



Ubuhinzi bw'U Rwanda: Imbata y'Isomo ku Kugaburira Igihingwa

IGIHE CYOSE: amasaha 2

ABAHUGURWA: Abahinzi

UHUGURA: Uhugura abahinzi

AHANTU: Mu murima no mu ishuli

INTEGO:

- **INTEGO YA 1:** Abahinzi bamenye akamaro ko kugaburira igihingwa neza kandi bashobore gutandukanya ikawa yagaburiwe neza n'iyagaburiwe nabi.
- **INTEGO YA 2:** Abahinzi bamenye udutungagihingwa tunyuranye dukenerwa ku giti cyagaburiwe neza .
- **INTEGO YA 3:** Abahinzi bamenye uko udutungagihingwa dukoresha cg dutakazwa) kandi bamenye udutungagihingwa igiti cya kawa gikenera.
- **INTEGO YA 4:** Abahinzi bamenye uburyo bunyuranye bwo kugaburira igihingwa.
- **INTEGO YA 5:** Abahinzi bamenye gahunda yo gufumbira ibihingwa.
- **INTEGO YA 6:** Abahinzi bashobore kwerekana uko bakoresha neza NPK ku gipimo gikwiriye.

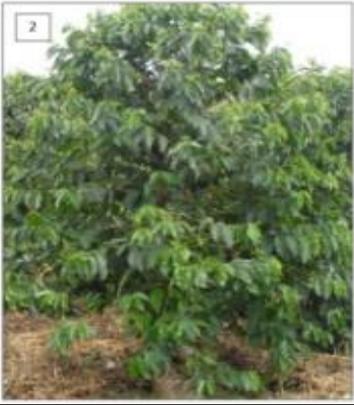
IBIKORESHO:

- NPK ihagije yo gukoresha mu murima wigishirizwamo
- Urugero rw'ibipimo by'amagarama 100 ya NPK
- Udukombe twa pulasitiki two gupima NPK
- Marikeri yo kwandika ibipimo.
- Imakasi yo gukata ibipimo.

IGIHE	IBIKUBIYE MU ISOMO
iminota10	<p>GUTANGIRA:</p> <p>KWIBWIRANA:</p> <ul style="list-style-type: none">○ Uhugura○ Abahugurwa○ Abashyitsi <p>KWIBUKIRANYA: amahugurwa y'ubushize ubaza abahinzi ibibazo bimwe na bimwe.</p> <p>KWIBUKIRANYA: Intego z'amahugurwa:</p>



	<ul style="list-style-type: none">▪ Uku kwezi tuzaganira ku Gufumbira Ikawa ndetse tunaganire ku kamaro ko gufumbira neza bigamije kweza ikawa nziza kandi yujuje ibya ngombwa byose.▪ By'umwihariko tuzaganira ku:<ul style="list-style-type: none">○ Kamaro ka gahunda yuzuye yo gufumbira ikawa,○ Ifumbire iberanye n'ubutaka bw'iwacu○ Uko bakoresha ibipimo nyabyo by'ifumbire○ Hanyuma buri wese azagira umwanya wo gutera NPK mu ikawa. <div style="border: 1px solid black; padding: 5px; margin-top: 10px;"><p>UMWITOZO: Agakino ko kwishyushya Toranya agakino ko kwishyushya kabereye n'abahugurwa.</p></div>
iminota1 0	<p>INTEGO YA 1: Abahinzi bamenye akamaro ko kugaburira igihingwa neza kandi bashobore gutandukanya ikawa yagaburiwe neza n'iyagaburiwe nabi.</p> <p>BAZA: Kuki ari ingenzi gufumbira neza igiti cya kawa?</p> <p>IGISUBIZO:</p> <ul style="list-style-type: none">▪ Byongera umusaruro ndetse n'ubwiza bw'ikawa▪ Bituma igiti gikura neza kandi gifite ubuzima bwiza▪ Bifasha kurwanya indwara zirimo kwuma kw'amababi n'udukoko twangiza ibihingwa▪ Bigabanya gusarura rimwe mu myaka ibiri – imyaka ikurikirana y'umusaruro mwinshi n'umuke – ahubwo tukabona umusaruro mwiza <u>buri</u> mwaka <div style="border: 1px solid black; padding: 5px; margin-top: 10px;"><p>UMWITOZO: Igiti cyagaburiwe neza</p><ul style="list-style-type: none">a) EREKANA ifoto y'igiti cyagaburiwe neza n'igiti cyagaburiwe nabi.b) SABA abahinzi kuzamura intoki berekana icyo babona ari igiti cyagaburiwe neza.c) BAZA: Ni irihe tandukaniro riri hagati y'igiti cyagaburiwe neza n'igiti cyagaburiwe nabi?d) MUBIGANIREHO.</div>

	<p style="text-align: center;">WHICH TREE LOOKS LIKE IT HAS RECEIVED THE BEST NUTRITION?</p> <div style="display: flex; justify-content: space-around;"> <div style="text-align: center;">  <p>1</p> </div> <div style="text-align: center;">  <p>2</p> </div> </div>	
<p>iminota1 0</p>	<p><i>Ifoto y'igiti cya kawa cyagaburiwe nabi (ibumoso) n'icyagaburiwe neza (Iburyo)</i></p> <p>INTEGO YA 2: Abahinzi bamenye udutungagihingwa tunyuranye dukenerwa ku giti kigaburiwe neza .</p> <p>BAZA: Ese wakumva umeze ute uramutse uriye igitoki gusa buri muni mu gihe cy'umwaka wose?</p> <p>BAZA: Ese wakumva umeze ute uramutse uriye igitoki, inyama n'imboga, n'imbuto?</p> <p>IGISUBIZO:</p> <ul style="list-style-type: none"> ▪ Wakumva umeze neza kandi ufite ubuzima bwiza igihe ufata ifunguro rinyuranye kandi ryuzuye. <p>SOBANURA:</p> <ul style="list-style-type: none"> ▪ Ibiti bya kawa nabyo ni nk'abantu, bikenera ubwoko bw'undutungagihingwa burenze bumwe kugira ngo bikure neza kandi bitange umusaruro mwiza. ▪ Igitoki cya kawa kigaburirwa udutungagihingwa tuba mu butaka, kandi kugaburira ikawa ukoresheje ifumbire ya NPK gusa, ni nko kugaburira umuntu igitoki gusa. 	
<p>iminota1 0</p>	<p>INTEGO YA 3: Abahinzi bamenye uko udutungagihingwa dukoresheya(dutakazwa) kandi bamenye udutungagihingwa igitoki cya kawa gikenera.</p> <p>BAZA: Ni gute udutungagihingwa dushobora kuvanwa mu butaka?</p> <p><i>Icyitonderwa k'uhugura: Ungurana ibitekerezo n'abahugurwa, hanyuma usuzume ibizubizo.</i></p> <p>IBISUBIZO:</p> <ul style="list-style-type: none"> ▪ Gukora imbuto za kawa. udutungagihingwa dukoresheya mu gukora imbuto za kawa, hanyuma zigakurwa mu murima igihe cy'isarura. ▪ Kumanurwa hasi kudutungagihingwa . udutungagihingwa twinshi tumanuka 	

hasi mubutaka kubera invura nyinshi.

- **Isuri y'ubutaka bwo hejuru.** Ubutaka bwo hejuru bugira udutungagihingwa dukunda kuba ku mizi igaburira igiti, iyo ubwo butaka butembye udutungagihingwa tujanya nabwo.
- **Kurumba bisanzwe.** Ubutaka bushobora kubura udutungagihingwa tumwe natumwe cyane igihe bwahinzweho imyaka igihe kirekire.

BAZA: Ni gute wamenya udutungagihingwa ibiti bya kawa byawe bikeneye?

IBISUBIZO:

- Rimwe na rimwe iyo igihingwa kibuze ibigitunga, amababi ahindura ibara n'ishusho.

SOBANURA:

- Nkuko bigenda ku muntu, igihingwa nacyo gishobora kugaragaza uburwayi.
- Nitorojeni na Zenke ni bimwe mu bikunze kubura bigaragarira ku mababi ya kawa.

BAZA: Ese abahinzi baba barabonye amababi nk'aya ku biti bya kawa yabo?

MUGANIRE



Ishusho igaragaza amababi abura Zenke (ibumoso) na Nitorojeni (iburyo)

SOBANURA:

- Kubura Nitrojeni bikunda kugaragara igihe igihingwa kigana mu kwera kandi gihishije. Amababi ahinduka umuhondo.



	<ul style="list-style-type: none">▪ Kubura Zenke bigaragara igihe icyo aricyo cyose cy'umwaka, amababi arananuka hanyuma imitsi yayo ikijima ndetse amababi agahinduka ibara ry'umuhondo. <p>BAZA: Ni gute wamenya udutungagihingwa ikawa ikeneye?</p> <p>IGISUBIZO:</p> <ul style="list-style-type: none">▪ Uburyo bwiza bwo kumenya udutungagihingwa n'ifumbire igiti cya kawa gikeneye ni ugufata urugero rw'ubutaka n'amababi ya kawa hagasuzumwa ibigize udutungagihingwa twabo. <p>SOBANURA:</p> <ul style="list-style-type: none">▪ Ingero z'ubutaka n'amababi bijyanwa muri laboratwari bigapimwa hanyuma ibivuyemo bigasobanurwa n'impuguke zikora gahunda yo gufumbira ibihingwa igendeye ku byavumbuwe mu butaka.
iminota1 0	<p>INTEGO YA 4: Abahinzi bamenya uburyo bunyuranye bwo kugaburira igihingwa.</p> <p>BAZA: Igiti cya kawa ntigishobora kurya ibiryo nkawe cyangwa nkange, none se ni gute twagaburira igiti cya kawa?</p> <p>IBISUBIZO:</p> <p>Binyuze mu mizi:</p> <ul style="list-style-type: none">▪ Imyinshi mu mizi igaburira igiti iri aharinganiye nacyo muni yacyo.▪ Kugira ngo ikurure udutungagihingwa mu butaka, imizi igomba kuba ikura neza kandi ubutaka bugomba kuba buhehereye.▪ Inyongeramusaruro ikoreshwa mu butaka igomba gukoreshwa gusa igihe hashize ibyumweru 2 imvura igwa. <p>EREKA: Abahinzi aho imizi igaburira igiti iba ushushanya uruziga muni y'igiti wifashishije inkoni nk'uko bigaragara ahakurikira:</p>



Ahaba imizi igaburira imizi munsu y'igiti

BAZA: Ni uruhe rugero rw'intungabihingwa ikoreshe mu butaka inyuzwa mu mizi?

IGISUBIZO: NPK

2. Binyuze mu mababi:

- Igipimo gito cy'udutungagihingwa gishobora kugaburirwa igihingwa cya kawa binyuze mu mababi yayo; Izo zitwa indyo zica mu mababi.
- Tumwe mu ndutungagihingwa nka Zenke na Boroni, n'ifumbire y'amazi itunganywa n'iminyorogoto tunyura mu ma babi mu buryo bworoshye, kurusha uko tunyura mu mizi, ku buryo zigomba gukoreshwa nk'imfuhezo z'amababi.
- Ububobere bw'ubutaka si ngombwa ku ndyo zica mu mababi ariko ibiti ntibigomba gufuhurwa mu gihe hashyushye kandi humagaye.

Iminota
20

INTEGO YA 5: Abahinzi bamenya gahunda yo gufumbira ibihingwa.

Gahunda yo gukoresha ifumbire

Nzeri	Ukwakira	Ugushyinyo	Ukubwoza	Mutarama	Gasanyatare	Werurwe	Mata	Gicurasi	Kamena	Nyakanga	Kanama
Irabya		Kororoka kw'igihingwa			Gukura kw'igihingwa		Gushya				
NPK 100g/Giti					NPK 100g/Giti						
Ifumbire y'imborera 10Kg/Kugiti											
Imvange ya zenke na borone/Amazi y'iminyorogoto					Imvange ya zenke na borone/amazi y'iminyorogoto						
								300g z'ishwagara ku giti/ a			



Sobanura:

- Iyi gahunda izatanga intungagihingwa zikenewe ku biti bya kawa kugira ngo bitange umusaruro mwiza, ifashe no kunganira ubutaka mu gihe habuze intungagihingwa zimwe na zimwe.
Iyi gahunda igomba gukurikizwa umwaka wose.

Ifumbire mborera.

- Ifumbire y'imborera yongerera mu butaka ibinyabutabire bifasha ubutaka gufata undutungagihingwa n'ububobere.
- Ifumbire y'imborera itanga Nitrojeni, Potasiyumu na Fosifate, nudutungagihingwa dukorewe aho ishyizwe. Ibuka ko ibisigazwa bya kawa iyo bikozwemo ifumbire bikora inyongeramusaruro nziza; wabikura mu rugo cyangwa ku ruganda rutunganya ikawa.
- Indobo ya litiro 20 y'ifumbire y'imborera nibyo bigomba gukoreshwa kuri buri giti cya kawa buri mwaka mu gihe cy'imvura.

NPK

- NPK ibamo Nitrojeni (N), Fosifori (P) na Potasiyumu (K). Izi zose zirakenerwa mu rwego rwo kugira umusaruro mwiza wa kawa.
- NPK igomba gukoreshwa kabiri mu mwaka mu gihe cy'imvura muri Werurwe/Mata no m'Ukwakira/Ugushyinyo. Igihe cyiza cyo gukoresha NPK ni **ibyumweru 2** nyuma y'uko imvura itangira kugwa, kandi mu gihe igiti kirimo gukura neza.
- Gufumbira ikawa inshuro zirenze imwe mu mwaka ni ingenzi.



	<ul style="list-style-type: none">○ Nkuko bimeze ku bantu (amafunguro mato 2-3 /ku munsu ugereranyije n'ifunguro 1 ku munsu), ikawa ishimishwa no kugaburirwa ibipimo bito inshuro nyinshi mu mwaka kurusha kugaburirwa byinshi inshuro imwe mu mwaka.○ NPK ishobora gusohoka igashira mu butaka uramutse uyishyizemo ku bwinshi inshuro imwe gusa.○ Ni byiza gukoresha NPK 22:6:12+3S mu Kwakira/Ugushyingo ndetse na NPK 22:6:12 +3S cyangwa NPK 17:17:17 muri Werurwe/ Mata. <p>Indyo z'igiti za zenke, Boroni n'ifumbire y'amazi atunganywa n'iminyorogoto</p> <ul style="list-style-type: none">▪ Zenke, Boroni n'ifumbire y'amazi itunganywa n'iminyorogoto birakenewe ku bipimo bito ariko ni ingenzi ku gukura kw'ibabi n'igitumbwe. Bikoreshwa ku mababi bayafuhera.▪ Ifumbire iterwa ku mambabi yagombye gukoreshwa inshuro ebyiri mu mwaka. Inshuro ya mbere; imvura igitangira n'ikawa yatangiye kuyanga, n'inshuro ya kabiri ibitumbwe bitangiye gukura. Iyi fumbire ntibigomba guterwa igihe ibiti bihangayitse kubera kubura imvura. <p>Ishwagara</p> <ul style="list-style-type: none">▪ Ahantu hose hakenera ishwagara▪ Ishwagara yongera kalisiyumu mu butaka kandi itegura ubutaka bugakora izindi ntungabihingwa ziburimo zikayoboka igihingwa cya kawa.▪ Ishwagara irahenduka▪ Ishwagara ikoreshe mu gihe cy'izuba.
<p>Iminota 30</p>	<p>INTEGOYA 6: Abahinzi bashobora kwerekana uko bakoresha neza NPK ku gipimo gikwiriye.</p> <p>BAZA: Ese mubusanzwe mwateranga infumbire mute?</p> <p>GANIRA. Ese abahinzi bamishaga ?</p> <p>BAZA: Ni gute wakoresha igipimo nyacyo cy'inyongeramusaruro kuri buri giti?</p> <p>IGISUBIZO:</p> <ul style="list-style-type: none">▪ Ukoresha igikoresho cyabugenewe gisohora igipimo nyacyo cy'inyongeramusaruro.▪ Ushyira inyongeramusaruro munsu y'igiti atari mu murima wose.▪ Ibi bituma igipimo nyacyo cy'inyongeramusaruro kigera ku giti bikaba bigabanya isesagura bikongera kwizigama. <p>SOBANURA:</p> <ul style="list-style-type: none">▪ Twakoze igipimo cya garama 100 za NPK twifashishije umunzani.



- Ushobora gukoresha ibi ugakora ibindi bipimo byifashishwa mugihe cyo gutera NPK.

UMWITOZO: Kwerekana uko bakora igipimo cya NPK:

- a) Uzuza NPK ku gipimo cya garama 100.
- b) SUKA NPK mu kandi gakombe ka pulasitiki.
- c) GARAGAZA igipimo cya NPK ku gakombe wifashishije ikaramu.
- d) SUKA NPK hanyuma ukate agakombe aho wanditse n'ikaramu. Hagomba kuba ari garama 100 za NPK.
- e) Gerageza wuzuze NPK wifashishije ibipimo bya mbere.

IBUTSA: Abahinzi ko igihe cyiza cyo gukoresha NPK ari ikigera ku byumweru 2 nyuma y'uko imvura itangira kugwa n'imizi y'igiti irimo gukura neza; icyo gihe inyongeramusaruro ikora vuba vuba.

UMWITOZO: Gukoresha NPK

- a) EREKANA uko bakoresha inyongeramusaruro neza wifashishije intambwe zikurikira; SOBANURA ibyo ugenda ukora:
 1. RANDURA ibyatsi byose hanyuma ukure isaso muni y'igiti.
 2. UZUZA neza igipimo cya NPK.
 3. SHYIRA NPK muni y'igiti, ukore ku buryo ijya ku mpande zose z'igiti, siga santimetero nka 20 uvuye ku ruti rw'ibanze mu nkengeru zo muni y'igiti.
Icyitonderwa: Ku biti byasazuwe uyishyira aho muni y'igiti hagarukiraga mbere y'isazura.
- b) TWIKIRA n'isaso. GABANYA abahinzi mo amatsinda 5.
- c) HA buri tsinda igipimo n'umurongo w'ibiti 8 riteramo NPK. Basabe gukurikira intambwe werekanye.
- d) SURA buri tsinda urihe ubufasha rikeneye.
- e) HURIZA amatsinda yose hamwe. MUGANIRE ku mwitozo, ese gukoresha inyongeramusaruro byari bikomeye cyangwa byoroshye?



iminota1
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GUSOZA:

GUSUZUMA IBYIGWA BY'INGENZI.

UMWITOZO: Isuzumabumenyi

BAZA abahugurwa ibibazo bikurikira:

Icyitonderwa k'uhugura: koresha ibibazo by'isuzuma ugenzure ko bumvise, ugende utanga ubufasha aho bukenewe.

- Kuki imirire myiza ari ingenzi?
- Ese ni byiza kugaburira igiti cya kawa ukoresheje Nitorojeni gusa?
- Ni NPK ingana iki wakoresha mu Kwakira?
- Ni ikihe gihe cyiza cyo gukoresha NPK ?

IBIBAZO N'IBISUBIZO

INTAMBWE ZIKURIKIYeho:

- Shimira abahinzi bitabiriye amahugurwa .