



**MINAGRI**



**RAB**

## **KUGABURIRA INKA ZIKAMWA**



**Werurwe 2014**



## Ugushimira

Turashimira abagize uruhare mu iyandika ry'aka gatabo bose:

- Abakozi b'ikigo cy'igihugu gishinzwe guteza imbere ubuhinzi n'ubworozi "RAB";
- Umushinga SPAT II wa BTC;
- Abakozi b'ikigo gishinzwe gukusanya no gusakaza amakuru ku buhinzi n'ubworozi "CICA".

## O. INTANGIRIRO

Inka ni itungo riri mubwoko bw'amatungo maremare yuza ibyo bigatuma ifunguro ryayo rigizwe cyane cyane n'ubwatsi. Ubwatsi rero bukomoka ahantu henshi hatandukanye ariko ahingenzi ni mu nzuri kamere, inzuri z'interano, imirwanyasuli, imirima y'ubwatsi bw'amatungo, ibiti byo mu buhinzi kandi bikoreshwa no mukugaburira amatungo, ibisigazwa by'imyaka yasaruwe

Ubwatsi ndetse n'ibiryo bitunga inka, bikaziha n'ubushobozi bwo gutanga umusaruro bitewe n'intunga mubiri zikubiyemo arizo: ibitera imbaraga, ibyubaka umubiri, amavitamini n'imyungu ngungu n' amazi.

Ibi byo kurya by'inka bigiye bifite umumaro utandukanye kuburyo iyo hagize ikiburamo ingaruka ziba mbi kw'itungo bigatera igihombo hakurikijwe ubwinshi bw'ibura ugereranije n'ubwinshi bw'iyongereye ntunga mubiri buba bukenewe.

Akagatabo kagaragaramo ibi bikurikira:

- ⤴ Ibyo inka zikamwa zikeneye;
- ⤴ Amoko y'ubwatsi bw'amatungo;
- ⤴ Gutera ubwatsi bw'amatungo;
- ⤴ Gukorera ubwatsi buri mu murima ;
- ⤴ Gusarura no kugabura ubwatsi;
- ⤴ Kumisha ubwatsi;
- ⤴ Guhunika ubwatsi;
- ⤴ Ibiryo mvaruganda;



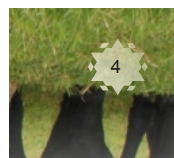
## I. KUGABURIRA INKA ZIKAMWA

### 1.1 Inka zikamwa zikeneye iki?



Inka zikamwa zikenera ifunguro ryuzuye ririmo:

- **Ibitera imbaraga:** bituma inka ikomeza kumera neza, bituruka ku bihingwa nk'ibigori, ibyatsi nk'urubingo n'umucaca, ibisigazwa by'inganda nka sondori na melase,
- **Ibyubaka umubiri:** Bituma inka ikura neza. Biboneka mu binyamisogwe nka soya;
- **Amavitamini n'imyunyu:** bituma inka zigira ubuzima bwiza;
- **Amazi:**kuko afite uruhare mukongera umukamo.





## Amazi



*Umworozi yuhira Inka amazi*

Amazi ni ingenzi kuko agize 60-70 by'umubiri w'inka kandi akaba agize 3/4 by'amata. Amazi agira uruhari runini mu mubiri w'amatungo kuko afasha :

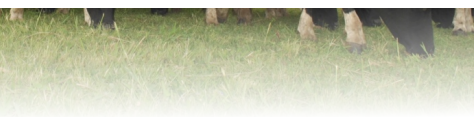
- Mwigogorwa ry'ibiryo,
- Mu kuringaniza ubushyuhe mu mubiri,
- Mu gutwara intungamubiri aho zikenewe, n'ibindi...



*Ikibumbiro k'inka cya Kijyambere*

Inka zikamwa zikenera amazi bitewe n'ibyo zariye, n'imihindagurikire y'ikirere niyo mpamvu ari ngombwa inka zigomba kubona amazi buri gihe ziyashakiye;

- Amazi meza akwiye guhora mu kibumbiro inka ikayanywera igihe ishakiye.
- Aya mazi agomba kuba afite isuku, mbese ari amazi meza.



## Ubwatsi

Ubwatsi bw'amatungo burimo amoko abiri:

- **Ubwatsi buterwa butanga**
  - Ibinyampeke
  - ibinyamisogwe
- **Ubwoko bwa kabiri**
  - bugizwe n'ibisigazwa by'ibihingwa.
- **Ubwatsi buterwa**

**Ibinyampeke:** Ibinyampeke bitanga ingufu. Bikenerwa ku kigero cya 2/3 by'ibigize ifunguro ryose. Bigizwe n'Urubingo, Tiribusakumu, Ivubwe, Umucaca, urutegama, karorisi, Panikumu n'ibindi..

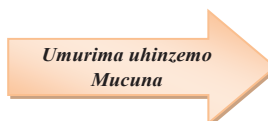
### Ivubwe



*Umurima uhinzemo ivubwe*

**Ibinyamisogwe:** Bitanga intungamubiri zituma itungo rikura vuba, birinda indwara bikongera n'umukamo. Bikenewe ku kigero cya 1/3 cy'ifunguro ryose.

Harimo Mucuna, Desimodiyumu, Lesena, Kariyandara na Alfalfa.



**Ibisigazwa by'ibihingwa:** Habonekamo ibigorigori, ibicericeri, Ibishogoshogo by'ibishyimbo, ibya soya, iby'ubunyobwa, ibitwe by'ibihwagari, n'ibindi.

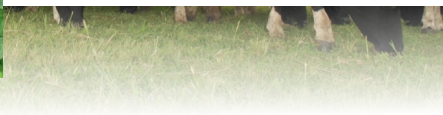


*Ibicericeri bimaze guhambirwa kugirango bibikwe neza*

## I.2 Umworozi yakwita kuki mu guhinga ubwatsi?

Mu guhitamo ubwatsi umworozi akwiye kwita kuri ibi bikurikira:

- ✦ **Uburyohe bwabwo :** Ubwatsi bugomba kuba buryohera itungo bityo rikaba ryabasha kuburya;
- ✦ **Intungamubiri bwifitemo :** Ubwatsi bugomba kuba bufite intungamubiri itungo ribukeneyemo;
- ✦ **Gufata neza ubutaka:** Ubwatsi bugomba kuba atari ubugundura ubutaka, ahubwo byaba byiza guhinga ububukungahaza ( nk'ibinyamisogwe)
- ✦ **Buhingwa ku buryo bworoshye:** Ubwatsi bugomba kuba butagorana mu kubuhinga kugira ngo bitaguhenda;
- ✦ **Butanga musaruro uhagije:** Ubwatsi bugomba kuba butanga umusaruro uhagije kugira ngo buhaze amatungo hasaguke n'ubwo kubikira igihe cy'izuba;
- ✦ **Igihe bumara utongeye kubuhinga :** Ubwatsi bwiza ni ubumara igihe mu murima utongeye kubuhinga bundi bushya;
- ✦ **Kuba butabangamira ibindi bihingwa biri hamwe mu murima:** Ubwatsi bwiza ni ubwo ushobora kuvanga n'ubundi mu murima bugakomeza gutanga umusaruro kandi butabangamiye ubundi buri hamwe.

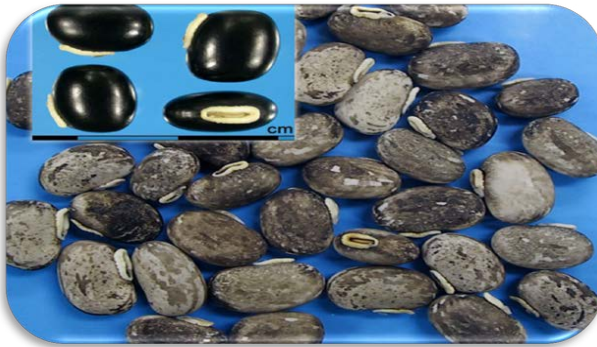




## II. GUTERA UBWATSU BW'AMATUNGO

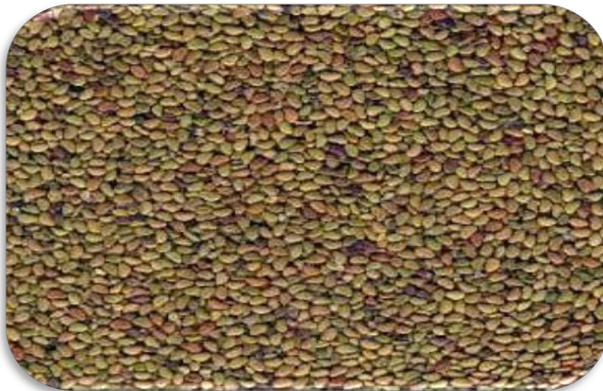
Ubwatsi buhingwa mu gihe cy'imvura. Umworozi ategura umurima neza, akawuhinga kandi akavanamo ibyatsi bibi. Mu gutera hashobora gukoreshwa: imbuto nini, imbuto ntoya cyangwa ibitsinsi/ ingeri .

- **Imbuto nini:** ziterwa mu twobo dutandukanyijwe na m 1 ku murongo na m 1 hagati y'imirongo.



*Imbuto nini za Mucuna*

- **Imbuto ntoya :** zishobora guterwa mu buryo bubiri:
  - Gutera imbuto bamisha mu murongo ku ntera ya metero 1 hagati y'imirongo, bagatera mu bujyakuzimu bwa santimetero 2;
  - Gutera ingemwe babanje guhumbika muri pepiniyeri batera ku ntera ya metero hagati y'imirongo na santimetero 50 ku murongo.



*Imbuto ntoya za desimodiyumu*



- **Ingeri:** batera ku ntera ya metero 1 kuri metero 1. Iki gihe haba hakenewe ingeri 10,000-20.000

### Ingeri



*Urubingo rumaze gufata hakoreshejwe ingeri*

### 2.2 Gukorera ubwatsi buri mu murima

Mu gihe ubwatsi buri mu murima bugomba

- ⤴ Kubagarwa;
- ⤴ Gusukirwa;
- ⤴ Gufumbirwa;
- ⤴ Gusarurwa butarasaza.



*Ubwatsi buri mu murima busukiriye*

## 2.3 Gusarura no kugabura ubwatsi

### 2.3.a Gusarura

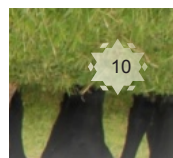
- Ubwatsi busarurwa bumaze amezi atatu mu murima bugeze igihe cyo kurabya ku rugero rwa 50%. Nibwo buba bufite intungamubiri nyinshi.
- Ku bwatsi butinda kuraba nk'urubingo busarurwa bufite hagati ya m 1 na m 1.5 z'uburebure



Ibuka koUgomba gutema ubwatsi bukenewe kugira ngo budapfa ubusa.



*Ubwatsi bugeze igihe cyo gusarurwa*



### 2.3.b Kugabura ubwatsi



*Inka ziri kugaburirwa*

- Iyo ugaburira inka uvanga ubwatsi bw'ibinyampeke n'ubuturuka ku binyamisogwe;
- Ibinyampeke bigomba kuba bigize  $2/3$  naho ibinyamisogwe ntibigomba kurenga  $1/3$  cy'ubwatsi bwose;



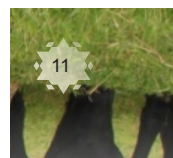
*Inka ziri kugaburirwa ubwatsi*

- Ubwatsi bugaburwa bubanje gukatwamo uduce duto tungana nka centimetero 5.

- Inka igaburirwa  $1/10$  cy'ibilo byayo.

**Urugero:** Nk'inka y'ibilo 300 igaburirwa ibilo 30. Muri byo Kg 20 biba ari ibinyampeke naho 10 bikaba ibinyamisogwe.

- Nibyiza ko ubwatsi bw'ibinyamisogwe bugaburwa bumaze guhonga. Iyo ugabuye ubwatsi bwumye uha inka 2.5-3% byibilo byayo. Inka ifite ibilo 300, igaburirwa ibilo biri hagati 7.5 na 9 birimo ibiro biri hagati ya 5 na 6 z'ibinyampeke na kg 2.5-3 z'ibinyamisogwe.



### III. KUMISHA UBWATSI

Ubwatsi bushobora kumishwa ni ubufite amababi matoya nka kororisi, Senkurusi, Panikumu, Umucaca n'Alufalufa.

#### 3.1 Nigute bumisha ubwatsi?

Hakoreshwa cyane cyane uburyo bwo kumisha ku zuba. Ubwatsi bwumishwa mu byiciro bikurikira:

- ⤴ Mu bihe by' imicyo, ubwatsi buratemwa, bugashyirwa hasi aho buhura n' imirasire y' izuba;
- ⤴ Ni ngombwa kubugaragura inshuro zishoboka ku munsu 2 cyangwa 3;
- ⤴ Ubwatsi bumaze kuma babuhambira mu miba bakoresheje udusanduka n' utugozi tw' imigwegwe;
- ⤴ Agasanduka bakuzuzamo ubwatsi bakabutsindagira kugeza igihe agasanduka kuzurira neza;
- ⤴ Iyo agasanduka kamaze kuzura neza babuhambiriza akagozi gakomeye mbere yo kuvana mu gasanduka;
- ⤴ Ubwatsi buhita bujyanwa mu bubiko cyangwa bukaba bwatangira kugaburirwa amatungo.

Ubwo bwatsi bwumishijwe bubikwa neza mu gisharagati cyangwa hanze mu kirundo, nta mpungenge ko bwafata uruhumbu., iyo ntaho buhurira n'amazi cyangwa imvura, bishobotse bwashyirwa hejuru y'agatanda.





### 3.2 Uko bumisha bakanahambira ubwatsi n'aho bubikwa.

a) Kwanika no kumisha ubwatsi:

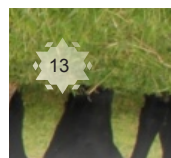


*Ubwatsi burikumishwa*

b) Kubuhambira mu miba hakoreshejwe udusanduka.



*Gukora udutafari tw'ubwatsi bwumye hifashishijwe agasanduku kugira ngo byorohe kububika.*



**c) Guhambira ubwatsi**

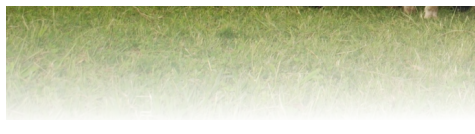
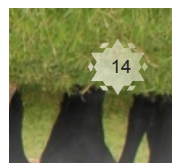


*Ubwatsi bwamaze guhambirwa*

**d) Ubwatsi buri mu buhunikiro.**



*Ubwatsi bubitswe bwamaze kumishwa*



## IV. GUHUNIKA UBWATSI

Guhubika ubwatsi ni ukububika ahantu hatinjira umwuka nko muri shitingi,

### 4.1 Uko ubwatsi buhunikwa

- ✦ Ubwatsi bucagurwamo uduce dutoya (cm5),
- ✦ bushyirwa mu mwobo urimo shitingi, butsingagirwa kugeza umwobo wuzuye,
- ✦ Iyo bumaze kuzura bafunga shitingi ku buryo umwuka utinjiramo

**Icyitonderwa:** Imirimo yo guhunika ikorwa umunsi umwe.

### 4.2 Kugabura ubwatsi buhunitse

Mugihe ugiye kugaburira inka yawe uzakurikiza ibi bikurikira:

- Ibiro inka ifite;
- Umusaruro itanga;
- Uko ingana.

Inka igomba gufata 1/10 cy'ibiro ifite

### 4.3 Kugabura ibisigazwa by'imyaka

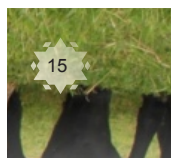
Ibisigazwa by'imyaka bikunze gukoreshwa mu kugaburira amatungo ni: Ibigorigori, ibicericeri, ibisigazwa by'ingano, ibikenyeri by'amasaka, ibishogoshogo by'ibishyimbo, ibishogoshogo bya soya, ibitwe by'ibihwagari n'ibindi.



*Ibisigazwa by'imyaka*

Ibisigazwa by'ibihingwa biba bifite intungamubiri nkeya kuko izindi ziba zagiye mu musaruro w'ubuhinzi.

Bityo rero ni ngombwa kubyongeramo Ire n'umushongi w'ibisheke (melasi).





## V. IBIRYO MVARUGANDA

- Ku nka ikamwa ni ngombwa kuyiha ifunguro ry'inyongera rigizwe n'ibiryo mvaruganda.
- Ibi bihabwa inka ifite umukamo uri hejuru ya litiro zirindwi; ikiro kimwe cy'ibiryo mvaruganda cyongerera ubushobozi inka bwo gukamwa litiro 2 z'inyongera z'amata.



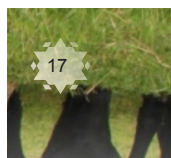
Ibiryo mva ruganda



## Umwanzuro

Kugira ngo amatungo yongere umusaruro, agomba kubona indyo yuzuye kandi ifite intungamubiri zihagije. Ubwatsi bw'amatungo cyane cyane ubwa kijyambere bukaba ari nabwo bugomba kuzana izo ntungamubiri.

Kuberako ikirere kigenda gihindagurika bikanatuma ubwatsi bw'amatungo butabonekera igihe ningombwa ko aborozi bamenya guhinga no gutubura ubwatsi bw'amatungo. Ibyo byose bikunganirwa n'igikorwa cyo guhunika no kugaburira ubwatsi neza kandi mu gihe gikwiye hanakoreshwa aho bishoboka ibisigazwa by'imyaka. Ibi bizatuma umusaruro wiyongera, twihaze mu bikomoka ku matungo ndetse tunasagurire amasoko yaba ayo mu karere cyangwa hanze yako.



Umaze gusoma aka gatabo ku kugaburira inka zikamwa, twifuzaga ko wagira icyo ukavugaho kugira ngo turusheho kunoza uburyo bwo kubagezaho amakuru y'ubworozi!

**1. Ibyo ushima kuri aka gatabo**

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**2. Ibyakosorwa muri aka gatabo**

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**3. Ubundi bumenyi bw'ingenzi wifuza kumenya ku kugaburira inka zikamwa**

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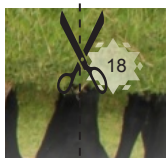
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*Umaze kuzura uru rupapuro ruce urwohereze kuri CICA cyangwa ku biro bya RAB bikwegereye*



Umaze gusoma aka gatabo ku kugaburira inka zikamwa, twifuzaga ko wagira icyo ukavugaho kugira ngo turusheho kunoza uburyo bwo kubagezaho amakuru y'ubworozi!

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*Umaze kuzuzura uru rupapuro ruce urwohereze kuri CICA cyangwa ku biro bya RAB bikwegereye*



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*Umaze kuzura uru rupapuro ruce urwohereze kuri CICA cyangwa ku biro bya RAB bikwegereye*

