

Maphunziro
a
Alangizi othandizira
alimi a ziweto m'midzi

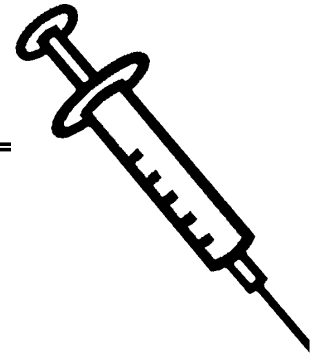
Mankhwala a ziweto

Small Scale Livestock and Livelihoods Program
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Mankhwala a ziweto

Phunziro 1: Za m'mene mankhwala amakhalira



Zolinga za phunziroli:

Pomaliza pa phunziro ili wophunzira athe:

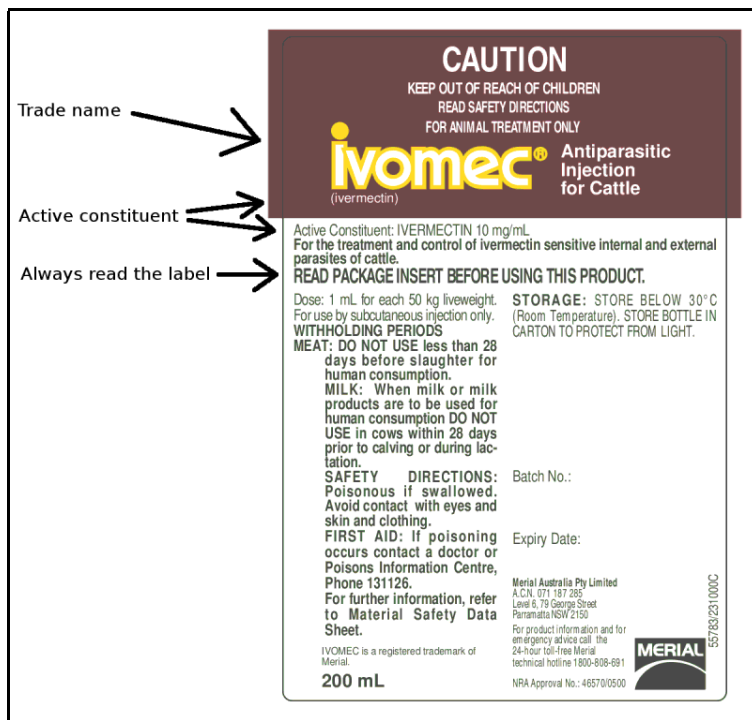
1. Kuwerenga ndi kumvetsa zomwe za lembedwa pakapepala komata pa botolo, pa chitini, pa bokosi zokhudza kagwiritidwe ntchito ka Mankhwala
2. Kumvetsa za mitundu yosiyana ya mankhwala ndi kagwiritsidwe ntchito kake
3. Kumvetsa za mitundu ya mankhwala ndi matenda omwe amachiza
4. Kutha kuchita masamu opezera mlingo wa mankhwala ndi kasungunulidwe kamankhwala omwetsa ziweto

Zolembedwa pa pepala la moikamo mankhwala - lebulu

Yankhani mafunso awa:

Werengani kalebulo kamankhwala kali m'musika. Dziwani kuti ichi ndi chitsanzo choti timvetse phunziro ili. Fotokozani izi molingana ndi lebuloyi:

- Kodi dzina la mankhwala amenewa ndi chiyani?
- Nanga ndi mankhwala ati amene akupezeka m'menemo amene amachiza matenda?
- Nanga mankhwala amenewa amagwira ntchito yanji?
- Nanga mankhwala amenewa amagwira ntchito ku ziweto za mtundu uti?
- Nanga mukhoza kupereka mankhwala ochuluka bwanji ku ng'ombe yolemera makilo 300?
- Nanga mukhoza kupereka mankhwala ochuluka bwanji ku thole lolemera makilo 70
- Kodi mukhoza kusunga mankhwala kuti ndi motani?



Chitsanzo cha lebulu ya mankhwala a ziweto

Lamulo lalikulu pa mankhwala ndi lakuti muziwerenga lebulu nthawi zonse

- Lamulo lalikulu pa mankhwala ndi lakuti **MUZIWERENGA LEBULO NTHAWI ZONSE** musanagwiritse ntchito mankhwala. Munvetse zimene zalembedwa pa lebulu. Werengani ndi kumvetsa zimene zalembedwa pa lebulu musanagwiritse ntchito mankhwala. Musagwiritse ntchito mankhwal mosiyana ndi m'mene ayenera ngakhale mutaona ena akugwiritsa ntchito mwamtundu wina. Nthawi zonse mutsatire zimene alemba pa lebulu. Funsirani kwa akatswiri ngati simukumvetsa kaperekedwe ka mankhwala ku ziweto.
- Mankhwala a ziweto amadziwika ndi **dzina logulitsira**. Dzina logulitsira mankhwala amapereka ndi amene amapanga mankhwalawo.
- Koma chofunika kwambiri ku mankhwala a ziweto ndi mankhwala amphamvu ochiritsa matenda amene aikako. Amalemba mankhwala amphamvuwa pa lebulu. Ndi mankhwala amenewa amene timadziwira ntchito yake ya mankhwalawo.
- Ntchito ya lebulu ndi kutiuza kagwiritsidwe ntchito ka mankhwala. Palebulu pamalembedwanso chenjezo la kasamalidwe kamankhwala. Monga pa lebulu ili pamwambali pali chenjezo lakuti tisagwiritse ntchito mankhwalawa ngati chiweto chiphedwa ndi cholinga chodya nyama pasanathe masiku 28 itapatsidwa mankhwalawa.
- Muonetsetse kuti lebulu ya mankhwala iziikidwa pamodzi ndi mankhwala. Mankhwala asungidwe mchotengera chake chimene opanga mankhwalawo

amaikamo. Musataye lebulu yopezeka pa chotengera mankhwala kapena choikidwa mkati mwa pheketete la mankhwala mpaka mankhwala atatha. Tikunena izi chifukwa ndi pofunika nthawi zonse kuwerenga za mankhwala wo pa lebulu nthawi zonse.

- Ngati mukusinthira pheketete, botolo, chitini chosungiramo mankhwala, muonetsetse kuti lebulu yaikidwanso mchotengera chatsopanocho.

Mitundu yosiyanasiyana ya mankhwala a ziweto

1. Mankhwala omwetsa: Ena ndi awa:

- **A mibulu (tablets).**
- **A mubulu yaitali** - awa ndi okulapo kusiyana ndi a mibulu ya laundi.
- **Ma kapisolo (capsules)** - Makapisolo amapangidwa ndi mankhwala a ufa amene amaikidwa mchikwachika cha kapisolo chimakasingunuka chikafika m'mimba ndipo mankhwala amamasuka ndikuyamba kugwira ntchito.
- **Mankhwala a madzimadzi** - Chiweto chimachita kumwetsedwa mankhwalawa. Pali zida zopangidwiratu kapena mabotolo atali khosi akhoza kugwiritsidwa ntchito pomwetsa ng'ombe, mbuzi kapena nkhoa
- **A ufa:** awa amathiridwa ku chakudya kapena madzi a kumwa. Ziweto zimodyera limodzi ndi chakudya kapena kumwera limodzi ndi madzi. Mankhwala otere amakhala ophera mejeremusi (germs) ndi njoka/nyongolotsi za m'mimba.
- **Mibulu ya mchere** - mutha kumangirira kuchikupa kwa khola kuti ng'ombe kapena mbuzi zizinyambita. Timichere topezeka kumibulu imeneyi timakwaniritsa zofunikira m'thupi la chiweto.

2. Mankhwala obaya ndi nyereti: Chiweto chimalandira mankhwala pochibaya pansu pa khungu kapena mumnofu. Mankhwala ochita kubaya ndi nyereti sachedwa kukhodzokela thupi lonse. Ena mwa mankhwala obaya ndi monga awa:

- **Mankhwala opha tizirombo toyambitsa matenda (Antibiotics)** - Mankhwala a mtundu amapha ti majeremusi. Mankhwala sakupha mitundu yonse ya majeremusi, ena amakhala osafa. Pali mitundu yina ya majeremusi yomwe siifa ndi mankhwalawa ziweto zipatsidwe mankhwala a Antibiotics motsatira malangizo amene alembedwa pa lebulu. Muonetsetse kuti chiweto chamaliza kumwa mankhwala onse monga mwa malangizo. Musasiye kuchimwetsa ngakhale mutaona ngati kuti chachira chifukwa timajeremusi tina timakhala kuti tisanafe. Ndiye mukasiya kumwetsa, timajeremusi timayambabnso kuswana ndi kuyambitsanso matenda.
- **Mankhwala ophera njoka za m'mimba** - chitsanzo ndi cha mankhwala obaya ophera njoka za m'mimba (onani chitsanzo cha lebulu chiri m'mwambachi)
- **Nyereti ya aironi** yomwe imaperekedwa kwa ana ankhumba kuphatikizapo mchere ndi mavitamini.
- Ndi mankhwala ochiza matenda osiyanasiyana.

3. Mankhwala opaka pa khungu:

- **Mankhwala amafuta opaka kapena kudzola.** Mankhwala amapha majeremusi ndipo amapoletsa zilonda.
- **Mankhwala oopera pa chilonda.** Awanso amakhala ndi mankhwala oopera majeremusi ndi kupoletsa zilonda.
- **Mankhwala a ufa othira pa chilonda.** Awanso amakhala ndi mankhwala oopera majeremusi ndi kupoletsa zilonda.
- **Mankhwala oopera oopera tizirombo touluka ndi tokwawa.** Awanso amakhala ndi mankhwala oopera tizirombo toluma monga nsabwe ndi nthata. Mankhwala amapoperedwa pogwiritsa ntchito chopopera mwankhwala.
- **Dibi wophera nkhopakupa.** Awa ndi malo omwe pali nkhati yowaka ndi sementi m'mene ng'ombe zimakasambamo madzi othira mankhwala oopera nkhopakupa, nthata ndi nsabwe
- **Mankhwala othira pa khungu la ziweto.** Awa ndi mankhwala othira pa khungu la chiweto. Mumakhala mankhwala omwe amayenderera thupi lonse ndi kupha nkhopakupa ndi nthata ndi nsabwe za pathupi.
- **Posambitsa mapazi.** Nthawi zina ndikofunika kupanga poponda ng'ombe pomwe pathiridwa mankhwala oopera majeremusi omwe amayambitsa matenda owola ziboda.

4. Mankhwala othira m'maso ndi awa:

- **Ofinyira/kupopera kapena odontheza m'maso:** Amakhala ndi mankhwala oopera majeremusi ndipo amachepetsa ululu.
- **Mankhwala a m'maso a ufa:** Amapngidwa kuti aphe majeremusi.
- Musamale maso. Ngati mankhwala siyenera kuthira m'maso, musathire pooa kuononga maso.

5. Mankhwala ochiza matenda akubere ndi awa:

- **Mankhwala oopera tizirombo toyambitsa matenda (antibiotics):** Amene amapha tizirombo toyambitsa matenda mkati mwa bere. Mankhwala amaikidwa m'timachubu timene ngati nyerezi koma n'tapulasitiki. Kachubu kamodzi kamakhala ndi mankhwala okwana kuthira m'bere limodzi kudzera m'njira yotulukira mkaka ya nkhumbe. (Onani zambiri pa zokhudza ng'ombe za mkaka m'gawo lija).
- **Mankhwala oviikamo ndi kupaka nkhumbe:** Awa ndi mankhwala omwe amanyikamo nkhumbe za mawere a ng'ombe yomwe ikukamidwa atangomaliza kukama ndi ena opaka nkhumbe pamene tisanayambe kukama. M'mankhwala amenewa mupezeka mankhwala oopera majeremusi ndi ena ofewetsa khungu la nkhumbe ndi kuliteteza kuti lisathetheke.

6. Mankhwala oika m'chiberekero:

- Awa amakhala a mibulu yaitali ndi yaikulu ndipo amathandiza kupha majeremusi ndi kukonza chiberekero kuti chibwerere m'malo mwake.

Milingo ya mankhwala a ziweto

Yankhani mafunso awa:

Yenderani pakhola pamene pali mbuzi zambiri ndi pamene pali ng'ombe zambiri zimene aziyesa kulemera pogwiritsa ntchito lamba woyenera ziweto. Taonani ng'ombe imodzi ndipo mungoganizira kulemera kwake pakungoiwona lembani kulemera kwake musanaone kulemera kwake kwenikweni. Tabwerezani kuchita izi pang'ombe zina. Bwerezaninso kuchita izi ndi mbuzi.

Chitani izi mpaka mutazolowera.

- Ndi chinthu chofunika kudziwa kulemera kwa chiweto kuti tithe kudziwa za mlingo wa mankhwala womwe chiweto chingapatsidwe. Njira yabwino yoyesera chiweto ndi kuchikweza pa sikelo chifukwa sikelo imaonetsa kulemera kwa chiweto molondola. Koma chobvuta ndi chakuti masikelo oyezera ziweto sapezeka kwenikweni. Koma pali malamba amene amagwiritsidwa ntchito poyesera ng'ombe, nkhumba ndi mbuzi.
- Ngati lamba woyesera palibe, mukhoza kungoyerekeza kulemera kwa chiweto pogwiritsa ntchito m'ndandanda wa manambala komalizira kwaphunziro ili.

Phunziro 2: Mankhwala amene amagwiritsidwa ntchito ku ziweto kawirikawiri

Zolinga za phunziroli:

Pomaliza pa phunziro ili, aliyense wophunzira athe:

- 1. Kudziwa za mankhwala omwe amagwiritsidwa ntchito pochiza ndi kuteteza matenda a ziweto**
- 2. Kudziwa kagwiritsidwe ntchito mosamala ka mankhwala otetezera ndi ndikuchiza matenda a ziweto**

Katamera

- Ngati tizirombo toyambitsa matenda tilowa mthupi la chiweto, chimayamba kudwala. Ngati chiweto chachira, m'thupi lake mumakhala chitetezo cha matenda amene chimadwalawo. Ngati chiweto chigwidwanso ndi mtundu womwewo wa tizirombo toyambitsa matenda, chitetezocho chimatha kumenyana nato kuti tisayambitse matenda.
- Katamera amathandiza kuti chiweto chikhale ndi asilikali omenyana ndi matenda ngati atalowa m'thupi mwake.
- Pamatenga milungu iwiri mukabaya katamera kuti chiweto chipange asilikali okwana m'thupi omenyana ndi matenda.
- Ntchito ya katamera ndi **kuteteza** matenda **osati kuchizira** matenda ayi. Katamera siwochiritsira matenda koma kukonza thupi kuti likhale ndi asilikali ogonjetsa matenda omwe angathe kulowa m'thupi patsogolo. Ndiye popeza katamera sapanga asilikali mofulumira, sibwino kutamera ziweto ngati mwalowa kale matenda m'kholamo.
- Katamera aliyense amapangidwa kuti ateteze matenda a mtundu umodzi wokha umene wapangidwirawo. Katamera wa matenda ena sangathe kuteteza matenda a mtundu wina.
- Pali katamera wamitundumitundu amene amagwiritsidwa ntchito. Ina mwa mitundu ya katamera yomwe imapezeke m'Malawi muno ndi:
 - Katamera woteteza matenda a chideru ku nkuku: Pali mitundu ingapo ya katamera woteteza matenda a chideru ku nkuku, wina ndi ongodontheza m'maso mwankhuku potamera. Muonetsetse kuti nkuku zonse za m'midzi zalandira katamera woteteza matenda a chideru kangapo pa chaka.
 - Katamera woteteza matenda a chiwewe: katamera wa agaru ndiwofunika zedi chifukwa agaru atha kupatsira munthu matenda ngati ataluma. Komabe mutha kutamera katamera ku ziweto zina ngati pali chiopsyezo choti zitha kulumidwa ndi nyama yodwala chiwewe.

- Katemera woteteza matenda a *Blackquarter*: katemera uyu ndi obaya ndipo agwiritsidwe ntchito kudera kumene kudagwapo matenda a Blackquarter.
- Katemera woteteza matenda wofalitsidwa ndi nkhopakupa: Alipo katemera woteteza ku matenda ngati a chigodola cha ng'ombe, matenda a chikasu, matenda a likodzo la ng'ombe, ndi matenda a khunyu la ng'ombe. Koma katemera ameneyu amafunika ukatswiri weniweni pobaya ndipo ayenera kubaya ndi munthu wophunzitsidwa bwino.

Mankhwala wotsukira ndi wopoletsa zirona

- Awa ndi mankhwala omwe amapha tizirombo tomwe timanyeketsa zirona
- Mankhwala amenewa amapakidwa kapena kuthiridwa pa chirona pogwiritsa ntchito thonje kapena kansalu kaukhondo.
- Musanathire mankhwala pa chilonda, muyenera kutsukapo ndi madzi a ukhondo. Izi ndizofunika kutero chifukwa pachilonda chosatsuka pamakhala mafinya fumbi ndi zina zongogwerapo ndiye ngakhale pathiridwe mankhwala, sangathe kugwira ntchito.
- Ena mwa mankhwala othira pachirona ndi awa:
 - *Stockholm tar, wound oil*. Mankhwala awa amathiridwa pachirona kuti aphe majeremusi ndikuthawitsa ntchentche kuti zisamatere pachirondapo.
 - *Tincture of iodine, acriflavine*. Mankhwala amagwiritsidwa ntchito ngati tifuna kuti chilonda chiume ndipo chisamangidwe.
 - *Alcohol*. Awa ndi mankhwala ophera tizirombo tosaoneka ndi maso ndipo amatsukira zipangizo zogwiritsira ntchito popereka mankhwala.
 - *Dilute bleach (sodium hypochlorite)*. Mankhwala awa ndi ogwiritsa ntchito zoposuka ndi kuchapa zinthu zogwiritsa ntchito pakhola ndipo amapha tizirombo toyambitsa matenda tomwe tingakangamire ku ziwya. Mankhwala amenewa muyenera kuwasungunula pophatikiza gawo limodzi la mankhwala ku magawo 20 a madzi.

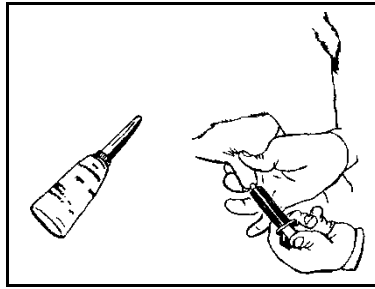
Mankhwala ochiza matenda a kafulukutu (kuwola kwa ziboda)

- Mankhwala awa ndi ochizira kapena kuteteza matenda a kafulukutu kapena matenda owoletsa ziboda za nkhusa ndi mbuzi.
- Mankhwala ayenera kuthiridwa pa ka chidekwe cha simenti pomwe nkhusa kapena mbuzi zimadutsa polowa m'khola kuti zizipondamo.
- Mitundu ya mankhwala ochizira kapena kuteteza kuwola kwa ziboda ndi awa:
 - *copper sulphate* kapena *zinc sulphate*: Sungunulani mankhwala awa potenga gawo limodzi ndi kuthira ku magawo 9 a madzi.
 - *formaldehyde solution*: Nthawi zambiri amapezeka wa mphamvu zokwana 40%. Sungunulani mankhwala potenga gawo limodzi ndi kuthira magawo 8 a madzi.

**Mankhwala obaya ophera tizirombo toyambitsa matenda (ma *antibiotic*):
mankhwala a mibulu, mankhwala oopera, ndi mankhwala obaya ku
nkhumbu za mawere**

- Ma *antibiotic* ndi amene amapha tizirombo toyambitsa matenda (ma *bacteria*) koma samapha ma *virus* ayi. Ena amakhala obaya, a mibulu, pamene ena amakhala opaka, kapena afa, kapena oopera. Tionetsetse kuti tigwiritse ntchito mankhwala a mtundu uwu mosamala kwambiri, chifukwa tikamagwiritsa ntchito chisawawa, amapangitsa kuti tizirombo tina toyambitsa matenda tiludzulare kapena kupima osafanso ndi mankhwalawa.
- Mankhwala obaya timabaya m'minofu ya mkhosi kapena yapaphewa.
 - Zitsanzo za mankhwala amenewa ndi *long acting oxytetracycline*, *oxytetracycline*, *penicillin-streptomycin*, ndipo, nthawi zina, amaikakonso ma *antibiotic* a mitundu ina.
- Ma *antibiotic* ena amapezeka a mibulu koma sagwiritsidwa ntchito ku ziweto.
- Ma *antibiotic* ena amaikidwa ku mibulu yaikulu yaitali m'mbaki yomwe imagwiritsidwa ntchito poika mchiberekero cha chiweto chomwe cha ngobereka kumene. Mibulu imeneyi imateteza kuti m'chiberekero musachite matenda a uchembere.
- Ma *antibiotic* ena amapangidwa ngati oopera kapena opaka amene amagwiritsidwa ntchito pa zirona kapena m'maso. Musathire mankhwala m'maso mankhwala amene siyenera kutero.
 - Ma *antibiotic* amene amakonda kupezeka ngati opaka kapena wopera ndi *oxytetracycline*, *chloramphenicol*, *tetracycline*, *neomycin* ndi a mtundu wa sufuli (*sulpha drugs*).

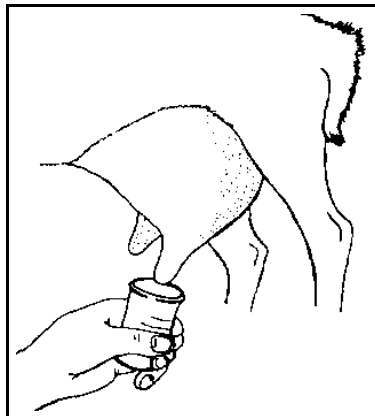
- Mtundu wina wa ma *antibiotic* ndi omwe amathiridwa m'bere kudzera ku nkhumu. Awa ndi ochizira kapena kuteteza matenda otupitsa mawere otchedwa masitatisi amene amagwira ng'ombe za mkaka. Mankhwala amathiridwa m'timachubu ta pulastiki timene timakhala ndi nozol yomwe timalowetsa ku nkhumu ndi kuthira mankhwala m'bere. Mitundu ya mankhwala othira kubere ndi iyi:
 - Mankhwala ophatikiza penicillin, kapena streptomycin, kapena cloxacillin ndi ma antibiotic ena. Mankhwala amenewa amapangira kuti agwiritsidwe ntchito ku ng'ombe za mkaka.



Kabaidwe ka mankhwala a kubere
(Courtesy FAO "A manual for the primary animal health care worker")

Mankhwala obvikamo nkhumu

- Mankhwala awa ntchito yake ndi kupha tizirombo tomwe tingayambitse amatenda otupitsa mawere ang'ombe za mkaka.
- Mankhwala ndi oteteza kumatenda a masitatisi omwe ndi matenda otupitsa mawere a ng'ombe za mkaka.
- Mankhwala amenewa amaikidwa m'kapu. Muvike nkhumu ya bere m'kapu mutangomaliza kukama ng'ombe. Mankhwala amenewa amapha tizirombo toyambitsa matenda kubere.



Kugwiritsa ntchito mankhwala obviika nkhumu za bere
(Courtesy FAO "A manual for the primary animal health care worker")

Mankhwala ophera njoka za m'mimba - omwetsa, a ufa, ndi obaya

- Mankhwala amenewa ndi ophera njoka za m'mimba.

- Mankhwalawa amapezaka a mitundu yochita kumwetsa, ena wochita kubaya ndi ena a ufa omwe amasakaniza kuchakudya cha chiweto. Nthawi zina mankhwala ophera njoka za m'mimba amapezeka ochita kuthira pamsana pang'ombe motsatana ndi msana wonse.
- Ena mwa mankhwala ophera njoka za m'mimba ndi:
 - *ivermectin* ndi *avermectin*: Awa ndi obaya
 - *benzimidazoles* (monga: *mebendazole*, *fenbendazole*, *oxfendazole*, *albendazole*, *thiabendazole*): Awa ndi omwetsa
 - *levamisole* kapena *tetramisole*: awanso ndi ochita kubaya
 - *piperazine*: Awa ndi a ufa.

Mankhwala a dibi ophera nkhopakupa

(Pali osambitsa, oopera, othira pakungu ndi owaza a ufa)

- Mankhwala awa ndi ophera nkhopakupa, nsabwe, ntchentche, nthata zimene zimazunza ziweto.
- Mankhwala ena amapangidwa kuti agwiritsidwe m'dibi. Mankhwala amasakanizidwa bwino ndi madzi m'dibi muja. Chiweto chimasambira m'dibi muja mpaka chitanyowa thupi lonse. Mankhwala ena amapangidwa kuti akhoza kugwiritsidwa ntchito popopera chiweto mpaka chitanyowa thupi lonse.
- Mankhwala ena amapezeka ochita kuthira pa chiweto. Mankhwalawa amathiridwa pamsana kuchokera kumutu mpaka kumchira. Mankhwala a mtundu uwu sasungunulidwa ayi.
- Mankhwala ena ophera nkhopakupa amakhala a ufa. Awa ndi ophera tizirombo ta mtundu wa nthata ndi nsabwe za nkuku.
- Ndikofunika kwambiri kuti mankhwala azikhala ndi mphamvu yoyenera kuphera tizirombo pamene asungunulidwa. Chofunika kwambiri ndi kumvetsa malangizo onse amene alembedwa pa lebulu mukamasungunula mankhwala. Ngati simungathe kumvetsa malangizo apa lebulu, funsira kwa alangizi a za ziweto kuti akuthandizeni. Mutha kupha ziweto ngati simugwiritsa moyenera mankhwala amenewa.
- Muthire mankhwala othira pamsana m'malo oyenera pa thupi la chiweto. Werengani lebulu za kathiridwe kamankhwala othira pamsana pang'ombe. Kathiridwe kamankhwalawa kamasiyana pa ziweto zochepe misinkhu ndi zazikulu musinkhu.
- Mitundu ya mankhwala ophera nkhopakupa, nthata, ntchentche, ndi nsabwe ndi:
 - *organophosphates*: *chlorfenvinphos*, *coumaphos*, *malathion*

- Mankhwala ena omwe mumapezeka mankhwala a mtundu wa malathion atha kugwiritsidwa ntchito pophera nthata, utitiri ndi tiziroombo tina toluma m'makola a nkhuku.
- Alimi ena amagwiritsa ntchito akiteliki (*pirimiphos-methyl*) pophera nthata, utitiri ndi tiziroombo tina toluma m'makola a nkhuku.
- *amitraz*, awa ndi mankhwala omwe amapha nkupukupa ndipo amateteza matenda a mkupe
- *synthetic pyrethroids: alphas-methrin, cypermethrin, deltamethrin, flumethrin*

Mankhwala a chipumphu cha nkhuku (*coccidiosis*)

- Awa ndi mankhwala oteteza chipumphu (kapena kamwazi - *coccidiosis*)
- Mankhwala amenewa amathira kuchakudya kapena kumadzi kuti nkhuku ili yonse imeze mankhwala okwana.
- Ndi kofunika kupereka mlingo woyenera wa mankhwala. Ngati mukukaika pa za mlingo wa mankhwala, funsani kwa alangizi a za ziweto.
- Mankhwala amene amagwiritsidwa ntchito yotetezera chipumphu kawirikawiri ndi *amprolium*. Mankhwala ena a m'gulu la sufuli (*sulpha drugs*) amathanso kuteteza matenda a chipumphu.

Mankhwala ochiza matenda a kutupidwa

- Awa ndi mankhwala amene amachepetsa matenda a kutupidwa kwa ziweto zodya udzu. Kutupidwa kumachitika pamene m'mimba mwadzala mphepo kapena thobvu.
- Mankhwala ochiza kutupidwa amakhala omwetsa.
- Mankhwala amene amagwiritsidwa ntchito ndi mafuta ophikira, mafuta anyali, kapena mankhwala opangidwa kugwira ntchito imeneyi.

Mankhwala ena ochizira matenda a mpwerere

- Mankhwala a mtundu wa *kaolin* kapena *bentonite* (dothi la makande la China) amagwira ntchito yotseka m'mimba. Mankhwala amenewa sakupha njoka za m'mimba kapena majeremusi. Mankhwala amakhala a ufa ali oyera m'maonekedwe.
- Mankhwala amatha kuchepetsa matenda a mpwerere ku ng'ombe, mbuzi kapena nkumba.
- Mlingo wa mankhwala ku ng'ombe ndi wolemara magalamu a pakati pa 200-250 pamene ku nkumba ndi mbuzi mupereke mankhwala olemara ma galamu 150.

Mankhwala owonjezera madzi m'thupi

- Mankhwala awa amaonjezera madzi a m'thupi omwe atayika chifukwa cha mpwerere kapena kusanza.
- Mankhwala opangidwa ndi akatswiri a zachipatala amapezeka m'malo ogulitisira mankhwala.
- Mutha kupanga oonjezera madzi m'thupi posakaniza masipuni 6 a tiyi odzadza ndi shuga, theka la supuni ya tiyi ya mchere ndi lita imodzi ya madzi ofunda a ukhondo.
 - Zimwetseni ziweto pogwiritsa ntchito botolo loyamwitisira mwana. Mlingo wa mankhwala amenewa ku mbuzi ndi nkhosa ndi theka la lita, kanayi pa tsiku kwa masiku atatu motsatizana. Zikakhala ziweto zazikulu misinkhu, mupereke 5% yakulemera kwake kawiri pa tsiku.

Mankhwala ena

- Pali mankhwala ena ochuluka omwe sakugwa m'gulu la mankhwala tatchula kalewa. Ena mwa mankhwala amenewa omwe amagwiritsidwa ntchito m'Malawi muno ndi:
 - mankhwala obaya ochizira chigodola cha ng'ombe otchedwa *parvaquone* kapena *buparvaquone*
 - mankhwala ochiza matenda a likodzo la ng'ombe ndi matenda a chikasu ndi *imidocarb*
 - mankhwala oonjezera mphamvu za umuna ndi kuti msoti kapena mkota zizikhala ndi nyere pa nthawi yake ndinso kusula nzidzi

Milingo yothandizila kupeza kulemera kwa ng'ombe

Yesani mozungulira pachifuwa pa ng'ombe kumbuyo kwa miyendo ya kutsogolo ndi lamba woyesera. Werengani kutalika kwake mu ma sentimita (*centimetres*). Yerekezani kutalika ndi kulemera kwake monga m'mene ziliri m'munsimu.

Kutalika kozungulira pachifuwa pa ng'ombe	Kulemera kwake (kg)
65 cm	25 kg
70 cm	32 kg
75 cm	40 kg
80 cm	47 kg
85 cm	56 kg
90 cm	65 kg
95 cm	76 kg
100 cm	89 kg
105 cm	102 kg
110 cm	117 kg
115 cm	133 kg
120 cm	151 kg
125 cm	169 kg
130 cm	189 kg
135 cm	210 kg
140 cm	232 kg
145 cm	256 kg
150 cm	281 kg
155 cm	307 kg
160 cm	334 kg
165 cm	363 kg
170 cm	393 kg
175 cm	424 kg
180 cm	459 kg
185 cm	490 kg
190 cm	526 kg
195 cm	561 kg
200 cm	599 kg



Chitsanzo:

Ngati mutayesa ng'ombe iyo ndipo mwapeza kuti ndiyotalika 150 cm, ndiye kuti ng'ombe iyo ndiyolomera 281 kg.



Milingo yothandizila kupeza kulemera kwa nkumba

Yesani mozungulira pachifuwa pa nkumba kumbuyo kwa miyendo ya kutsogolo ndi lamba woyesera. Werengani kutalika kwake mu ma sentimita (*centimetres*). Yerekezani kutalika ndi kulemera kwake monga m'mene ziliri m'munsimu.

Kutalika kozungulira pachifuwa pa nkumba (cm)	Kulemera kwake (kg)
50 cm	15 kg
55 cm	21 kg
60 cm	27 kg
65 cm	35 kg
70 cm	42 kg
75 cm	50 kg
80 cm	58 kg
85 cm	68 kg
90 cm	77 kg
95 cm	88 kg
100 cm	99 kg
105 cm	114 kg
110 cm	129 kg
115 cm	147 kg
120 cm	164 kg
125 cm	180 kg
130 cm	196 kg
135 cm	217 kg
140 cm	237 kg
145 cm	250 kg
150 cm	262 kg

Milingo yothandizila kupeza kulemera kwa mbuzi kapena nkhosa

Yesani mozungulira pachifuwa pa mbuzi kapena nkhosa kumbuyo kwa miyendo ya kutsogolo ndi lamba woyesera. Werengani kutalika kwake mu ma sentimita (*centimetres*). Yerekezani kutalika ndi kulemera kwake monga m'mene ziliri m'munsimu.

Kutalika kozungulira pachifuwa pa mbuzi kapena nkhosa (cm)	Kulemera kwake (kg)
25 cm	2 kg
30 cm	3 kg
35 cm	4 kg
40 cm	7 kg
45 cm	11 kg
50 cm	15 kg
55 cm	19 kg
60 cm	25 kg
65 cm	31 kg
70 cm	37 kg
75 cm	43 kg
80 cm	50 kg
85 cm	57 kg
90 cm	67 kg
95 cm	77 kg
100 cm	86 kg
105 cm	97 kg