuhumbikiro ijya ku murima wa ari 1

4. NI GUTE INGEMWE ZITEGURWA MU BUHUMBIKIRO?

- Gusanza neza ubuhumbikiro
- Umutabo ufite ubugari bwa metero 1 kugeza kuri 1.2 n'uburebure butarengeje metero 10
- Kora umutabo uzamuye wa cm 20 z'ubujyejuru
- Hagati y'imitabo ibiri hagomba kubamo inzira byibuze ya 40 cm.
- Vanga amashyi atatu(Kg 3-5) y'imborera iboze neza n'ubutaka bwo hejuru.
- Shyira iyo mvange mu buhumbikiro, bigakorwa bitarenze icyumweru kimwe mbere yo guhumbika.
- Koresha g 20/m² (ufuniko 2 tw'icupa ry'amazi) za NPK 17-17-17 mu buhumbikiro.
- Kubwubakira ubuha igicucu muri 1,3metero hejuru.

- Ca imirongo yo kwinazamo ifite ubujyakuzimu bwa cm 0.5 ukoresheje agati
- Tera umurama mu mirongo ku ntera ya cm2 hagati y'umurama.
- Siga cm 10-15 hagati y'imirongo.
- Twikiriza agataka unasibanganye gahoro.



5. NI IYIHE MIRIMO IKORWA MU KWITA K'UBUHUMBIKIRO?

- Sasira ukimara kwinaza.
- Vomerera mu gitondo cyangwa nimugoroba.
- Ingemwe zikimera nyuma y'iminsi 7-10; kuraho isaso kugirango ingemwe zimere neza.
- Randura ingemwe zirwaye ndetse n'izitameze neza.
- Bagara buri gihe.
- Icira ingemwe mugihe zicucitse
- Tera umuti urwanya indwara mu buryo bukwiye rimwe mu cyumweru.
- Gabanya igicucu no kuvomerera mu buhumbikiro mu byumweru bibiri mbere yo kugemura.

6. NI RYARI KANDI NI GUTE DUTERA INGEMWE?

Ryari?

- Gemura nyuma y'ibyumweru 6 nyuma yo kwinaza(zifite Amababi 3-4).

Ni gute dutegura umurima?

- Kora imitabo ya metero 1.2m z'ubugari
- Siga inzira y'abagenzi ya cm 40 hagati y'imitabo
- Vanga imborera n'itaka mbere yo guca imyobo
- Umurima uhingwa neza ku bujyakuzimu bungana nibura na 30 cm, ibisigazwa by'ibimera byose bigakurwamo.



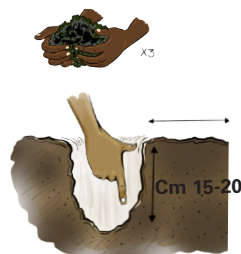
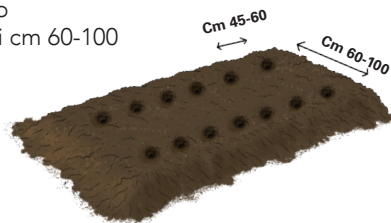
7. NI IYIHE NTERA DUKOresha DUTERA INTORYI, NI RYARI TUZITERA?

Intera:

- Imyobo ya cm 15-20 z'ubujyakuzimu mu mitabo.
- Cm 45-60 hagati y'imyobo
- Intera hagati y'imirongo ni cm 60-100

Ziterwa ryari:

- Gemura unatere ingemwe mu gitondo kare cg ku mugoroba



8. NI IYIHE MIRIMO Y'INGENZI IKORWA MU GUKENURA IGIHINGWA CY'INTORYI

- Sasira mu gihe cyo gutera
- Vomerera rimwe mu minsi 3 imvura idahagije
- Bagara buri gihe
- kuraho ibisambo.
- Icira amashami
- Shingirira intoryi

9. NI RYARI, NI GUTE KANDI NI KUBERA IKI DUSHYIRAHO IFUMBIRE MVARUGANDA?

NPK 17-17-17

- **Ingano:** Garama 10 (agafuniko kamwe k'amazi)ku rugemwe rumwe
- **Ryari:** icyumweru 1 nyuma yo gutera
- **Kubera iki:** ituma imizi ikomera zigakura vuba

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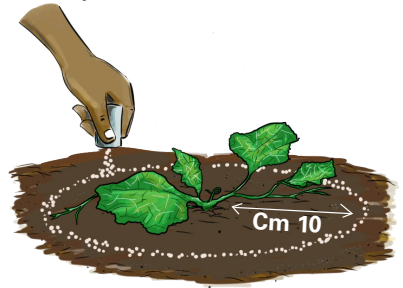
- **Ingano:**Garama 3 (agafuniko 1 ka fanta gacagase)
- **Ryari:** Ibyumweru 6 nyuma yo gutera
- **GUTE:** Ca akazenguruko ku murambararo wa cm 10 uvuye ku rutoryi.
- **Kubera iki?** Ikomeza uruti ikanatuma urubuto rw'urutoryi ruba runini

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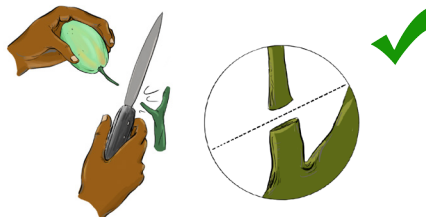
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10. INTORYI ZISARURWA RYARI, GUTE?

- Zisarurwa nyuma y'iminsi 75-110 nyuma yo kugemura.
- Agahu k'inyuma k'urubuto kaba kabonerana kandi kanyerera, gafite ibara ry'umweru.
- Zigomba gusarurwa mu gihe hatari imvura ndetse n'ubukonje bwinshi
- Ni byiza gusarura ukoresheje icyuma gityaye kandi gifite isuku ku buryo inkondo iguma ku rubuto,
- Ugomba gutoranya intoryi ukanazishyira mu byiciro. Bikorwa hashingiwe ku ibara, ingano, uko ziteye n'izifite ubusembwa.
- Koresha amakurete, amabase cg ibitebo byinjiza umwuka.
- Umuti ugomba guterwa byibuze ibyumweru bibiri mbere y'uko usarura.
- Gusarura bikorwa kuva intoryi zeze kugeza zihunduye(iminsi 120-150).



INDWARA Z'INGENZI N'IBYONNYI BIKUNZE KWIBASIRA INTORYI

Akaribata(anthracoze)

- Iyi ndwara iterwa n'agahumyo kitwa *Colletotrichum melongena*. Aka gahumyo gakunda gufata intoryi zifashwe nabi .Iyo ndwara yiyongera cyane mu gihe cy'imvura cyangwa cy'ubuherehere bukabije.
- Ku mababi haboneka amabara bijya gusa n'ikigina kijimye,
- Ku mbuto usangaho ibara ry'ikigina rizengurutswe n'ibara ry'umukara,
- Rimwe na rimwe imbuto zafashwe ziruma zikaba umukara.



Uko wayirinda

- Gusimburanya ibihingwa mu murima hahingwa ibindi bitari mu muryango umwe,
- Gutera imbuto z'indobanure,
- Gusukura umurima hakurwamo ibyafashwe,
- Kwirinda ko amazi areka mu murima,
- Gukura ibisiganzwa by'ibiti by'intoryi byarwaye. mu murima ukabishyira mu kimoteri



Uko wayirwanya

- Gutera imiti yica uduhumyo nka Carbendazim, Copper, Tricyclazole(Beem), Chlorothalonil.

Kiribiranya iterwa na bagiteri (Bacterial wilt)

- Iyi ndwara iterwa na bagiteri yitwa *Ralstonia solanacearum*.
- Irangwa n'uko igihingwa kirabirana kidahinduye ibara cyane nkaho cyatemwe mu mizi. Uruti rusohokamo umushongi w'umweru usa n'amata iyo urukase ukarushyira mu mazi



Uko wayirinda

- Kubahiriza isimburanyabihingwa nibura mu gihe cy'ibihembwe bitatu hahingwa ibihingwa bitari mu muryango umwe.
- kudakomeretsa imizi cyangwa amababi mu gihe cyo gutera, gukuraho ibisambo,...
- Guhinga mu butaka bwumutse.
- Kurandura igihingwa cyafashwe ukimara kubona ibimenyetso,
- Guhinga ku mitabo muri gahunda yo kwirinda ko amazi areka mu mirima,
- Gusukura ibikoresho bikoreshwa mu murima hirindwa ikwirakwira ryayo

Uko wayirwanya

- Nta muti uhari uvura ubu burwayi. Ni ngombwa kubwirinda.

Urunyo rwangiza intoryi (*helicoverpa armigera*)

Ni ikinyugunyugu bita *helicoverpa armigera*, aho gitera amagi ku mababi akura akavamo urunyo rugenda rukora rutobora umuteja w'urutoryi ruginjiramo imbere.



Uko wayirinda

- Gusimburanya ibihingwa mu murima hahingwa ibindi bitari mu muryango umwe n'intoryi nk'ibigoli, ibishyimbo, amashu, soya, amashaza, ..
- Gukuramo intoryi zamaze gufatwa ukazishyira mu kimoteri.
- Gukoresha imitego ifata ibinyugunyugu mu murima no munkengeri zawo.

Uko wayirwanya

Gutera imiti yica udukoko nka abamectin, acetamepid, Imidachlopid, Delthamethrin, Lambdacyhalothrin.

Ibyonnyi: Inda na Tiripusi (*Aphis, Thrips*)

Ubu busimba bukunze gufata cyane cyane amababi n'uruti bikiri bito, indabo n'amababi. Inda zikwirakwiza virusi ku gihingwa.

Inda



Uko wazirinda

- Gukikiza ibigori umurima w'intoryi kuko aryohere cyane agakurura inda zikava ku ntoryi.
- Kubungabunga inshuti z'abahinzi (udukoko turya inda. Urugero: udusurira, urutambara, ...)
- Kwirinda guhora ukoresha ubwoko bw'umuti umwe kuko inda ziwumenyere ntizipfe ahubwo zikororoka vuba.
- Gukoresha imitego y'ibara ry'umuhondo izifata.

Tiripusi



Uko wazirwanya

Gutera imiti yica udukoko nka Lambda-Cyhalothrin (ml 15 z'umuti muri litiro 20 z'amazi) (ml 10 z'umuti muri litiro 20 z'amazi), acetamiprid, abamectin, nimbecidine (azadirachtin: ml 15 z'umuti muri litiro 20 z'amazi).

Icyitonderwa: Egera umujyanama mu buhinzi akubwire umuti uri ku isoko mu gihe cyo gutera umuti

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SEAD, UR na IPRC HUYE

