



Kuchengeta nyuchi kwapamusoro *Chinyorwa Chepiri*

Kugoverana ruzivo kunorerutsa ndima.

*Chinyorwa ichi chakanyorerwa vadzidzisi vevachengeti venyuchi avo vanoshanda nesimba
kuitira kubetsera vamwe kuti vawane pundutso kubva mukuchengeta nyuchi.*



Munyori Pam Gregory

Chinyorwa chino chakashandurwa kubva muchirungu kuenda kushona na
Luke Jimu weBindura University of Science Education (BUSE)

Mari yakashanda pakuburitsa chinyorwa chino yakabva ku

[thewaterloofoundation*](http://thewaterloofoundation.org)

Gay Marris weku UK National Bee Unit (fera) akabetsera nekupenengura pamwe
nekugadzirisa chinyorwa chino.

Mashandisirwo echinyorwa chino



Iyezvino chave chinhu chinobvumwa kuti kuchengeta nyuchi kunokwanisa kupa vanhu vanogara mumaruwa mari pamusoro peyavanowana kubva mukurima. Kuchengeta nyuchi kunobetserawozve kuti goho rikure zvoita kuti chikafu chiwande uye kuti zviwanikwa zvichengetedzeke. Miti yemusango iyo inopa uchi hwepamusoro inochengetedzwa kuburikidza nekuchengetwa kwe nyuchi muruwa.

Zvisinei, nyuchi hadzisi nyore kuchengeta nguva dzose. Mugore ra2008 takanyora chinyorwa chine musoro unoti *Kutanga Kuchengeta Nyuchi* icho chakanyorwa nechinangwa chekugoverana navanhu ruzivo runodiwa pakutanga kuchengeta nyuchi. Chinyorwa chino chinotaura zvakanwanda pamusoro pekutarisira nyuchi pamwe nekugadzirisa matambudziko anosanganikwa nawo.

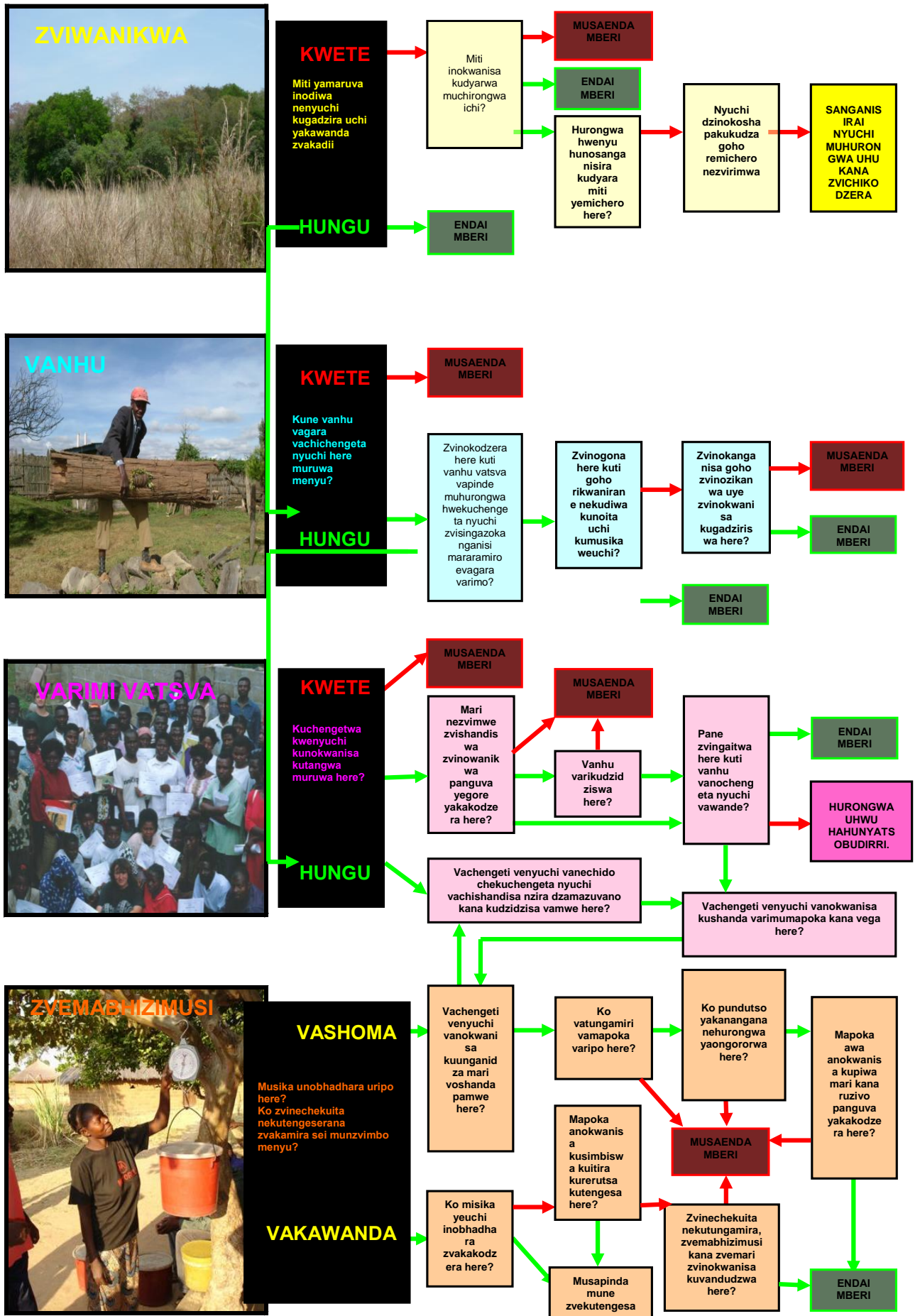
Kugoverana ruzivo chinhu chinobatsira zvikuru. Nekudaro, chinangwa chechinyorwa chino ndechekukurudzira hurukuro kuitira kuti vanhu vazviwanire nzira dzekuderedza matambudziko avanosangana nawo muruwa mavo. Kunyangwe chinyorwa chino chakanangana nekuchengeta nyuchi tichishandisa mikoko yemaKTB, chinogonawozve kubetsera mamwe machengeterwo enyuchi kusanganisa mikoko yechinyakare kana yamazuva ano.

Chinyorwa chino chakanyanyonangana nevaya vanodzidzisa varimi kuchengeta nyuchi muno muAfrika. Chinowanikwawozve mururimi rwechingezi. Chinyorwa chekutanga che *Kutanga Kuchengeta Nyuchi* chinowanikwa mundimi dzinoti French, Swahili, Chichewa pamwe neChingezi. Kuwanikwa kwezvinyorwa izvi munogona kukuwana kubva ku UK National Bee Unit Bee Base www.nationalbeeunit.com kana kunyorera Pam Gregory pa pamgregory@phonecoop.coop . Munokwanisa kuwana zvimwe zvinyorwa kana makanyorera Pam Gregory.

Pam Gregory akatanga kuchengeta nyuchi kubva mugore ra1974. Akashandira UK National Bee Unit kubva muna 1976 kusvika muna 2003. Ane chitupa che UK National Diploma chekuchengetwa kwenyuchi pamwe nechitupa cheMSc cheOverseas Rural Development. Ave nemakore gumi namatatu achishanda nevachengeti venyuchi vemunyika dzichiri kusimukira.

Ivai nekuchengeta
nyuchi kune mufaro
Pam Gregory August 2010

Zvamungaita kuunza zvinechekuita nekuchengetwa kwenyuchi zvitsva



Kuvandudza kupinda kwenyuchi mumikoko



Bumha renyuchi dziri kupinda mumukoko munzvimbo yeGarissa kuKenya. Nyuchi idzi dziri kupinda napadenga.

Dambudziko guru ririkusanganikwa naro mukuchengeta nyuchi kusapinda kwenyuchi mumikoko.

Mifananidzo yakashandiswa yakabva kune vanotevera kuna John Home, Brian Durk, Felicien Menagon Amakpe, Claire Waring pamwe naAdrian Waring

Dambudziko guru rinosanganikwa naro navachengeti venyuchi muAfrika kusapinda kwenyuchi mumikoko. Honzero huru ndeyekuti nyuchi dzinofanirwa kupinda mumikoko dzinobva mudondo. Nyuchi dzingasarudza kupinda mumukoko kana dzichiona wakaka kupfuura dzimwe nzvimbo mudondo.

Kusapinda kwenyuchi mumikoko kunoita kuti bhindauko rekuchengeta nyuchi risaunza pundutso inotarisirwa kunyanya tichitarisa mari inenge yashandiswa mukugadzira mikoko.



Pamikoko iyi hapana kana mumwechete zvawo une nyuchi. Izvi zvinoreva kuti mari zhinji yakarasika mukugadzira mikoko.

Mazano anotevera anokwanisa kutibetsera kuti mikoko yedu ipinde nyuchi. Mamwe anoshanda kupfuura mamwe uye mamwe anoshandiswa kunyangwe zvazvo asingakurudzirwe.

- 1. Kuve nechekwadi kuti musango mune nyuchi dzakawanda idzo dzinouya dzichipinda mumikoko**
- 2. Kuturika mikoko munguva dzakakodzera dzegore**
- 3. Kunamira hwezvo yenyuchi mumikoko**
- 4. Kuva nechokwadi chekuti mikoko yakashambidzika apo nyuchi dzinenge dzisati dzapinda**
- 5. Kugadzika twumikoko tweekubata nyuchi munzvimbo dzinowanza kupfuura nenyuchi dzinenge dzatama.**
- 6. Kubata mapumha enyuchi**
- 7. Kupatsanura nyuchi kuita mapoka maviri kana kupfuura.**
- 8. Kurera Zimai renyuchi**
- 9. Kubata nyuchi kubva musango.**

1. IVAI NECHEKWADI KUTI MUSANGO MUNE NYUCHI DZAKAWANDA

Kana musango muine nyuchi dzakawanda, zvinoita kuti zvive nyore kuti nyuchi dzipinde mumikoko inenge yaturikwa.

RANGARIRAI KUTI MITI INOKOSHA KUNYUCHI

Miti inokosha kunyuchi kusanganisira mhango umo dzinokwanisa kugara, chikafu kubva mumaruva uye mumvuri munguva dzekupisa.



Dondo rekuBenin iri rine miti yakakura. Nekudaro, rakanakira kuchengeta nyuchi.



Gwenga rekumusoro kweKenya rine miti yeminzwa yakawanda inoita kuti nyuchi dzirarame.

Kushomeka kwemiti munzvimbo kunogona kukonzera kuti nyuchi dzisapinda mumikoko sezvo nyuchi dzinenge dzisina chikafu chakakwana.



Dyarai miti inoita maruva kuti nyuchi dziwane chikafu.

2. KUTURIKA MIKOKO MUNGUVA DZAKAKODZERA



Mugore, panenguva idzo vanhu vanokwanisa kubata nyuchi dzinenge dzatama. Kana muchida kuziva nguva idzi, taurai nevachengeti venyuchi vemuruwa.

3. KUNAMIRA HWEZVO YENYUCHI MUMIKOKO

Mikoko yakachena uye yakanamirwa hwezvo inopinda nyuchi nyore. Wakisi ihwezvo yakanaka sezvo ichinhuhwirira kunyuchi. Zorai wakisi yakawanda mukati memukoko uye pamukova panopinda nenyuchi.



Matop bars akanamirwa wakisi anokwezva nyuchi kuti dzipinde mumikoko. Musashandisa uchi sehwezvo nekuti nyuchi dzinouya dzohutora dzisingazogari mumukoko.



Nyuchi dzinokwanisa kukwezvewa namashizha emiti, uswa hwendimu (*lemon grass*), doro rinobikwa mumaruwa, upfu hwemufarinya kana chibage uye makanda emabhanana.

Namo yakazorerwa pamukana wemukoko inokwanisa kushandiswa kukwezva nyuchi.

Muchengeti wenyuchi weku DR Congo arikutora namo kubva pamatop bars. Nyuchi dzinoshandisa dzinoshandisa namo kuvhara makwanza anenge ari mumukoko.

Musaumba namo yamunenge maunganidza.





Hwezvo iyi yakagadzirwa nekadhibhokisi uye yakagadzikwa pamusoro pamatop bars.

Mimwe miti inogadziriswa mikoko ine hwema hunoita kuti nyuchi dzitambire kure. Miti mizhinji inoshandiswa kugadzira mikoko yechinyakare inokwezva nyuchi. Nyuchi dzinopindawo nyore mumikoko yaimbove nenyuchi.

4. KUCHENGETA MIKOKO YAKASHAMBIDZIKA



Nyuchi dzine utsanana uye dzinodawo kugara munzvimbo dzakashambidzika. Nokudaro, hadzipinde munzvimbo dzinopinda mvura, munemakonzo, madandaude kana tumwe twupukanana. Kana mukoko wakasapinda nyuchi munguva yekupatsanuka kwemapoka enyuchi, ivai nechokwadi kuti mukoko wenyu wakachena uye kuti maisa hwezvo patsva.

5. KUTURIKA KABHOKISI KEKUBATA NYUCHI MUNZVIMBO DZINOFAMBA NYUCHI DZINENGE DZAPATSANUKA

Imwe yenzira dzatinogona kubata nayo nyuchi kuturika twumabhokisi tweekubata nyuchi munzvimbo dzinofamba nenyuchi dzinenge dzapatsanuka. Vachengeti venyuchi vanoziva nzvimbo dzakadaro.



Kabhokisi kekubata nyuchi karinyore kubvisa pane imwe nzvimbo kuenda pane imwe. Kana nyuchi dzapinda, kabhokisi aka kanoendeswa kuapiari uko mizinga pamwe nenyuchi zvinobviswa zvoiswa mumukoko muhombe.



Kutamisa nyuchi kuri nyore apa nekuti *matop bars* akareba kuenzana nekufara kwemukoko.

Zvinokosha kuti mukoko mutswa uiswe panzvimbo yawo. Nyuchi dzinonyatsoziva nzvimbo yadzo yadzinogara. Kana muchida kutamisa nyuchi dzenyu ivai nechokwadi kuti nzvimbo itsva inosvika makiromita matatu kubva panzvimbo iri kubva nyuchi dzenyu.

6. KUBATA NYUCHI DZINENGE DZAPATSANUKA

Kubata bumha renyuchi kunobetsera kuti mikoko yedu ive nenyuchi. Izvi hazvisi nyore nenyuchi dzemuno sezvo dzichiramwa mikoko nyore.

Kana nyuchi dzave kugadzirira kupatsanuka, dzinowanda uye dzinotanga kugadzira mazana enyuchi hono akawanda.

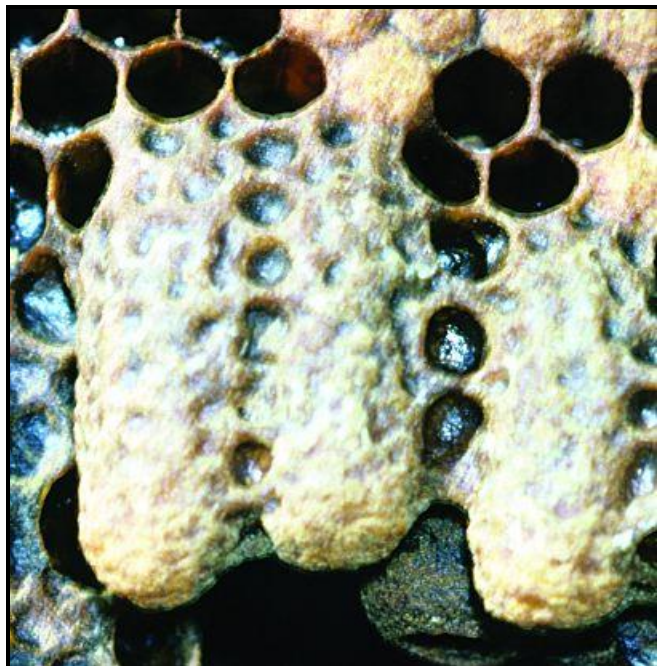


Mazana enyuchi hono arinyore kuona sezvo akati kure pane enyuchi zhinji dzevashandi uye akatikwirire mudenga.



Kubvisa mazana enyuchi hono kunogona kuita kuti muzive kana mumukoko muine *Varroa mites*.

Apo nyuchi dzinenge dzave nemazana enyuchi hono akawanda, dzinotanga kuvaka masero emazimai ayo ari nyore kuona sezvo akareba kupfuura mamwe ose. Panongovharwa masero aya, nyuchi dzinenge dzatogadzirira kupatsanuka.





**Kana dzagadzirira,
nyuchi
dzinopatsanuka
dzoenda kune imwe
nzvimbo. Nyuchi
dzinoita izvi
chinyarire.**

**Muchinguva chidoko,
nyuchi dzinoungana
kuita bumha mumuti
dzichimirira kuenda
kumusha mutsva.
Panguva iyi zviru
nyore kubata nyuchi
idzi dzoiswa
mumukoko.**



**Bumha renyuchi rinobatwa munguva dzamanheru. Rinobatwa
nekurizunzirwa mubhokisi. Ivai nechokwadi chekuti zimai
rabatirwa pamwe nedzimwe nyuchi nekuti kana risimo nyuchi
hadzigarimo.**



Nyuchi dzinounga zvishoma nezvishoma mumukoko unezimai. Munogona kufuridzira utsi zvishoma kuti nyuchi dzipinde mumukoko.



Gadzirirai mukoko wenyu mutsva mosiya gwanza pakati pematop bars kuti mukurimbidze kubheura bumha renyuchi mumukoko. Zunzirai nyuchi mumukoko mutsva zvinyoronyoro. Ngwarirai kuti zimai ririmo. Dzoserai matop bars nekukurumidza.

Nyuchi dzinogona kuramwa kana dzakasavharirwa mukati kwemazuva mashoma. Nekudaro, vharai musuo wenyuchi neuswa uhwo hwamunogona kutendeka kuti zimai risabuda.



Nyuchi dzinodawo mizinga ine mazana chaizvo. Kana mukoko uine mazana kazhinji nyuchi hadziramwe. Mazana akafa anokwezva nyuchi. Nekudaro, anokwanisa kushandiswa sehwezvo. Zvisinei, kubvisa mazana kubva mumukoko kuenda kune umwe kunogona kuparadzira zvirwere.

7. KUPATSANURA NYUCHI

Kumirira nyuchi kuti dzipinde mumukoko dzichibva musango kunonoka uye nyuchi dzinopinda muchidimbu chemikoko muapiyari. Izvi zvinoita kuti tisashandisa zvizere mari yatinenge tashandisa kugadzira mikoko.

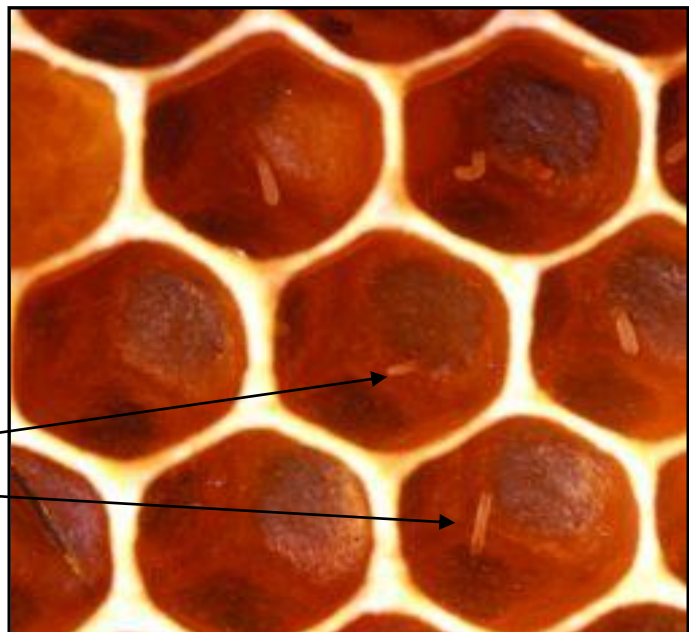
Kupatsanura nyuchi kunotibetsera kuti mikoko ive nenyuchi zvoita kuti musamirira nyuchi dzinobva musango. Kupatsanura nyuchi kunonyatsoita munguva idzo nyuchi dzinenge dzave kugadzirira kupatsanuka pachadzo.

Patsanurai mikoko inenyuchi dzakawanda, inemazana akawanda uye inotaridza utano.



Mukoko unenyuchi dzakawanda zvekuti nyuchi dzinogona kupatsanuka kana ukasapatsanurwa. Mukoko wakadai unogona kutove nemasero emazimai.

Zvinokosha kuti mumukoko muve nemazai. Nyuchi dzinenge dziri mudivi rinenge rapatsanurwa dzinoda mazai kuti dzigadzire zimai. Uku ndiko kutaridzika kwemazai enyuchi.



Kana muchipatsanura nyuchi zvinokosha kuti patop bar rimwe pave nemuzinga mumwechete. Izvi zvinoita kuti zvive nyore kugovera matop bars mumikoko. Kana izvi zvisizvo, matop bars anofanira kugadziriswa musati matanga kupatsanura nyuchi dzenyu.



Rangarirai kuti kufara kwemikoko yenyu iri miviri kwakafanana.

Izvi zvinoita kuti zvive nyore kubvisa ma *top bars* kubva mukoko kuenda kune mumwe.

Vanhu vaviri kana vatatu vanodiwa pakuita basa iri. Shandai pamwe chete uye zvinyoronyoro. Munoda mikoko miviri-une **NYUCHI DZAKAWANDA** pamwe ne**USINA** chinhu.

Vachengeti venyuchi ava varikugadzirira mukoko usina chinhu uye apiyari vachigadzirira kupatsanura nyuchi. Mikoko inofanirwa kupararana mamita anoita maviri kusvika mana. Pakati pemikoko ngapasave nemiti kuti zvive nyore kufamba.



Kune nzira dzakawanda dzekupatsanura nyuchi. Nzira inotevera inovimbika. Kupatsanura kunofanira kuitwa mangwanani kuchiri kutonhorera. Tangai runyanhiriri.

GADZIRIRO UYE MAFAMBISIRWO EBASA

- (i) Sarudzai mukoko wekupatsanura unenyuchi namazai akawanda. Itai izvi kuchine mazuva matatu kana maviri kubva pazuva ramunoda kuzopatsanura nyuchi dzenyu. **MAZAI ANOKOSHA KUMUKOKO MUTSWA KUTI NYUCHI DZIGADZIRE ZIMAI.** Ibvai marega kupatsanura nyuchi kana mukoko wamasuradza usina mazai. Mirirai kusvika mave namazai.

- (ii) Pfungaidzai utsi mumukoko wenyu une nyuchi dzakawanda kwemaminitisi angaita maviri kana matatu.



- (iii) Dzikisai mukoko unoda kupatsanurwa mouisa panzvimbo itsva.

Shandisai miti yakasungwa nemakavi sezvakataridzwa mumufananidzo. Miti iyi inoita kuti zvive nyore kutakura mukoko unoda kupatsanurwa kuuendesha panzvimbo itsva.



- (iv) **GADZIKAI MUKOKO MUTSWA PANZVIMBO YANGA IINE MUKOKO UNODA KUPATSANURWA.** Ipapo nyuchi dzinobhururuka dzave kubuda kubva mumukoko uyu dzichipinda mumukoko mutsva.

- (v) **Rambai muchifuridzira utsi. Nyuchi dzinenge dzisisa nyanyonetsa sezvo nyuchi dzinokwanisa kubhururuka dzinodzoka kunzvimbo yaive nemukoko wadzo kare.**



- (vi) **Bvisai mimwe mizinga kubva mumukoko wamurikupatsanura moiendesa kumukoko mutsva. Tangai nekusarudza muzinga ine uchi nepfuma.**



- (vii) Tsvairai nyuchi kubva pamuzinga dzichidzokera mumukoko wakasimba zvinyoronyoro muchishandisa bhurasho renyuchi. Endesai muzinga uyu kumukoko mutsva.



- (viii) Mapedza izvi tsvakai muzinga unemazana. Nyatsotarisaisai muzinga wemazana wega wega kusvika mawana unokodzera uyo unenge uine mazai nemazana akawanda. Zvakare, tsvairai nyuchi kubva pamuzinga.



- (ix) Dzokororai izvi kusvikira mave nemizinga inemazana ingasvika mitanhatu mumukoko wenyu mutsva. Endesai muzinga mumwe panguva imwe kumukoko mutsva.



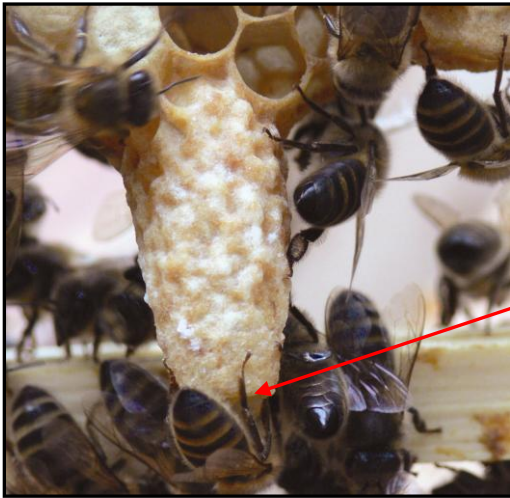
- (x) **RANGARIRAI KUTI ZVINOKOSHA KUTI NYUCHI DZOSE DZITSVAIRIRWE MUMUKOKO WAKASIMBA KUITIRA KUTI MUVE NECHOKWADI CHOKUTI ZIMAI RASARAMO.** Chidimbu chapakati napakati chemizinga chinofanira kusara mumukoko urikupatsanurwa kuitira kuti zimai riwane pekukandira mazai uye kuti nyuchi dziwane pekuchengetera chikafu.

- (xi) Endesai mizinga yenyu mumwe nemumwe moirongerera mumukoko mutsva muchibva nechekumusuo. Mizinga ine mazana inofanira kurongerwa yakateverana.



(xii) RANGARIRAI KUTI ZVINOKOSHA KUTI MIZINGA INEMAZANA YAMUNOISA MUMUKOKO MUTSVA INGE IINE MAZAI KUITIRA KUTI NYUCHI DZIGADZIRE ZIMAI. Mukuita izvi dzinotanga nekugadzira masero ezimai.

Nedzimwe nguva masero ezimai anogona kunge atove mumukoko urikupatsanurwa. Izvi zvakanakisa chose nekuti nyuchi dziri mumukoko uyu dzinenge dzatotanga kugadzira zimai. Kana masero aya asati avharwa zvinoreva kuti nyuchi dzirikugadzirira kupatsanuka. Izvi zvinoita kuti kupatsanura kwenyu kubudirire.



Sero rezimai iri harina kuvharwa. Nyuchi dziri mushishi kupa chikafu kuzana rezimai.

Kana sero rakavharwa, zvinoreva kuti nyuchi dzakapatsanuka kare. Mazimai matsva anenge atotanga kugadzirwa mukati.

Uku ndiko kutaridzika kwesero rezimai rinenge ravharwa.



Kana masero ezimai atovemo, takurai muzinga unesero iri zvinyoronyoro moendesa kumukoko mutsva. Muzinga une masero ezimai unofanira kusara mumukoko wamuri kupatsanura kudzivirira njodzi yekurasika kwezimai pakupatsanura.

- (xiii) Tsivai matop bars ane mazana amaendesa kumukoko mutsva nekuisa asina chinhu. Kana zvichikodzera, zorerai wakisi pamatop bars musati maaisa mumukoko wamapatsanura. Izvi zvinoita kuti nyuchi dzivakire muzinga mumwe patop bar rimwe.**



- (xiv) Zadzai makwanza ese nematop bars matsva mumikoko yese iri mivire movhara nemuvharo wapamusoro.**

- (xv) Nyatsoturikai mukoko wakasimba munzvimbo yawo itsva.**



(xvi) Cherechedzai muone kuti zimai ritsva rachochonya here uye kuti rave kukandira mazai. Izvi zvinogona kutora nguva ingasvika masvondo mana.



Kuwanda kwemazana kunotaridza kuvemo kwezimai uye kubudirira kwekupatsa nura.

YAMBIRO: Kupatsanura nyuchi kune njodzi dzakafanana nekukanganisa nyuchi. Nekudaro muchengeti wenyuchi anofanira kuve akazvipira kunjodzi iyi. Zvingangove zvakanaka kuedza kupatsanura nyuchi kana muine mikoko yakawanda uye kana musingarwadziwi nekurasikirwa nemikoko mishoma.

8. KURERA ZIMAI

Vanhu vazhinji vanofunga kuti kurera zimai kunopedza dambudziko rekusapinda kwenyuchi mumikoko. Sandizvo.

Nekuda kwekuramwa kunoita nyuchi dzedu uye vashandi vanokandira mazai, nzira dzekurera zimai dzakagadzirirwa nyika dzekumusoro kunotonhora, hadzishandi kuno kuAfrika.

Kurera zimai kwanakarira zvinotevera:

- **Kuuchika uye kuvandudza nyuchi kuti dzive nani**
- **Kutengesa nyuchi uye mazimai.**
- **Kugadzira *royal jelly*.**



Kana kupatsanura nyuchi kusingakwanirani nezvido zvenyu zvekuchengeta nyuchi, makasununguka kundinyorera tsamba.

9. KUTAMISA NYUCHI KUBVA MUSANGO KANA MIKOKO YECHINYAKARE

Vanhu vazhinji vanoedza kutamisa nyuchi kubva musango kana mikoko yechinyakare asi vasingabudirire munguva zhinji. Izvi zvinokonzerwa nekurasika kwezimai kana kuramwa kwenyuchi mushure mekutamiswa. Kunze kwekunge mukoko wadonha kana kuti uri munjodzi:

MUSAUTAMISE

Chengetedzai mikoko yenyu kuti nyuchi dzigopatsanuka kubva kwairi munguva inotevera.



Nyuchi dziri mumukoko wakadonha uyu dzinogona kutamiswa.

Chekai muzinga wega wega zvinyoronyoro. Sungirai muzinga wega wega *patop bar*. Zunzirai kana kutsvairira nyuchi dzose mumukoko mutsva zvinyoronyoro. Cherechedzai kuti zimai rapindawo mumukoko mutsva. Zimai rinogona kusara riri pakati pedzimwe nyuchi.



Nyuchi dzinosunungura tambo dzamunenge mashandisa kusungira mizinga.



Muzinga wakatamiswa uyu hauna kunge wasungirwa zvakasimba nekudaro nyuchi dziri kutambura kuvhara gwanza. Cherechedzai kusatwasuka kwakaita muzinga uyu.

Miti inodiwa nenyuchi

**Pasina miti hapana nyuchi
Pasina uchi hapana mari**



**Uchi hwemhando yepamusoro hunogadzirwa kubva mumaruva
emiti yakasiyana siyana yemuno.**

**Miti yakaita semisasa, mipfuti uye mitondo inoita maruva
agogadziriswa uchi hwapamusoro uye hwakatsetseka.**

Mifananidzo yakabva kuna Paul Latham pamwe naPam Gregory, John Home, Roy Dyche, Gay Marris, Selwyn Wilkins na Tom Carrol

Kuchengeta nyuchi kwapamusoro *Chinyorwa Chepiri* (© Pam Gregory)

Nyuchi dzemuno muAfrika hadziwanzopiwi tsvigiri. Izvi zvinoita kuti kuwanda kwemaruva ane nekita kuve kunokosha zvikuru munguva ndefu yegore.

Munzvimbo zhinji, varimi nevachengeti venyuchi vanodyara zvirimwa zvakawanda kuitira chikafu. Miti iyi inoshanda zvakawanda wanda uye mimwe yacho inoita maruva anoita kuti goho reuchi rikwire. Edzai kusarudza zvirimwa zvinoita maruva munguva idzo maruva anenge ari mashoma. Izvi zvinodzika dambudziko rekuramwa kwenyuchi. Miti inoshanda zvakawanda inowanzo sarudzwa nevachengeti venyuchi ndeinotevera:-

Mango – *Mangifera indica*



Inoshanda sehuni, michero, kupachikafu kuzvipfuyo uye kuchengetedza ivhu.

Pigeon pea – *Cajanus cajan*

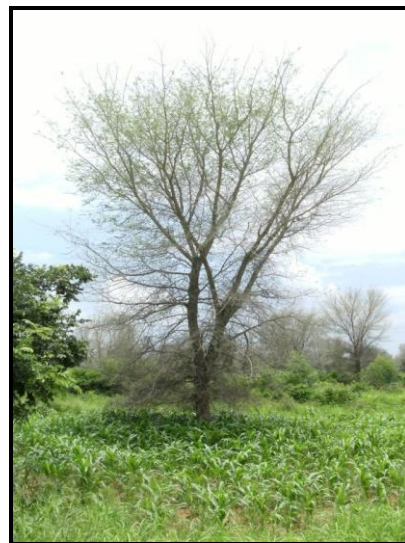


Inoshanda sehuni, sechikafu kuvanhu uye zvipfuyo pamwe nekuvandudza ivhu.

Miti yeminzwa



Miti yeminzwa yese inogadzira nekita yakanakisa.



Mutsangu-*Faidherbia albida*. Inovandudza ivhu, huni, mapango uye chikafu chezvipfuyo.

Magamu



Miti yese yemigamu inogadzira nekita.

Miranjisi pamwe nemiremoni



Miti yese iri mumhuri yemiranjisi inogadzira nekita nemichero zvirinani kana ichishanyirwa nenychi.

CHERECHEDZAI: Magamu haafaniri kudyarwa pedyo nezvimwe zvirimwa sezvo zvichiita kuti goho ridzikire.

Miti inodyarwa yakatenderedza misha inobetsera kudzivirira vanhu kubva kuapiyari zvobetsera kuti vanhu vachengetenyuchi pedyo nemisha yavo.

**Bottle brush –
*Callistemon citrinus.***



Unoshandiswa sehuni.

**Rukina (*Leucaena leucocephala*)
(alt *L. glauca*).**



Unoshandiswa sehuni, chikafu chezvipfuyo uye kuvandudza ivhu.

Miti inotevera inodiwa zvakanyanya nenyuchi. Cherechedzai muone kuti inowanika here muruwa menyu.

***Moringa oleifera*
(*M. pterygosperma*)**



Unoshandiswa kurapa, sechikafu chezvipfuyo, kuchengetedza ivhu, seheji yepamusha, kusvina mafuta uye kuuraya utachiwana mumvura yekunwa.

**Macadamia nut –
*Macadamia tetraphylla***



Munowana huni, mafuta ezvemicheno, mapango, huni uye nzungu dzacho dzinotengeswa.

Jirimono-Jatropha curcas



Unoshandiswa kugadzira mafuta edzimota, semushonga wekurapa, kugadzira sipo.

Mamwe maruva madiki madiki anokosha kunyuchi.



Nhungumira, *Bidens pilosa*, kanoshandiswa kudzikisa marwadzo euorera.



Maruva ekamuti aka, *Fuchsia* anokosha apo maruva anenge ari mashoma.

Zvirimwa zvinoita maruva zvinopa vanhu chikafu uye zvinotengeswa. Goho rezvirimwa zvakaita sedonje, mapopo, mango, magwavha, makotopeya, manhanga pamwe nemaringa zuva rinokwira kana zvichi shanyirwa nenyuchi.

Mapopo – *Carica papaya*



Makotopeya – *Persea Americana*



Mufarinya-*Manihot esculenta*



Zviringa zuva- *Helianthus annuus*





Zviringa zuva – *Helianthus annuus*

Zvinorimirwa mhodzi dzinosvinwa mafuta. Mhodzi dzinotengeswawo zvakare.

Kenyan kale - *Brassica oleracea*



Zvirimwa zvose zviri muboka remirivo yerepu zvinokwezva nyuchi uye goho rezvirimwa izvi rinokura.

Kofi - *Coffea canephora*



Goho rekofi rinowedzera kana yakashanyirwa nenyuchi uye kuchengeta nyuchi kunorerutsa raramo yevachengeti venyuchi.

Mabhanana – Musa spp.



**Mibhanana
ine nekita
pamwe
nepfuma
kunyangwe
isingadi
nyuchi kuti
ibereke.**

**Mimwe miti yakaita
se*Gliricidium sepium*, inokosha
kunyuchi sezvo ichiita maruva
munguva idzo maruva anenge
ari mashoma. Cherechedzai
muruwa menyu muone kana
muine miti yakaita seuyu.**



**Zvinokoshaozve kuti nyuchi
dziwane mvura kunyanya
munguva yekupisa apo
mvura inenge irishoma.
Mvura iyi inogona kuiswa
muchigaba chisina kunyanya
kudzika kuitira kudzivirira
kufa kwenyuchi. Mvura
inofanira kuwedzerwa nguva
nenguva.**

Zvinokwanisa Kukanganisika

Uye kuzvigadzirisa



**Kuchengeta nyuchi hakusi nyore nguva dzose. Nekudaro,
kugoverana ruzivo kunobetsera.**

Mifananidzo yakabva kuna Roy Dyche, Robert Kajobe, Mike Allsopp, James Morton (CSL), Claire Waring, David Wilkinson (Fera), Felicien Menagon pamwe neFera Photographic services

Kuchengeta nyuchi kwapamusoro *Chinyorwa Chepiri* (© Pam Gregory)

KUGADZIRISA MIZINGA INENGE YAKAVAKIRWA PAMA`TOP BARS' AKAWANDA

Kana muchichengetera nyuchi dzenyu mumikoko inoshandisa *matop bars*, zvakanosha kuti **MUZINGA MUMWE UVE PATOP BAR RIMWE**. Kana nyuchi dzakavakira mizinga pamatop bars akawanda, zvinonetsa kuongorora mukoko kana kumora.



Kufara kwetop bar kunokosha sezvo kuchiita kuti nyuchi dzivake mizinga patop bar rimwe. Top bar rinofanira kufara kuita 3.2 cm.

Munogona kuongorora kufara uku nekushandisa muvharo wemabhodyera ezvinwiwa.



Uku ndiko kufara chaiko here?



Uku ndiko kufara chaiko here?



Kana muzinga wakakura uchibatandiza *matop bars* zvinoreva kuti kukoshi hwemhando yemikoko iyi hunobva kwashaya basa.



Dzimwe nguva zviri nyore kucheka *matop bars* akakakurisa. Miti yakapfaya yakaita seRafia inogadzira ma *top bars* anogara kwenguva yakareba.

Dzimwe nguva nyuchi dzinovakira muzinga pama *top bars* akawanda. Izvi zvinokwanisa kugadziriswa nekucheka muzinga uye kuusungira pa *top bar* rimwe.

Izvi zvinoda vanhu vaviri –mumwe akabata apo mumwe anenge achicheka nekusungira.



1. Chekai muzinga muchubvisa kubva pamatop bars pausingafanirwi kuve uri.



2. Petai muzinga mousungira patop bar neshinda.



3. Nyuchi dzinobva dzanamira muzinga patop bar pamwe nekubvisa shinda.

ZVIRWERE, TWUPEMBENENE UYE MAMWE MATAMBUDZIKO

Nyuchi dzinoda kutarisirwa sezvinongoitwa zvimwe zvipfuyo kuti dziite goho rinofadza. Zvinotevera zvichakubatsirai pakutarisira nyuchi dzenyu:

- Shanyirai apiyari yenyu nguva nenguva muchiongorora utano hwenyuchi dzenyu.
- Chekai uswa kuitira kudzivirira twupembenene twakaita semasvosve nemadzvinyu.
- Sakurai uswa hwakatenderedza apiyari kuitira kudzivirira moto.
- Dzivirirai mikoko yenyu kubva kumbavha uye mhuka.
- Masvosve anokwanisa kuparadza mukoko kana akasadzivirirwa.

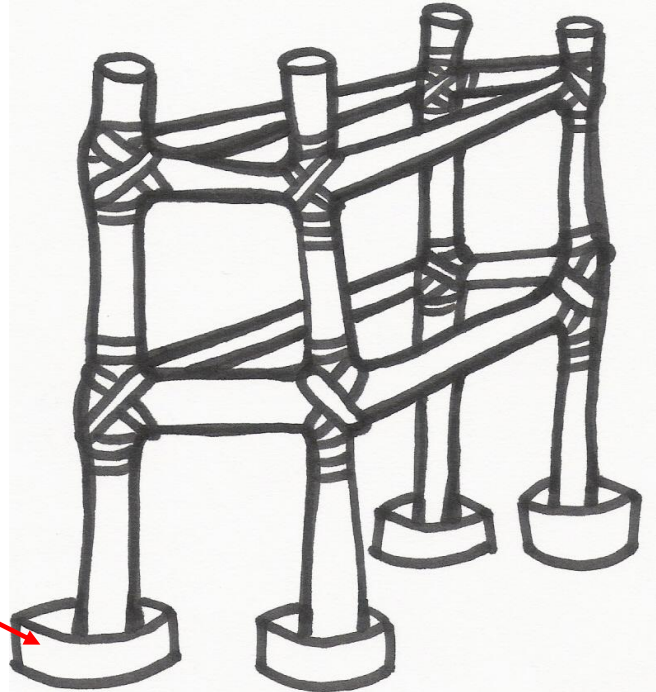


Masvosve awa atoparadza mukoko uyu.

Kuzorera girizi kunodzivirira masvosve kuti asapinda mumukoko. Waya kana miti inoshandiswa kuturika mikoko inofanirwa kuzorwa girizi nguva nenguva. Apiyari yenyu inofanira kugara isina miti.

- **Makumbo epanoturwikwa mukoko anofanira kuzorwa girizi kana kuaisa mumagaba anemafuta emotokari akashandiswa kuitira kuti masvosve asakwira.**

Kuisa makumbo emikoko mumagaba ane mafuta emotokakari akashandiswa kunodzivirira masvosve kuti asakwira



- **Muchenje unoparadza mikoko isina vanhu vanotarisa. Mikoko iyi inokwanisa kudonha yopedzisira yakuvadza vanhu.**



Kuparadza kwemuchenje.



Mukoko unenge wadonha injodzi kune vamwe.

- **Kune twumwe twupukanana twunokanganisa nyuchi twakaita semadzvinyu ayo anodya nyuchi.**

Madzvinyu anokwanisa kudzivirirwa nekusaisa kapuranga kanomhara nyuchi dzichipinda mumukoko uye kuchengetedza apiyari yakachena.



- **Tumwe twupuka twakaita seshiri twunodya nyuchi.**



Shiri hadziwanzodyi nyuchi zvekuparadza mukoko. Kana shiri dziri dambudziko, mukoko unokwanisa kubviswa woiswa pane imwe nzvimbo. Pano tinotaridzwa kuparadza kunokonzerwa neshiri inonzi hohodza (woodpecker).

- Mikoko isati yapinda nyuchi inofanira kugara yakachena nekuti kana inetsvina, nyoka, madandaude, mazongororo, mapete pamwe namarize zvinopedzisira zvave kugaramo.



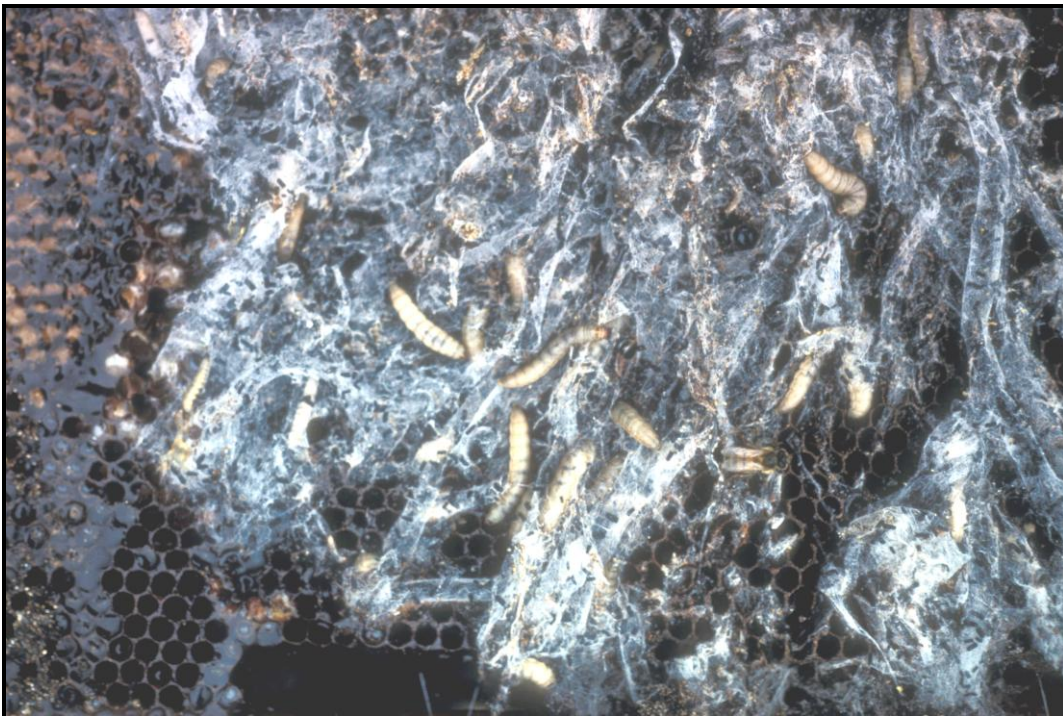
Nyuchi hadzipindi mumikoko yakaita seuyu.

- Panewozve twumwe twupembenene twunokanganisa nyuchi twakawandawanda.



Twunofanira kuparadzwa apo munosangana natwo. Kana twanyanya kuwanda, bvisai mukoko mouisa kune imwe nzvimbo.

- Kana mizinga ikaregererwa inoparadzwa nekapuka kanonzi *wax moth* muchingezi.

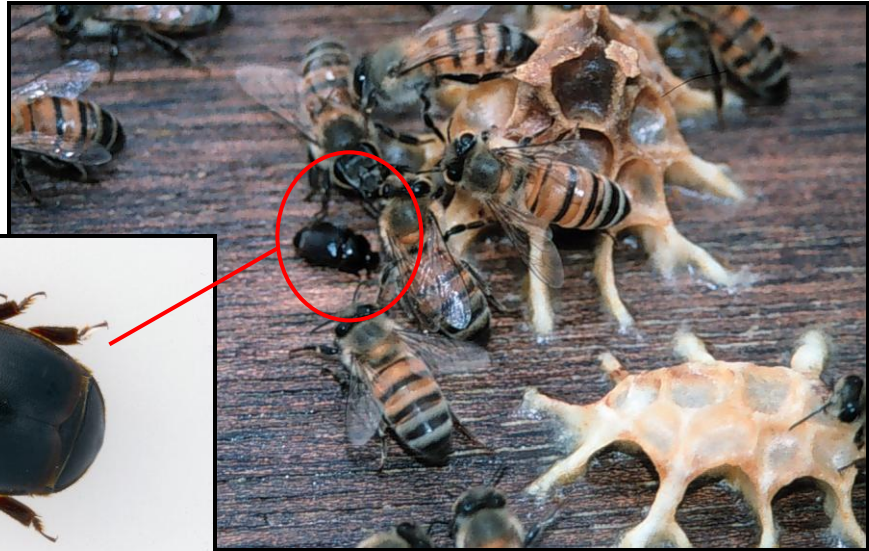


Wax moth inoparadza nyuchi dzinenge dzirishoma mumukoko. Kuchengetedza nyuchi dzenyu kunoita kutidziwande. Bvisai mizinga kubva mumikoko inenge yaramwiwa nenyuchi kuitira kudzivira *wax moth*.

Nedzimwe nguva *Wax moth* inotorwa seshamwari yemuchengeti wenyuchi nekuti inoparadza mizinga pamwe nehurwere huri mairi.

- Twupuka twunonzi *Small hive beetles* muchingezi twunoita kuti nyuchi dzisagadzikane. Twunotenderera mumukoko uye vana vatwo vanodya mazana, pfuma uye uchi.

Small hive beetle.



Muapiyari ngamuve makachena-musasiya zvunhu zvinokwezva masvosve kana twupembenene. Nyuchi dzakawanda dzinokwanisa kukurira twupembenene twakaita semabeetles. Dzimwewo nyuchi dzinodzivirira kupinda kwemabeetles uye idzi ndidzo nyuchi dzakanaka kuchengeta. Kana dambudziko iri ranyanyisa, munokwanisa kushandisa inonzi *soil drench* iyo inoiswa pasi yakatenderedza mikoko.



- Twuma *beetles* twukuru twunoshunguradzawo zvekare dzimwe nguva.



Twunogona kudzivirirwa kuti twusapinda mumukoko nekusiya musuo wenyuchi mudiki. Musuo wemukoko haufanirwi kukura kupfuura chinyoreso. Zvinokuridzirwa kuisa misuo yakawanda panekuisa musuo mumwechete wakakura.

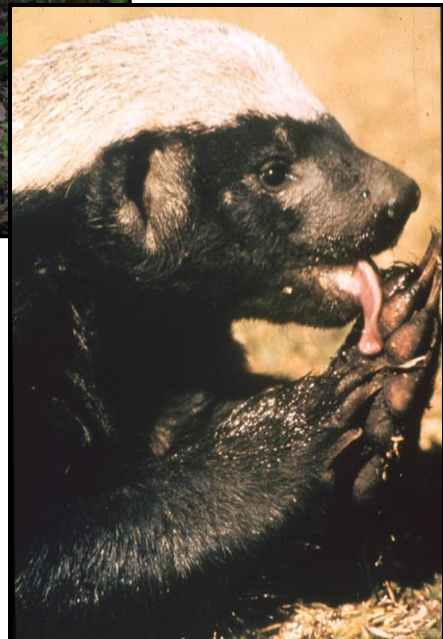
- Dzimwe mhuka huru dzinogona kukanganisawo nyuchi. Munzvimbo idzo mupurwa unonetsa, mikoko inofanira kuturikwa paisingasvikirwi.



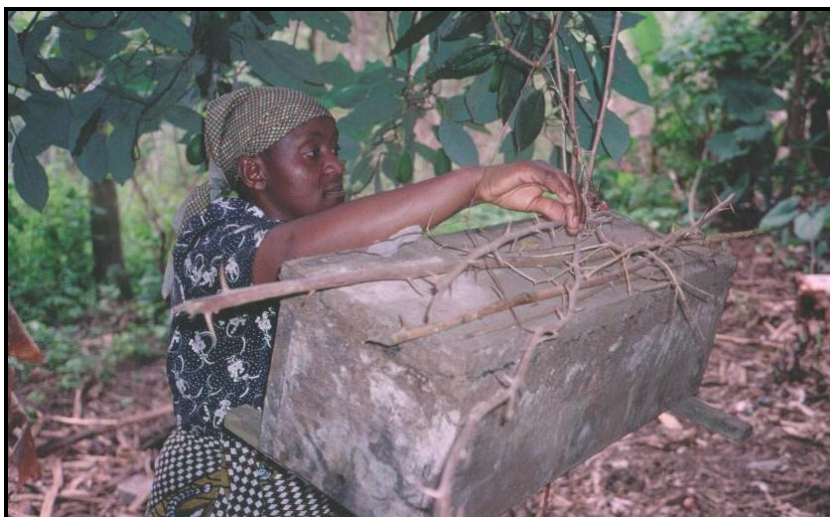
Cherechedzai kumonwa kwakaitwa waya. Izvi zvinodzivirira kuti mupurwa usakwira.

Shandisai waya pakaturika mukoko kana mipurwa ichinetsa muruwa menyu. Turikai mikoko yenyu pakakwirira kusvika mita imwechete kana kupfuura kubva pasi.

Kana makashandisa mastands ngaave akasimba.



Mikoko inodawo kudzivirirwa kubva kvanhu nezvimwe zvipuka. Dambudziko guru rinokonzerwa nembavha.



Kana tsoko dzichinetsa, miti ineminzwa inogona kuturikwa pamusoro pemikoko.

- Nyuchi dzemu Afrika dzinobatwawo nezvirwere. *American foul brood (AFB)* ndicho chirwere chakaipa chinobata nyuchi dzemu Afrika. AFB inokonzerwa neutachiona hwebacteria hunouraya mazana. Izvi zvinoita kuti nyuchi dzishomeke mumukoko kusvika dzapera. Hapana mushonga unoshandiswa kurapa chirwere ichi.



AFB inoonekwa nekudzikira kwewakisi inovhariswa mazana iyo inenge yakasviba uye kuboowa pamwe nemazana akapararira. Muzinga uyu unechirwere. Nekudaro, nyuchi idzi dzinofanira kuparadzwa nekupiswa.

Kuve nechekwadi cheurwere hweAFB:

Kana mukafungira kuti nyuchi dzenyu dzabatwa neAFB, bayai sero nekamuti modhonza. Kana pakabuda zvinorera izvi zvinotaridza chirwere cheAFB.

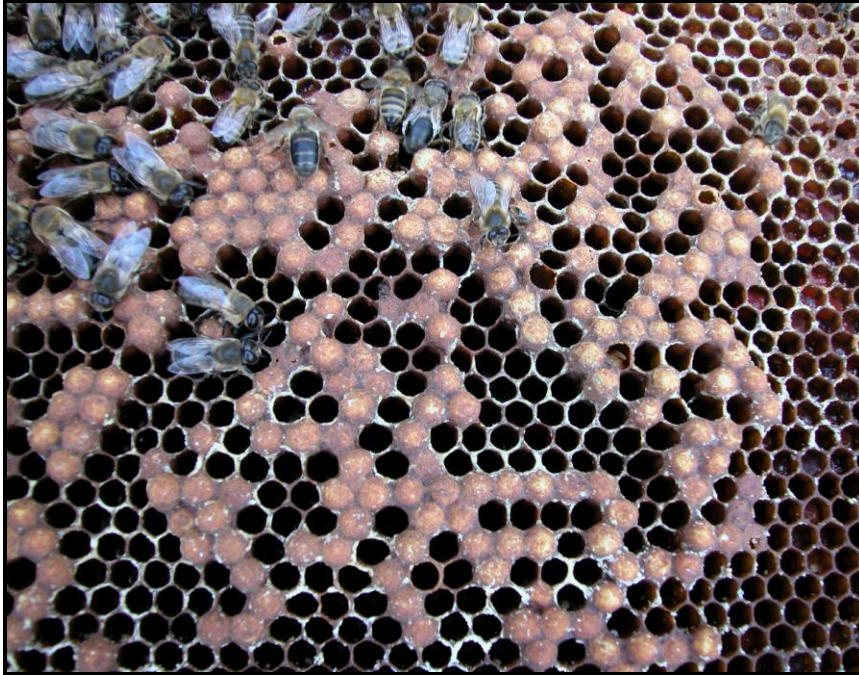


Kuchengeta nyuchi kwechinyakare pamwe nema *Top bar* kunodzivirira chirwere cheAFB nekuti mizinga mizhinji inomorwa. Izvi zvinobvisa urwere kubva mumikoko. Kuchengeta nyuchi kwamazuvano kunokurudzira kufambiswa kwemizinga mumikoko yakawanda zvokonzera kupararira kwechirwere cheAFB.

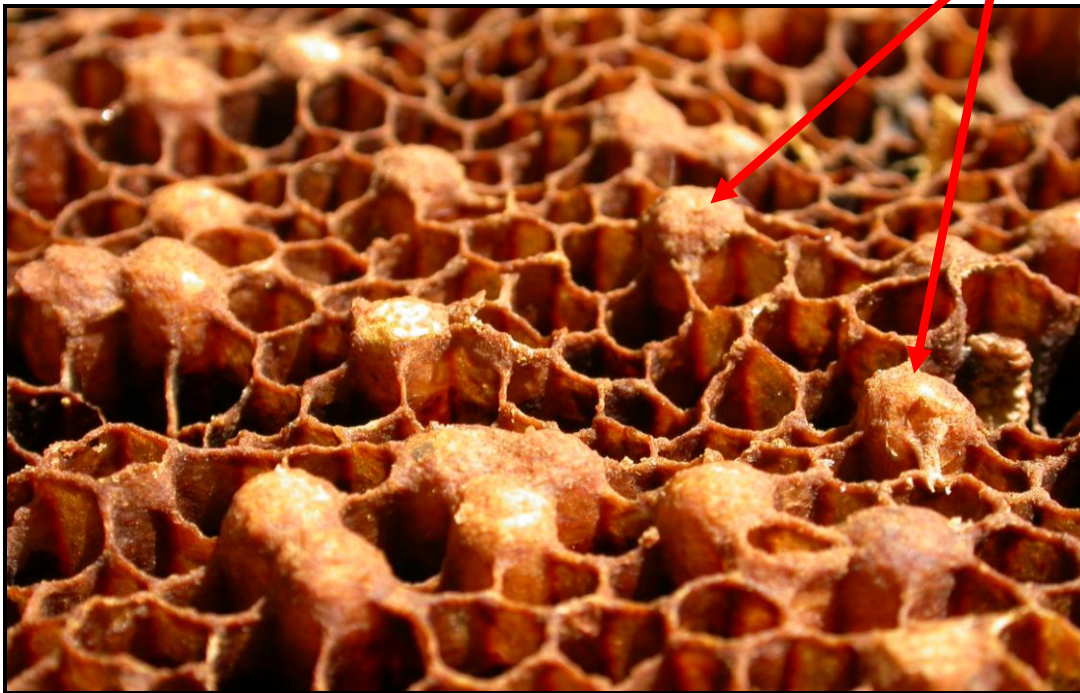
- Twupembenene twunonzi *Varroa mites* muchingezi twunowanikwa pano nepapo mu Afrika. Kunyika dzinotonhora, twunowanikwa pamwe nezvirwere zvinokonzerwa nebacteria kana virus. Nyuchi dzemu Afrika hadzikanganiswi netwupukanana utwu.



- **Nyuchi dzemuno mufrika dzinowanzoita vashandi vanokanda mazai. Izvi zvinowanzoitika kana muchengeti wenyuchi akatadza kubudirira pakupatsanura nyuchi dzake. Zimai rakarasika nyuchi dzinogona kutadza kugadzira rimwe zimai. Nekuda kwekushaikwa kwemunhuwi wezimai, nyuchi dzerudzi rwavashandi dzinotanga kukanda mazai ayo anogadzira nyuchi hono. Nekudaro mukoko uyu unopedzisira usisina nyuchi.**



Nyuchi dzavashandi nemazimai anokandira mazai anopa nyuchi hono idzo dziri nyore kuona nekuti dzinokandira mazai enyuchi hono mumasero enyuchi dzevashandi. Mhedzisiro yacho masero akatikwirire ayo arinyore kuziva.



Mazimai anopedzisira avekukanda mazai enyuchi hono kana akapererwa nembeu yaanenge akakohwa kubva kunyuchi hono. Izvi zvinoitika kana zimai risina kusangana zvakanaka nenyuchi hono kana kuchembera.

KUPATSANUKA, KUTAMA UYE KURAMWA

Kupatsanuka, kutama uye kuramwa zvinhu zvakasiyana. Maitiro aya anobetsera kuti nyuchi dzirarame mumamiriro ekunze emuno muAfrika.

Kupatsanuka inzira inoita kuti nyuchi dziwande. Chidimbu chenyuchi chinosara chimwe chichinotangawo musha wacho.



- Izvi zvinowanzoitika kana munhuwi wezimai usisanzwikwi nenyuchi zvoita kuti nyuchi dzisabatane semhuri imwe. Izvi zvinonyanyokonzerwa nekuchembera kwezimai.
- Kupatsanuka kunogona kuitika kamwe kana kakawanda pagore kana kusatoitika zvachose. Kunowanzoenderana namakuriro, kuwanda kwechikafu pamwe nemamiriro emukoko.
- Mukoko unopatsanuka hauiti uchi hwakawanda kuenzana neuya usinga wanzo patsanuki.

Kutama kunoitika kuchitevera mwaka apo nyuchi dzinenge dzichitevera nzvimbo dzinechikafu. Uku kunoitika gore rega rega uye zviri nyore kuziva nguva idzo nyuchi dzinotama.

Kuramwa kunokonzerwa nekushaikwa kwechikafu kana kukanganiswa nezvinhu zvakasiyana siyana.

- Kuramwa kunogona kurongwa kana kusarongwa nenyuchi.
- Kutama kwakarongwa kunowananzokonzerwa neku-shaikwa kwechikafu. Izvi zvinoita kuti zimai rimire kukanda mazai. Nyuchi dzose dzinotama apomazana ose anenge akura kuita nyuchi dzinobhururuka. Nyuchi



- Kutama kusina kurongwa kunokonzerwa nezvinhu zvakaita semoto, twupembenene twakaita samasvosve kana kubvinza kwemukoko. Nyuchi DZOSE dzinosiya mukoko dzichinotsvaka musha mutsva apodzintama kana kuramwa.

Masonerwo esvutu yenyuchi



Salome weku Kenya anesvutu yenyuchi yakasonwa kubva mumasaga. Yakasonwa nenzira inoita kuti zipi isadiwa.

KUSONA SVUTU YENYUCHI PAMWE NEVHEIRI

Svutu dzenyuchi dzinogadzirwa nezvinhu zvakasiyana siyana. Zvinokosha kugadzira svutu nezvinhu zvakasimba, zvakachipa uye zvinodzivirira kupfondwa. Saga rechibage rinoita chose.



Chekai saga renyu kuti rivhurike.



Shandisai mudhabha wakabvaruka kuita *pattern* yemudhabha wesvutu.



Apa ndipo panosangana zvidimbu zvakumakumbo.

gusset



Musatambisa saga renyu.



Chekai zvidimbu zvemakumbo zvina.

Sonanidzai zviviri zvekutanga mogadzira mberi kwemudhabha.



Itai zvimwechetezvo apo munosona zvidimbu zvesure kwemudhabha.



Batanidzai majoin emukati memakumbo.



Batanidzai micheto yekunze kwemudhabha.



Panobatanidzwa micheto miviri ndiyo inonzi "seam".

Sonai mipendero mayakarudunuka.



Edzai mudhabha wenyu muone kana uchikwana.



Sonai mupendero muchiuno nekumucheto kwemakumbo. Mupendero unoita kuti zvine nyore kuisa rasitiki kana tambo inosungiswa muchiuno kuti mudhabha usadonha kana kusunga kumakumbo kuitira kudzivirira nyuchi kuti dzisakwira nekumakumbo.



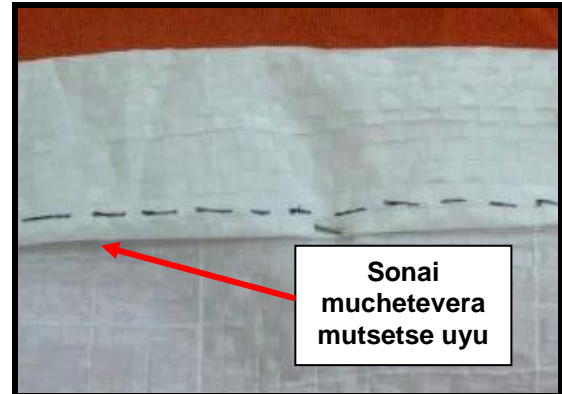
Isai tambo mumakumbo pamwe nemuchiuno.

Aya ndiwo maisirwo erasitiki kana tambo:

1. Petai mucheto kamwe.



2. Petai zvekare mobva masona.



3. Iri ndiro gwanza rinoiswa tambo kana rasitiki.



4. Sundai tambo muchishandisa chinhu chakagomara.



5. Rambai muchiita izvi kusvika tambo yabuda.



6. Kana tambo iyi yakadhonzwa inotaridzika seizvi uye inodzivirira nyuchi.

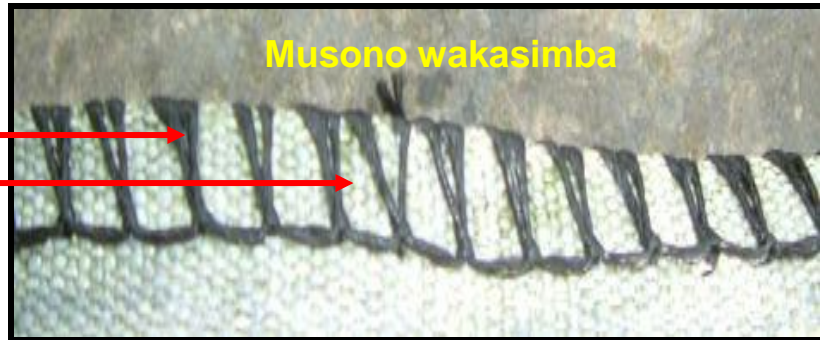


KUSONA

Misono inofanira kuve yakasimba kuitira kuti shinda dzesaga dzisarudunuka.

Izvi munogona kuzviita sezvakataridzwa mumufananidzo unotevera:

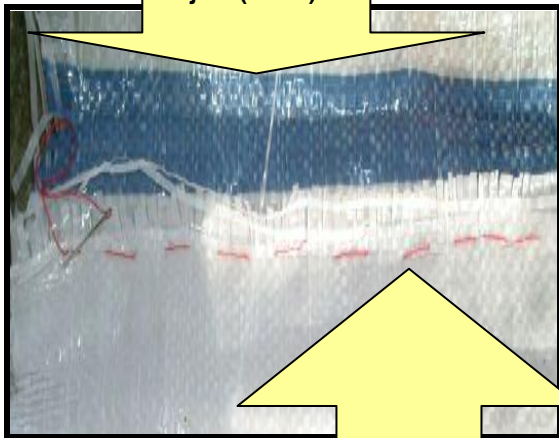
Kusona kumucheto kunoita kuti muve nemusono wakasimba.



Munokwanisawozve kuita "run and fell seam" iyo inoita mucheto wakasimba. Kusona run and fell seam:

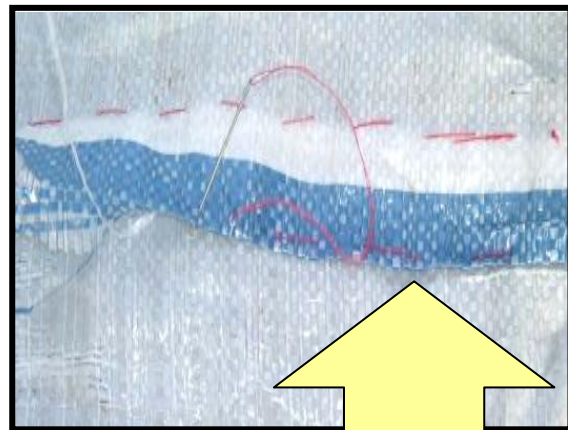
1.

Siyai jira rakati rebe rekusona join (seam).



Sonai muchitevera mutsetse uyu kuti mubatanidze micheto. Iyi ndiyo inonzi seam.

2.



Peterai jira paseam mobve masona.

Munokwanisa kunama mupendero netape zvoita kuti join isimbe.

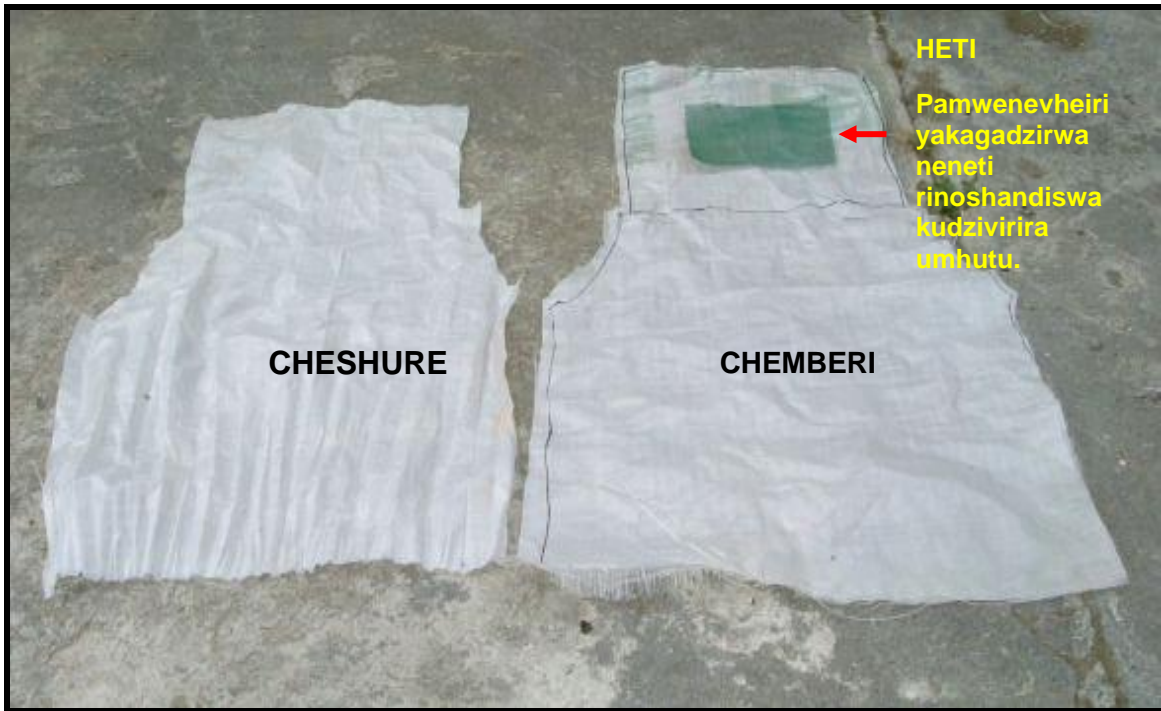
Shandisai bhatye dhara pakutara micheto yebhatye resvutu yenyu.



Wedzerai saga rakaita square kumusoro kuitira kusona hetu pamwe nevheiri.



Chekai zvidimbu zviviri, chemberi necheshure



Sonanidzai mativi pamwe nekupendera zasi kuitira kuzoisa tambo kana rasiitiki. Edzai muone kana muchikwana.



Musati masonera *net*, tarisai muone kana murikusonera panzvimbo chaipo panoenderana neuso. Munokwanisa kubetserwa nevamwe pakuita izvi.



Cherechedzai nzvimbo yamuchasonera vheiri.



Iri ibhatye resvutu yenyuchi risati rave nemaoko.



Tarai munofanira kuchekwa maoko ebhatye namo.



Chekai zvidimbu zviviri izvi.



Sonanidzai zvidimbu zvemaoko izvi. Penderai kumucheto kwemaoko kuti mukwanise kuisa tambo. Sonerai maoko pabhatye.



Svutu yapera kusonwa. Cherechedzai mapurasitiki akapfekwa pamusoro peshangu pamwe nekusingwa muzvitsitsinho kudzivirira kupfondwa mumakumbo. Magorovhosi eRubber ndiwo anokurudzirwa pakushanda nyuchi.



Magorovhosi erubber.

Mapurasitiki akapfekwa pamwe nekusingwa muzvitsitsinho.

Svutu yapera kusonwa

Svutu yakasonwa nechidimbu chejira/saga chimwechete. Svutu iyi inotoda zip kuti mukwanise kuipfeka.



Kuvandudza hukoshi hwezvinobva mukuchengeta nyuchi



Kubika doro neuchi kuZambia. Uchi hwakabva kare huchishandiswa kubika zvinwiwa zvakaita sedoro.



Zvimwe zvinhu zvinokwanisa kugadzirwa zvinoti makenduru, mafuta ezvemicheno pamwe nezvibikwa zvinosanganisira uchi. Kuwedzera hukoshi hwezvinobva mukuchengeta nyuchi kunopindirana neunyanzvi hwagara huine madzimai.

Mifananidzo yakabva kuna Janet Lowore (Bees for Development), Fera, John Home pamwe naRoy Dyche

Kuchengeta nyuchi kwapamusoro *Chinyorwa Chepiri* (© Pam Gregory)

ZVINHU ZVAKAVANDUDZWA

Kuwedzera hukoshi kunosanganisira vandudzo yezvinomorwa kubva mumikoko kuti zviite mari yakawanda kana kuti zvive nyore kutengesa. Izvi zvinonyatsoshanda kana muchigadzira zvinhu zvinosanganisa wakisi.

Kazhinji zvimidziyo pamwe nezvinosanganiswa newakisi zvinoshomeka kuti basa ribudirire. Munokwanisa kurerutsa dambudziko iri nekutsvaka zvinotsiva zvinowanika muruwa.

Munokwanisa kuedza mabikiro akasiyana siyana muchishandisa zvinhu zvakanawanda. Mamwe mabikiro munoawana mumapeji ekupedzisira echitsauko chino.



Kuumba makenduru

Kune mhando dzakawanda dzemakenduru dzamunokwanisa kugadzira. Mhando idzi dzinosiyana siyana zvichienderana nezvido zvavatengi kana foroma dzinoshandiswa idzo dzinosanganisa goko rezai, mushenjere, *pipe* remvura kana guni remupopo.



Boka remadzimai rekuMalawi rinogadzira makenduru richishandisa *mapipes* epurasitiki anenge akavharwa pasi nemivharo yezvinwiwa.



Mudzimai akaremara wekuTanzania ane kenduru yakagadzirwa neforoma yakatengwa kunze kwenyika.

Magadzirirwo emakenduru mamwechete zvisinei neforoma. Wakisi inofanirwa kuve yakachena. Macheneserwo ewakisi akatsanangurwa muchinyorwa chekutanga.

Pakubika makenduru:

1. Nyungudutsirai wakisi mumagaba muchishandisa moto.



2. Chekai tambo yakafanira. Vamwe vanozorera wakisi kuti tambo itwasuke.



3. Zorerai sipo kuti kenduru isanamira muforoma. Foroma iyi ndeyemushenjere.



4. Cherechedzai kuti pasi peforoma pakavharwa kuti wakisi isarasikira pasi.



5. Shandisai kamuti kakatsemurwa kuisa tambo pakati peforoma.



6. Dururirai wakisi muforoma.





Kenduru yakapera kugadzirwa.

Makenduru awa akagadzirwa neforoma inoshandiswa kuita bhizimusi remakenduru kubva kuZimbabwe.



Makenduru anokwanisa kugadzirwa nekunyika tambo mugaba rinewakisi yakanyungudiswa pamwe nekuibudisa kuti wakisi iomere patambo. Dzokororai izvi kusvika kenduru yakura. Hunyanzvi hunogona kuburitsa kenduru yakanaka seyakataridzwa mumufananidzo uyu.



Kugadzira kenduru nyore

Kenduru inogona kushandisirwa mugaba kana chiumbwa chakaita segaba. Izvi zvinoita kuti igare kwenguva ndefu sezvo wakisi inenge yanyunguduka isingarasiki.



1. Nyungudutsirai wakisi mugaba muchishandisa moto.



2. Gadzirirai gaba pamwe netambo.



3. Itai kuti tambo ive panzvimbo nekushandisa kamuti kakatsemurwa.



4. Dururai wakisi mosiya kuti iome.



Musabvisa kenduru kubva mugaba.

Kubika mafuta ekuzora

1. Pimai mafuta ekubika pamwe newakisi moisa mugaba.



2. Isai gaba iri munerimwe gaba moisa pamoto.



3. Dziisai kusvika wakisi yanyunguduka uye yasangana nemafuta. Kodzongai.



4. Wedzerai twunonhuwira. Kodzongai modururira mugaba. Siyai kusvika zvakora.



Zvokuzorera pamuroma zvinokwanisa kugadzirwa nenzira imwecheteyo. Dururirai mugaba rakakodzera.

Mafuta ekurapa ganda anogadzirwa nekunyungudusira namo muVaseline muchishandisa nzira yakatsanangurwa mundima yapfuura.



Kubika mafuta akapfavirira

Pakubika mafuta akapfavirira wedzerai mvura mumabikirwo atsanangurwa mundima yapfuura. Wedzerai zviwedzerwa zvinoita kuti mafuta nemvura zvisasangane.

1. Pimai mafuta pamwe newakisi modira mugaba. Dziisai kusvika zvasangana. Pimai mvura pamwe neemulsifier (kana iripo) moisa mugaba repiri.



2. Gadzirirai gaba rekusanganisira.



3. Sanganisai mvura newakisi yakasangana nemafuta mokodzonga zvakasimba kusvika zvakora. Izvi zvinoita nyore kana muri vaviri.



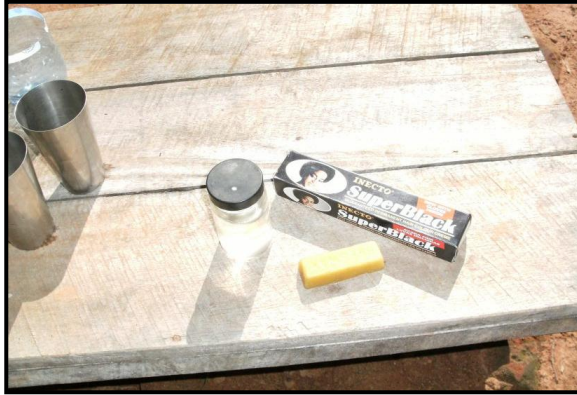
4. Dururirai mugaba rakakodzera.



Emulsifier iri nyore kuwana inonzi **borax (sodium borate)**. Kana muchida kugadzira lotion wedzerai alcohol kusvika mafuta atetepa kusvika pamunoda. Mafuta awa angada zvimwe zviwedzerwa kuti achengetedzeke kwenguva ndefu.

Kubika *polish*

1. Unganidzai zvinodiwa.



2. Nyungudutsirai wakisi yenyu mugaba.



3. Isai *turpentine* kana *spirit* yakakodzera mugaba.



4. Dururirai wakisi muturpentine muchikodzonga kusvika zvasangana.



5. Wakisi inogona kuiswa *dye*. *Dye* yemusoro ndiyo yakashandiswa mupolish iyi.



6. *Polish* isina kuiswa *dye* inoshandiswa pazvinhu zvakasiyana siyana uye inodzivirira mvura kuti isapinda.



Ndima ine zvinogadzirwa neuchi, namo newakisi



Zvibikwa zvevakisi

Mabikirwo akanyorwa muno anoshandisa zvinhu zvinogona kuwanikwa muruwa. Munokwanisa kuzama zvinhu zvinowanikwa muruwa izvo zvinogona kuvandudza zvibikwa. Shandisai mafuta amunoshandisa kubika. Mafuta anodyiwa haana ngozi kana akazorwa. Zvinhu zvinoshandiswa zvinosiyana nenzvimbo. Tsvakai zvinowanika munzvimbo menyu nemari shoma kuitira kuti muite mari kana mavekutengesa. Musashandisa mafuta *epalm* asina kucheneswa nekuti anoita kuti mafuta ekuzora atsvukuruke kunyange zvazvo asingazotsvukisi ganda kana mbatya.

Mafuta *ecream*

Mabikirwo emafuta *ecream*:

- Chikamu chimwe chewakisi; zvikamu zvina zvamafuta.
- Sanganisai mobva madziisa kwekanguva.
- Kodzongai zvakasimba.
- Burai mobva mawedzera zvinonuhwira uye zvinoshandura rudzi rwamafuta.
- Kodzongai zvakasimba modururira mumagaba ekutengesera.
- Kana muchida mafuta akapfava, wedzerai mafuta ekubikisa uye kana muchida akaomarara shandisai mafuta mashoma.
- Kuwedzera zvidonhwa zve*glycerine* kunoita kuti mafuta apfave. Kuwedzerawo zvidimbu zvina zve*Vaseline* kunoita kuti mafuta apfavirire zvakanaka.

Gavakava, *lemon grass*, namo, uchi, midzi yeuswa hwe*vetiver* pamwe nezvimwe zvakasiyana siyana zvinogona kuwedzera kuitira kunhuwirira kana kurapa ganda: semuenzaniso, mafuta anemagamu anogona kuzorwa pachipfuwa. Mafuta akawanda anogona kusvinwa kubva mumiti nezvimwe ayo anokwanisa kufashairirwa mugaba rakavharwa kwemaawa maviri (*max 100°C*). Mafuta awa anogona kushandiswa mukubika mafuta ekuzora akasiyanasiyana.

Mafuta ekuzora akapfavirira

Mafuta ekuzora akapfavirira musanganiswa wemafuta, wakisi pamwe nemvura. Nekuda kwekuti mafuta haawanzosangani nemvura munokwanisa kushandisa *emulsifier*. Kana muchikwanisa kuwana *emulsifier* iyi zvingava zvakanaka kuishandisa. Zvinokurudzirwa kuti zvisanganiswa zvenyu zvinge zvichidziya zvakananana musati mazvisanganisa. Zvinhu zvakaita *seneem oil*, *tea tree oil* kana *alcohol* zvinoita kuti mafuta enyu achengetedzeke kwenguva ndefu.

Mabikiro:

- Chidimbu ($\frac{1}{2}$ measure) chewakisi yakanyungudiswa, zvikamu zviviri zvemafuta ekubikisa, zvikamu zviviri zvemvura yakaiswa twunonuhwira pamwe nesipunu imwe *yeborax* (*sodium borate*). Tevedzai zvataridzwa muchikamu chemifananidzo.
- Kudziya kwezvirimumagaba ose arimaviri kunofanirwa kuve kwakananana.
- Bvisai gaba rewakasi yakanyungudiswa pamwe nemafuta kubva pamoto.
- Dururirai mvura inetwunonuhwira mumusanganiswa wewakisi nemafuta nekukurumidza. Kodzongai pamunenge muchiita izvi kusvika zvakora.
- Dirai mafuta mumagaba ekutengesera zvisati zvatonhora.



Kupfava kwemafuta aya kunogona kuwedzerwa kuita *lotion* nekuwedzera *ethyl alcohol* muchikodzonga kuti zvinyatsosangana. Huwandu hwe*ethyl alcohol* hunoenderana nematetepero amunoda kuti mafuta enyu aite uye kuti munoda kuachengeta kwenguva yakareba zvakananana. *Alcohol* yakawandisa inoita kuti ganda riomarare. Dirai *distilled water* kuti kusimba kwe*alcohol* yenyu kusapfuura zvikamu makumi mashanu kubva muzana (50%).

Vhanishi pamwe nepolish yemumba

Pakubika *polish*, wakisi inonyunguduswa muturpentine kana *white spirit*.

Mabikiro:

- Chikamu chimwe chewakisi, Zvikamu zviviri nechidimbu zveturpentine (zvinoenderana ne50g turpentine / solvent).
- Tevedzai zvakataridzwa muchikamu chemifananidzo.
- Pamunosanganisa wakisi nespirit rambai muchikodzonga kuti

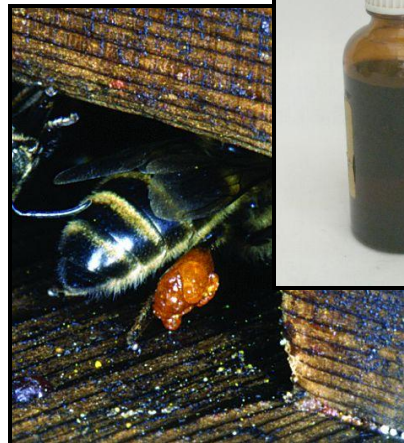


Namo

Namo inotorwa nenyuchi kubva mumiti uye yakasiyana chaizvo newakisi. Morai namo yenyu zveneutsanana kuti isasviba. Musaiumba kuita denderedzwa. Chengetai namo yenyu mugaba rakaoma uye rinotonhorera. Ishandisei yakaoma kudaro.

Mabikirwo ePropolis tincture:

- Kamurai namo inodiwa moinyika mumvura kwemazuva matatu kusvika manomwe kuti ichene uye kupfava.
- Nyikai namo yenyu muethyl alcohol (70%) muchiisanganisa zuva rega rega.
- Musashandisa alcohol inetsvina nekuti ine njodzi.
- 50 gms dzealcohol (100% proof) dzakasanganiswa ne100mls dzemvura zvinopa 50% solution.
- Izvi zvinogona kutora svondo kusvika masvondo matatu.
- Tsetsai muchishandisa zvinhu zvakaita secoffee filter.
- Zvatsetswa izvi ndizvo zvinoshandiswa kurapa.
- Zvinofanira kuchengeterwa mumabhodhoro akasvibira uye munzvimbo inotonhorera. Tincture iyi inogara kwenguva ndefu nekuda kwealcohol.



Zvibikwa zveuchi pamwe nezviwitsi

Chewy honey bars

Makapu 1 ^{1/3} euchi

^{3/4} yekapu yeshuga

Matable spoon matatu emargarine

Makapu mana *eflour*

Tea spoon imwe yebaking powder

^{1/2} yekapu yenzungu (*macadamia kana peanuts*)

^{1/2} yekapu yemuchero wakaomeswa

^{1/4} yetea spoon yeginger powder

yetea spoon yecardamom

Matea spoon maviri ecinnamon

^{1/8} yetea spoon yecloves

Dziisai uchi, shuga pamwe nemargarine kusvika zvanyungudika. Sanganisai *flour* nezvimwe zvakaoma mobva mazvidira mumusanganiswa weuchi, shuga nemargarine muchikodzonga. Dirai mumagaba moisa muoven inopisa kusvika 176°C kwemamitsi angasvika makumi maviri namashanu. Chekai kuita zvidimbu kana zvatonhora. *Mabar* anenge akaoma panguva iyi asi anozopfava kana makaachengetera mugaba rakavharwa kwesvondo. *Mabar* anogona kugara kwenguva ingasvika mwedzi mitanhatu mumagaba awa.



Fruit honey bread

Makapu matatu ewheat flour

Makapu matatu ebaking powder

Tea spoon imwe yecinnamon yakagaiwa

½ yetea spoon yesauti

Kapu imwe nechidimbu yemukaka

Kapu imwe yeuchi

Zai rime

Masipunu maviri emafuta ekubikisa

Makapu 1 ¼ yemuchero wakaomeswa (mango, bhanana kana mimwe michero yemusango)

½ yekapu yenzungu

½ yekapu yemhodzi dzezviringezuva

½ yekapu yeraisins

Sanganisai zvakaoma zvose mumudziyo mumwechete.

Sanganisai mukaka, uchi, zai pamwe nemafuta mune mumwe mudziyo. Sanganisai zvikamu zviviri izvi. Dururirai mubaking pan yakakura 23 x 13 x 8cm uye yakazorwa margarine moisa muoven inopisa kusvika 176°C kwemamitsi makumi matanhatu. Chekai zvidimbu gumi nezviviri.



Marzipan

Zvikamu gumi zvesweet almonds kana dzimwe mhando dzenzungu.

Chikamu chebitter almonds

Zvikamu zvinomwe zveuchi

Chikamu nechidimbu (1.5 parts) chechinwiwa chemandimu kana maranjisi

Bvisai makanda emaalmonds mobva makuya kuti atsetseke.

Isai chinwiwa chemandimu neuchi mosiya kwemaawa makumi maviri nemana.



Musaisa muoven. Marzipan rinomonwa muchishandisa icing sugar mobva macheka kuita zvidimbu zvamunogona kutengesa. Munokwanisawozve kuputira marzipan yenyu nechocolate, icing sugar nezvimwewo zvikafu zvakafanira.

Greek Halvah

Zvikamu zvishanu zveuchi

Zvikamu zvitatu zvemafuta *eolive* kana *sesame*

Zvikamu zviviri zvezvidimbu zvenzungu (wedzerai mhodzi dzesesame)

Zvikamu gumi zveshuga

Zvikamu zvishanu zveflour

Zvikamu zvitatu zvemvura

Cloves pamwe *necinnamon* zvakakuyiwa zvinoita kuti zvinuhwire

Dziisai mafuta kusvika ave

kupisa. Isai *flour* mokodzonga

kusvika *flour* yaita *brown*

(maminitsi 30 kusvika 40).

Zvichakadaro, gadzirai *syrup*

yeshuga, uchi pamwe nemvura

mozvifashaidza kwemaminitsi

30 pamoto mushoma kusvika

zvavekutanga kutsemukira. ,

Isai twunzungu mobva

masanganisa *neflour yebrown*.



Kodzongai zviripamoto mushoma kusvika zvakora. Dzimai moto movhara pani kwemaminitsi mashano. Dururirai *mutray*. Kana zvatonhora chekai kuita zvidimbu momwaya *icing sugar* kana *cinnamon*.

Nzungu dzakakangwa neuchi

Zvikamu gumi zveshuga

Zvikamu zviviri nechidimbu zveuchi

Nzungu makumi maviri nemashanu

Zvikamu zviviri nechidimbu zvemvura

Chikamu chimwe nechidimbu *chevinegar*

Nyungudutsai shuga mumvura

nevinegar moisa pamoto moramba

muchikodzonga.

Pazvinofashaira, isai uchi mokodzonga pamwe nekuzvidzoser

pamoto kuti zvifashaire. Kwidibirai kwemaminitsi matatu.

Kuduburai morega kukodzonga kuti zviomarare kusvika zvave

kutsemukira. Isai nzungu mozvibika kwekanguva kadiki pamoto

mushoma. Dururirai mupani yakazorerwa mafuta. Chekai

macandy enyu zvisati zvaomarara.



Honey sauces and relishes

Honey and chilli dressing

**1/3 yekapu yeuchi
Tea spoon yeoregano
yakaomeswa
1/2 yetea spoon yesauti
1/8 yetea spoon yemhiripiri.
Sanganisai zvinhu izvi**



Honey and lemon dressing

**Kapu yeuchi yakasvika pakati.
1/4 yekapu ye lemon juice.
1/4 yekapu yevinegar.
Magarlic maviri akachekwachekwa
Chipunu cheoregano.
Sauti pamwe nemhiripiri
zvakananira.
Sanganisai zvoze.**



Honey and orange sauce

**2/3 yekapu yeorange juice
1/2 yetea spoon yeginger
yakakuyiwa
1/2 yetea spoon yenutmeg
yakakuyiwa
Table spoon yemargarine
Table spoon yecorn starch
1/3 yekapu yeuchi.
Sanganisai zvoze mobika kusvika corn starch yakoresa sauce.**



Molly's honey sauce

Sanganisai uchi,
tomato sauce pamwe
nevinegar
 zvakaenzana pamwe
negarlic, sauti
nepepper
 zvakafanira.

**Honey and fresh fruit chutney**

Kapu yemuchero wakachekwa kuita zvidimbu (semuenzaniso
 mango kana zvinanazi)
 ¼ yekapu yehanyanisi dzakachekwa
 ½ yekapu yemacarrots kana
 macabbages akachekwa
 Matable spoon mashanu euchi
 Matable spoon matatu emustard
 powder
 Matable spoon maviri elemon juice
 Matea spoon maviri zveginger root
 Sauti nepepper zvakafanira
 Sanganisai mobika pamoto
 mushoma kusvika zvanyatsosangana.

**Notes**

Tea spoon = 5 ml

Table spoon = 30 mls

¼ yekapu = 60 ml

½ yekapu = 125 ml

Kapu imwe= 250 ml

Makapu maviri= 1 pint = 500 ml

Makapu mana= 1 quart = 1 litre

Ounce imwechete= 30g

Maounce masere= 225g

Zvirwere zvinorapwa neuchi

Uchi hwakabva kare huchishandiswa kurapa. Nedzimwe nguva hunosanganiswa nemiti kana *maherbs* zvoita kuti mishonga inovava itapire. Huchi hunorapa zvikuru. Hunobvisa tsvina pazvironda, kudzivisa kuzvimba uye kuuraya utachiona pazvironda pamwe nekudzivirira kunamira kwema *bandage* paronda. Uchi hunoita kuti ronda riome.

Maronda madiki ekutsva pamwe nemamwewo: Gezai ronda morizora uchi hwakawanda pamwe nekusunga *bandage* rakachena. Itai izvi zuva nezuva.

Chikosoro pamwe napahuro pakazvimba: Uchi hunonyaradza marwadzo. Uchi hwakasanganiswa nemandimu hunobetsera kunyaradza marwadzo epahuro uye hunorapa dzihwa. Sanganisai chipunu chihombe cheuchi pamwe nejuice ramunenge masvina kubva mundimu rakakachekwa napakati. Zadzisai kapu nemvura inopisa. Inwai kapu yose kamwe. Itai izvi mave kuda kurara.

Maziso akazvimba, conjunctivitis pamwe nezvimwe zvirwere zvemaziso: Donhedzerai madonhwe maviri euchi muziso rinorwara. Itai izvi kaviri pazuva kusvika rapora. Endai kwachiremba kana dambudziko rakaenderera.

Gastro-enteritis pamwe nerehydration: Shandisai uchi hwakasangana nemvura 5% (vol/vol) kudzikisa chirwere chemanyoka kuvana chinokonzerwa neutachiwana hwebacteria.

Kushaya hope: Inwai mukaka wakaiswa chipunu cheuchi musati marara.

Chikafu chinopa simba: Uchi hunobetsera vanoita maexercises uye vanenge vaneta nekuti hunopinda muropa nekukurumidza. Uchi hunopawo simba kune vanhu vechikuru, vana uye vaya vasinganzwi kuda chikafu. Bota rakabikwa neuchi, upfu hwenzungu nehwechibage rinonaka zvikuru.

Honey and oatmeal face pack: Sanganisai uchi pamwe neoatmeal (inorapa zvirwere zveganda) (kana upfu) kusvika zvave kuzoreka. Zorai kumeso mosiya kweawa musati mageza nemvura.

Uchi haufaniri kushandiswa nevanorwara nechirwere cheshuga kunze kwekunge vachitarisirwa nachiremba. Uchi pamwe nenamo **HAZVIFANIRI** kutsiva zvamunenge mapuwa nachiremba.

Kwamunokwanisa kuwana rumwe ruzivo

Munokwanisa kuwana ruzivo rwakawanda kubva paInternet asi harusi rweze rwunobatsira. Rumwe ruzivo runopikisa uye rwunogona kudhanganyisa musoro. Ruzivo rwunowanikwa mune zvimwe zvinyorwa haruna kubva muresearch kana hunyanzvi hwekuchengeta nyuchi munzvimbo dzemumatropics umo munopisa kudarica nyika dzekumadokero.

Ruzivo rwekuchengeta nyuchi rwunowanikwa kwakawanda asi dzinotevera dzinopa ruzivo rwapamusoro uye rwunovimbika:

- *Krell R; (2001), Value-added Products from Beekeeping, FAO Agricultural Services Bulletin, FAO Rome (available freely from FAO corporate document repository <http://www.fao.org/docrep/w0076e/w0076e00.htm>)*
- *Bees for Development www.beesfordevelopment.org.uk*
- *UK National Bee Unit Advisory Leaflets; FERA <https://secure.fera.defra.gov.uk/beebase/public/Advisory/advisory.cfm>*
- *Practical Action - <http://practicalaction.org/practicalanswers>*
- *Control of Varroa. A guide for New Zealand Beekeepers. MAF New Zealand. <http://homepage.ntlworld.com/qandboss/BeeginnersFAQ/Problems/control-of-varroa-guide.pdf>*
- *Bees Abroad – info@beesabroad.org*
- *Vachengeti venyuchi vemuruwa kana masangano anoita nezvekuchengetwa kwenyuchi.*
- *Zvinyorwa zvinowanikwa pamawebsites eCGIAR neFAO.*

***Ivai nekuchengeta nyuchi
kunemufaro uye kunopa pundutso***

Pam Gregory 2010

