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|  | Uburyo bwo gukusanya, gutunganya no gukwirakwiza amakuru kuri filiyeri y'imbutu mu Rwanda | Kode y'innyandiko: 41KR123I132v0 41KR127I136v0 |
| | IGICE CYA 4 : UBUMENYI BW'IMIKORERE MU BYA TEKINIKI | Itariki yo kujyanisha innyandiko n'igihe UKUBOZA 2007 |
| IFISHI YA TEKINIKI ZO GUHINGA KIYAMBERE : IBISHYIMBO | | Innyandiko ikomatanyije |

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| Itariki innyandiko yasohokweye | 2002 |
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IFISHI YA TEKINIKI ZO GUHINGA KIYAMBERE : IBISHYIMBO

- 1. Uturere birumbukamo:** Imbo, Impara, Mayaga, Umurambi w'iburasirazuba
- 2. Ubutaka bikunda :** Ubutaka bufite ifumbire ihagije, buseseka, kandi bw'isi ndende. Imishingiriro ikunda ubutaka bufite ifumbire nyinshi.
- 3. Amoko:**
 - *Ibishyimbo bigufi* : Peveya 8, RWK 10, Scam 80 CM/15
 - *Ibigereranyije* : Lab 487, Urugezi, RWR 221 (Rwandarugari) A 321, RWR 719
Ibishyimbo bigufi n'ibigira urugoyi rugeranyije bitanga umusaruro mwiza mu turere tw'imisozi migufi, uturere tw'imisozi iciriritse no mu karere k'umugongo (mu misozi iciriritse yo hagati)
 - *Imishingiriro* : - Vuninkingi G 65 : muni y'ubutumburuke bwa m 1800
 - Flora (59/1-2) : mu misozi miremire cyane
 - Ngwinurare : ishobora gukoreshwa mu misozi iciriritse no mu misozi miremire
 - Icyitonderwa* :** Uretse ayo moko atuburwa n'umushinga ASSR n'abandi batubuzi, hari andi moko nayo meza yatoranyijwe ushobora gusanga mu giturage. Ayo ni aya : Urunyumba, Umubano (B 2333), Puebla, Cajamarica na Gisenyi 2 bis
 - *Ibishyimbo by'imiteja* : Saxa na Royal Nel
- 4. Ifumbire y'ibibora:** Kg 100 kugeza kuri Kg 200 by'ifumbire yaboze kuri ari mu itabira.
- 5. Igihecy'itera:** - *Imusozi*: - Nzeri-Ukwakira: Umuhindo
 - Gashyantare-Werurwe: itumba
 - *Mu nkuka* : - Nzeri-Ukwakira: Umuhindo
 - *Mu gishanga*:- Gicurasi-Kamena: impeshyi itangiye
- 6. Igerambuto:** Garama 600-700 kuri ari
 - *Ibishyimbo bigufi*: batera ku mirongo ihurutuye itandukanijwe na cm 40. Haterwa intete 1 buri cm 5-7.
 - *Ibishyimbo by'imishingiriro*: cm 40 cyangwa 50 hagati y'imirongo na cm 20 mu murongo. Batera intete 2 muri buri mwobo.
- 7. Kubikenura:** - kubagara no gusukira igihe bifite amababi 4.
 - gushingirira nyuma y'isukira: umuhembezo umwe ku bishyimbo 4.
- 8. Ifumbire y'imvaruganda:**
 - Kg 1 ya DAP kuri ari bimaze kumera cyangwa mu itera.
 - Kg 2 za NPK 17-17-17 kuri ari y'ibishyimbo by'imishingiriro mu butaka bwiza cyangwa Kg 1,5 DAP + 0,5 Kg IRE kuri ari 1.



9. Indwara n'udukoko:

a) Isazi:

Irindi zina: **Melanagromyza phaseoli (Diptère agromyzidae)**

Aho ifata: Igice cy'igihimba cyegereye ubutaka (umunigo)

Ibimenyetso: ibishyimbo bikura nabi n'amababi agahinduka umuhondo

Kuyirwanya: gusukira hakiri kare, guhungira imbuto bakoresheje Sumithion 50%, 10 ml/10 L z'amazi cyangwa g 35 za gauchu + g 25 za thiram 80%, bigahungira Kg 100 z'imbuto.

b) Akaribata

Ikiyitera: **Colletotrichum lindemuthianum (agahumyo)**

Aho ifata: imisogwe, amababi, imbuto n'igihimba

Ibimenyetso: amabara maremare asa n'umutuku ku mababi n'amabara y'uruziga asa n'ikigina bivanze n'ikijuru ku mpande hatukura (ku misogwe)

Kuyirwanya: - gutera amoko yihanganira indwara
- gutera imbuto itarwaye (yavuye ku misogwe itarwaye)
- gusimburanya ibihingwa mu mirima
- guhungira imbuto mbere yo kuyitera hakoreshejwe Bénomyl g 2 mu Kg 1 y'imbuto

c) Asikoshitoze

Ikiyitera: **Ascochyta phaseoli**

Aho ifata: amababi n'imisogwe

Ibimenyetso: amabara y'ikigina yeruruka agiye akora inziga

Kuyirwanya:

- gutwika ibishogoshogo nyuma y'ihura
- gutera amoko yihanganira iyo ndwara
- guhungira imbuto mbere y'itera: Bénomyl + Thiram bakoresheje g 2 za buri bwoko mu kilo 1 cy'imbuto cyangwa g 35 za gauchu + g 25 za thiram 80% bigahungira Kg 100 z'imbuto

d) Ukubemba:

Ikiyitera: **Virusi**

Aho ifata: igihingwa cyose

Ibimenyetso: amababi ata ireme, akenshi akaba mato. Arihina, mu mpande hakareba hasi. Ibishyimbo byafashwe ntibikura neza, bisa n'ibicukiranye kandi umusaruro uba muke.

Kuyirwanya: - gutera umuti nka Dimethoate
- kurandura ibihingwa birwaye
- gutera ubwoko bwihanganira iyo ndwara

e) Amabara akore inguni

Ikiyitera: **Isariopsis griseola**

Aho ifata: amababi, rimwe na rimwe ifata no ku miteja

Ibimenyetso: amabara y'ikigina afite inguni zigenda zikurikira imitsi y'ibibabi

Kuyirwanya: - gutera imbuto ihungiyeho hakoreshejwe Bénomyl
- gukoresha amoko yihanganira iyo ndwara.

f) Ubuhunduguru bwirabura

Irindi zina: **Aphis fabae**

Aho ifata: igice cyose cyo hejuru

Ibimenyetso: ibishyimbo byafashwe bikura nabi, amababi agahinduka umuhondo. Igishyimbo gishobora no kuba gitwikiriwe n'ibintu bifata nk'ubujeni ubuhunduguru bukora, agahumyo kirabura gakuriramo.

Kuyirwanya: - guhinga kiyambere kuburyo ibishyimbo bikura vuba
- gutera sumithion cyangwa sumicombi : hakoreshejwe ml 10 z'umuti muri L
10 z'amazi kuri ari 1 cyangwa ugakoresha Diméthoate ½ L y'umuti kuri Ha 1.

g) Bagiteriyoze :

❶ Indwara y'ibidomo by'uruziga :

Ikiyitera : Bagiteri yitwa **Pseudomonas Syringae p.v. phaseolicola**

Aho ifata : amababi, ku misogwe no ku duti

Ibimenyetso: ku mababi, utudomo duto tw'umuhondo tuzengurutswe n'uruziga rweruruka rufite cm 1 y'umurambararo. Amababi akiri mato aba mato cyane, agata isura yayo akaba kandi umuhondo ubengerana rimwe na rimwe. Ku misogwe hazaho ibidomo by'icyatsi kibisi gikabije, kimeze nk'igisize amavuta, hamwe hagira ibara ry'ikijuju gitukura. Utwo tudomo tuba ari uruziga cyangwa tugakurikira imitsi y'ikibabi.

Kuyirwanya :

- gukoresha imbuto zitarwaye n'izihanganira iyo ndwara
- gushyira mu ngarani ibishogoshogo byarwaye bigatabwa ;
- gusimburanya neza ibihingwa
- gutera umuti wa Dacobre : g 140 muli litiro 10 z'amazi biterwa kuri ari 1 cyangwa 1,5

Icyitonderwa: Iyo ndwara ikara cyane mu misozi miremire bitewe n'ubushyuhe buke ndetse n'imvura nyinshi bituma yororoka.

❷ Kirabiranya

Ikiyitera : **Xanthomonas phaseoli**

Aho ifata : ku mababi, ku misogwe no ku duti

Ibimenyetso : - muni y'amababi hazaho utubara duto tubonerana, tutangana, ariko cyane cyane ku mpande z'amababi ;
- hagati muri ayo mababi muri ayo mabara haruma, hagakikizwa n'umuhondo ugaragara cyane. Amababi yafashwe arahunguka ;
- ku misogwe no ku duti hazaho amabara y'ikigina atangana.

Kuyirwanya : - gutera imbuto zitarwaye n'izihanganira iyo ndwara
- gusimburanya ibihingwa neza mu murima ;
- kurandura ibyafashwe no kubitwikira mu mwobo ;
- gutera umuti wa Dacobre : g/L 10 z'amazi/ari 1 cyangwa 1,5

Icyitonderwa : mu turere dushyuha cyane, indwara yiyongera mu gihe cy'imvura.



10. Iminsi byerera:

Ibigufi: kuva ku minsi 70 kugeza kuri 90 bitewe n'akarere n'imbuto

Imishingiriro: kuva ku minsi 90 kugeza ku 150 bitewe n'akarere n'imbuto



11. Umurumbuko:

Ibishyimbo bigufi: Kg 15 kuri ari mu buhinzi bwa kiyambere

Imishingiro: Kg 20 kuri ari mu buhinzi bwa kiyambere.

12. Guhunika:

- Ahantu hagera umwuka uhagije, humutse kandi hatagerwa n'udusimba twa mugugunnyi
- Malatiyo 2% g 100 kuri Kg 100 z'ibishyimbo
- Agitelike g 100 kuri Kg 100 z'ibishyimbo
- Super grain Dust : g 50 z'umuti muri Kg 90 z'ibishyimbo