



# MANKHWALA OVOMEREZEKA KUGWIRITSA NTCHITO MU ULIMI WA FODYA M'MALAWI M'CHAKA CHA 2023/2024



Chiwawu chakuda



Nsabwe za mfodya



Mbozi zodya masamba a  
Fodya



Fodya wopanda matenda

## MAWU OYAMBA

Fodya ndi mbeu yodalirika kwambiri pachitukuko cha chuma cha dziko la Malawi, choncho imafunika chisamaliro chokwanira kuti alimi apeze phindu. Zina mwa zomwe zimabwezeretsa m'mbuyo ulimi wa fodya ndi matenda komanso tizilombo tomwe timawononga fodya kuyambira ku nazale mpaka kumsika.

Ndondomeko yodalirika yopewera tizilombo ndi matenda mu fodya ndikugwiritsa ntchito njira zingapo monga; kubzala mitundu ya mbewu yopirira ku matenda ndi tizilombo, kutsatira njira zoyenera zamalimidwe, kugwiritsa ntchito zipangizo ndi manja, komanso mankhwala ngati njira yotsiliza.

M'bukhuli muli m'ndandanda wa mankhwala ovomerezeka ndi bungwe la Agricultural Research and Extension Trust (ARET) omwe amathandiza kupha tizilombo, kuteteza mbewu ku matenda komanso kupha udzu m'munda wa fodya. Mankhwala adavomerezeka potengera zotsatira za kafukufuku yemwe a bungweli amachita mogwirizana ndi makampani ogulitsa mankhwala. Izi zikugwirananso ndi ndondomeko imene inapelekedwa ndi bungwe limene limayang'anira ntchito za kafukufuka wa fodya pa dziko lonse la pansi lotchedwa CORESTA. Komanso kutengela ngati mankhwala ndiololedwa kugwiritsidwa ntchito ndi maiko akuluakulu aku Ulaya amene amagula fodyayu. Bungwe la ARET limasindikiza mndandanda wa mankhwala chaka ndi chaka.

## KUOPSYA KWA MANKHWALA

Mankhwala onse ndi woopsywa ku anthu, nyama ndi zachilengedwe zonse. Kuopsya kwake kumatengera pa mtundu ndi mphamu ya mankhwalawo. Pa mankhwala aliwonse amaikapo chizindikiro chosonyeza kuopsya kwa mankhwalawo monga; choifiira (Red), kuimira kuopsya kwambiri; chachikasu (Yellow) kuimira oopsywa; chamtambo (Blue) kapena chobiliwira (Green) kuimira mankhwala oopsywa pang'ono. Komabe ngakhale izi zili chomwechi, mankhwala onse ndioopsywa.

Mankhwala akhoza kuononga moyo podzera mkamwa, mphuno komanso pa khungu. Choncho ndikofunikira kuti pogwiritsa ntchito mankhwala, munthu ayenera kuvala zovala zodzitetezera nthawi zonse. Zovala zimenezi ndi; ovolosi, jombo-jombo (gambutsi), chotchingira pa mphuno ndi pakamwa (masiki) ndi magolovesi. Zinthu zimenezi zikuyenera kukhala zosang'ambika.

## A. TIZILOMBO TOONONGA FODYA NDI MANKHWALA OTETEZERA MBEWUYI

### 1. Nsabwe za m'fodya

Nsabwe za m'fodya ndi tizilombo tomwe timaononga kwambiri fodya m'dziko muno. Nsabwezi zimakhazikika pa mbewu ya fodya makamaka kunsi kwa masamba ndi kumayamwa madzi a m'fodyamo kenako ndi kumafalitsa matenda.

Mtundu wa mankhwala ophera tizilombo	Maina ena	Kasakanizidwe kake m'madzi okwana malita 10	Mulingo wa mankhwala pa hekitala	Nthawi yothiririra mankhwala ndi zomwe zimaletsedwa
Confidor 70 WG	Imidacloprid	Yezani magalamu 1.5 a mankhwala	Magalamu 60	Thirani malita awiri a mankhwala omwe mwasakaniza pa malo okula mita imodzi mbali zonse pa nthawi yofesa thiraniso pakatha masiku 45 kuchokera tsiku lobzala
		Yezan magalamu 6.5 a mankhwala	Magalamu 300	Thirani mamilimita 30 a mankhwala omwe mwasungunula mmadzi omwe mukufuna kuthirira nthawi yobzala fodya pa mapando.
Bandit 350 SC	Imidacloprid	Yezani mamilimita 7.2 a Mankhwala	Mamilimita okwana 300	Thirani mamilimita 30 a Mankhwala omwe mwasungunula mmadzi omwe mukufuna kuthirira nthawi yobzala fodya pa mapando.
Acetamark 20 SP	Acetamiprid	Yezani magalamu atatu (3) a mankwala	Magalamu 100 mpaka 400	Poperni mankhwalawa pakatha masabata awiri mutabzala. Mungathe kupoperano kamodzi kapena kawiri kutengera momwe tizilombo tikupezekera. Ndipo sibwino kupopera pakatha masabata asanu ndi limozi.
Sivanto 200SL	Flupyradifurone	9ml	Mamilimita okwana 400	Poperni Mankhwala pakatha masabata awiri mutabzala. Mungathe kupoperaso kamodzi kapena kawiri kutengera momwe tizilombo tikupezekera.
Thiamex 25 WG	Thiamethoxam	Yezani magalamu 12.5 a mankhwala		Thirani mamililita 30 a mankhwala omwe mwasakaniza m'madzi omwe mukuthiririra pobzala paphando
Aryna 46 EC	Acetamiprid + Indoxacarb	Yezani mamililita okwana 10 a mankhwala	Mamilimita okwana 400	Thirani Mankhwala omwe mwasungunula mmadzi pa nazale yanu mukangofesa fodya pogwiritsa ntchito keni. Poperni mankwalawa pakatha masabata anayi pamene fodya wameri ndikupiriza kupopera sabata ziwiri kapena zitatu zilizonse.
		Mamililita 33.3 a mankwala	Malita okwana 4	Thirani mamilimita 30 a mankhwala omwe mwasungunula mmadzi omwe mukufuna kuthirira nthawi yobzala pa mapando, thiraniso pakatha masabata 4 kuchokera tsiku lobzala

## 2. NYERERE

Nyerere zimanyamula njere za fodya kuchokera pa nazale ndipo kuonongaku kumacheptsa chiwerengero cha mbewu zoyenera kumera.

Mtundu wa mankhwala	Maina ena	Kasakanizi dwe kake m'madzi okwanira malita 10	Mulingo wa mankhwala pa hekitala	Nthawi yothirira mankhwala ndi zomwe zimaletsedwa
Decis Forte 10 EC	Deltamethrin	Yezani mamilimita 1 a mankhwala.	Malita okwana 0.045	Thirani malita awiri a mankhwala omwe mwasakaniza pa malo okula mita imodzi mbali zonse panthawi yofesa kenako ndikumathiranso pakatha masabata awiri njere zikamera kokwanira kanayi.
Lambda EC	Lambda - cyhalothrin	Yezani mamililita 5 a mankhwala	Malita okwana 0.2	Thirani malita awiri a mankhwala omwe mwasakaniza pa malo okula mita imodzi mbali zonse panthawi yofesa kenako ndikumathiranso pakatha masabata awiri njere zikamera kokwanira kanayi.
Muthambozi 100 EC	Indoxacarb 80g+Emamectin 20g	Yezani mamililita okwana 4	Malita okwana 0.1	Thirani Mankhwala omwe mwasungunula m'madzi pa nazale yanu mukangofesa fodya pogwiritsa ntchito keni. Poperani mankwalawa pakatha masabata anayi pamene fodya wameri ndikupiriza kupopera sabata ziwiri kapena zitatu zilizone.

## 3. Mbozi zodya mphukira

Mbozi za mtundu uwu zimadya masamba a nthete a fodya makamaka mphukira ndipo zikamadya masambawo zimapangitsa kuti masamba akhale ndi mabowo. Mabowowa amakula pomwe masamba akukulanso ndikupangitsa kuti mbewuyi ikhale yosawoneka bwino

Mtundu wa mankhwala	Maina ena	Kasakanizi dwe kake m'madzi okwanira malita 10	Mulingo wa mankhwala pa hekitala	Nthawi yothirira mankhwala ndi zomwe zimaletsedwa
Belt 480 SC	Flubendiamide	mamilita 1.3 m'munda	Malita okwana 0.3	Popelani pakatha masabata awiri mutadzala, Mungathe kuperanso pa masabata ena awiri mtsogolo. Ndipo sibwino kupopera mankhwala pakatha masabata asanu ndi limodzi
Steward 150 EC	Indoxacarb	Yezani mamililita 7 a mankhwala	Malita okwana 0.3 mpaka 0.6	Poperani pakatha masabata awiri mutabzala. Mungathe kupoperanso pa masabata ena awiri mtsogolo. Ndipo sibwino kupopera mankhwala pakatha masabata asanu ndi limodzi
Demin Fit 45 WG	Emamectin+lufenuron	Yezani magalamu 8 a Mankhwala	Magalamu 336	Poperani pakatha masabata awiri mutabzala. Poperani Mankhwala potengera kuchuluka kwa tizilombo munda mwanu
Prevathon 5 SC	Chlorantra-niliprole	Mamililita 40 pathawi yozala Mamililita 14 pakatha milungu inayi	Malita 2.4	Sungunulani mamililita 40 a mankhwala m'madzi ochuluka malita teni. Thilani mamililita 30 amankwala osungunula pa phando limodzi pa nthawi yobzala fodya. Pakatha milungu inayi, sungunulani mamililita 14 amankwala m'madzi ochuluka malita 10 ndipo popelani pogwiritsa nthito sipuleya ku masamba a fodya

Belt Expert 480 SC	Flubendiamide 24%+Thiacloprid 24%	mamililita a mankhala imodzi	Malita okwana 0.1	Thirani malita awiri a mankhala omwe mwasakaniza pa malo okula mita imodzi mbali zonse panthawi yofesa kenako ndikumathiranso pakatha masabata awiri njere zikamera kokwanira kanayi.
		mamililita awiri a mankhala - mm'unda		Popelani pakatha masabata awiri komanso anayi mutabzala fodya
Aryna 46 EC	Acetamiprid + Indoxacarb	Yezani mamililita 33.3 a mankhala	Y e z a n i malita 4 a mankhala	Thirani mamililita 30 a mankhala omwe mwasungunula mmadzi omwe mukufuna kuthirira nthawi yobzala fodya pa mapando, thiraniso pakatha masabata 4 kuchokera tsiku lobzala

#### 4. Mbozi zodula fodya

Mbozi za mtundu uwu zimaoneka zodera motuwirako ndipo ndi zazitali pafupifupi masentimita awiri mpaka anayi. Mbozizi zimaononga kwambiri ndipo zimakonda kudya usiku pomadula chithima cha mbande za fodya ali pa nazale kapena mukangobzala m'munda.

Mtundu wa mankhala	Maina ena	K a s a k a n i z i d w e kake m'madzi okwanira malita 10	Mulingo wa mankhala pa hekitala	Nthawi yothirira mankhala ndi zomwe zimaletsedwa
Lambda EC	Lambda-cyhalothrin	Yezani mamililita 5 a mankhala	Malita okwana 0.5 mpaka 0.4	Thirani malita awiri a mankhala omwe mwasakaniza pa malo okula mita imodzi mbali zonse panthawi yofesa kenako ndikumathiranso pakatha masabata awiri njere zikamera kokwanira kanayi.
Muthambozi 100 EC	Indoxacarb 80g + Emamectin 20g 4ml	4ml	Malita okwana 0.4	Thirani Mankhala omwe mwasungunula mmadzi pa nazale yanu mukangofesa fodya pogwiritsa ntchito keni. Popelani mankwalawa pakatha masabata anayi pamene fodya wameri ndikupiriza kupopera sabata ziwiri kapena zitatu zilizonse.
Decis Forte 10 EC	Deltamethrin	mamililita imodzi	Malita okwana 0.45	Thirani lita imodzi ya mankhala omwe mwasakaniza pa malo okula mita imodzi mbali zonse mbande zikangomera, ndikudzathiranso pakatha masabata awiri ali wonse kokwanira kanayi
Karate	L a m b d a - cyhalo-thrin	Mamililita 5 mm'unda	Malita okwana 0.2 mpaka 0.4	Ngati m'mundamo mumakonda kufala mbozi za mtunduwo thirani mamililita 30 a Mankhala omwe mwasakaniza m'madzi othirira pobzala
Belt Expert 480 SC	Flubendiamide + 24% + Thiacloprid 24%	mamililita a mankhala imodzi	Malita 0.1	Thirani malita awiri a mankhala omwe mwasakaniza pa malo okula mita imodzi mbali zonse panthawi yofesa kenako ndikumathiranso pakatha masabata awiri njere zikamera kokwanira kanayi
		mamililita awiri a mankhala - mm'unda	Malita 0.1	Popelani pakatha masabata awiri komanso anayi mutabzal fodya

## 5. ZIWALA

Izi ndi monga ziwala zonse zodziwika, bwanoni, komanso nunkhadala. Ziwalla ndi tizilombo toononga kwambiri ndipo mankhwala ovomerezeka omwe angaphe ziwalazi ndi omwe mumagwiritsa ntchito pophera mbozi zodula fodya ndi mbozi zomwe zimadya mphukira pa nazale komanso m'munda.

## 6. KAMAJEKETE

Kamajekete ndi tizilombo tomwe timaoneka tamtundu obiriwira kapena toderako ndipo mapiko ake amakhala olimba. Tizilomboti timaononga mbewu poyamwa madzi a m'masamba a nthete a fodya. Masamba owonongekawa amafota kwambiri makamaka masiku omwe kukutenthala. Poperani mankhwala ovomerezeka omwe mumapherano nsabwe za m'fodya.

## 7. CHISWE

Chiswe chimaoneka chathupi loyera ndipo mutu wake umakhala oderako ndipo chimakhala chachitali mamililita 4 mpaka 6. Chiswechi chimakonda kudya zinthu zoworerana kapena mbewu zomwe zili ndi matenda koma nthawi zina chimatha kuononga mbewu zomwe zikukula kuphatikizapo fodya. Chiswechi chimaononga mbewu zili pa nazale komanso m'munda makamaka pamene pamalopo palibe zinyalala zowolerana. Chiswe chimadyanso tsinde la mbewu yomwe yangowokeredwa kumene.

Mtundu wa mankhwala	Maina ena	K a s a k a n i z i d w e kake m'madzi okwanira malita 10	Mulingo wa mankhwala pa hekitala	Nthawi yothirira mankhwala ndi zomwe zimaletsedwa
Confidor 70 WG	Imidacloprid	Yezani magalamu 1.5 a mankhwala	Magalamu 60	Thirani malita awiri a mankhwala omwe mwasakaniza pamalo okula mita imodzi mbali zonse panthawi yofesa kenako thiraninso pakatha masiku 45 mbewu zitamera.
		Yezani magalamu 6.5 a mankhwala	Magalamu 300	Thirani mamililita 30 a mankhwala omwe mwasakaniza m'madzi othiririra pobzala paphando kapena patsinde la mbewu panthawi yobzalayo
Belt Expert 480 SC	Flubendiamide 24%+Thiacloprid 24%	mamililita a mankhwala imodzi	Malita okwana 0.1	Thirani malita awiri a mankhwala omwe mwasakaniza pa malo okula mita imodzi mbali zonse panthawi yofesa kenako ndikumathiranso pakatha masabata awiri njere zikamera kokwanira kanayi.

## 8. MBOZI ZAPANSI ZOFIIRA

Mbozi izi zimakhala ndi thupi lolimba, lachikasu choderako, lowala, losalala komanso zowoneka ngati nyongolotsi zokhala m'dothi. Mbozizi zimakonda kupezeka m'munda omwe walimidwa mochedwa ndipo momwe mulibe zinthu zowolerana. Mbozi zimenezi zimadya njere komanso mbande zomwe zangomera pa nazale kapena zomwe zawokeredwa kumene m'munda.

Mtundu wa mankhwala	Maina ena	K a s a k a n i z i d w e kake m'madzi okwanira malita 10	Mulingo wa mankhwala pa hekitala	Nthawi yothirira mankhwala ndi zomwe zimaletsedwa
Karate	Lambda-cyhalo-thrin	Mamililita 5 pa munda	Malita okwana 0.2 mpaka 0.4	Ngati m'mundamo mumakonda kufala mbozi za mtunduwo thirani mamililita 30 a mankhwala omwe mwasakaniza m'madzi othiririra pobzala.

## 9. Kafumbwfumbwe wa m'fodya

Iti ndi tizilombo towononga kwambiri fodya pamene akutchisidwa komanso kusungidwa. Fodya amaoneka ofuchirira kumapeto kwake. Kafumbwfumbwe wamkulu ngakhalenso wang'ono amaononga fodya.

Mtundu wa mankhwala	Maina ena	Kasakanizidwe kake m'madzi okwana malita 10	Mulingo wa mankhwala pa hekitala	Nthawi yothirira mankhwala ndi zomwe zimaletsedwa
Cislin 2.5 SC	Deltamethrin	Mamililita 12	-	Poperani malita 5 a mankhwala omwe mwaskaniza pa malo okula 100m2 kuti m'chigafa musapezenso tizilomboti musanayikemo fodya wina.
Carifend net	Alpha - Cypermethrin			Kutilani fodya yemwe mwamusunga mu shedi ndi ukonde wa karifendi. Onetsetsani kuti fodya mwamukutilayo sanagwidwe ndi kafumbwfumbwe

### Mankhwala oyenera kuthiridwa ndi anthu ovomerezeka

Phostoxin 56%	Aluminium phosphide	Theka la m'bulu pa malo okula mita imodzi mbali zonse	-	Thirani mankhwalawa pafodya owonongeka pa malo osungira. Ikani fodya pa malo posalowa mphepo kwa masiku 5 mpaka 8, kenako chotsani pepala la pulasitiki kuti mphweya uzilowa bwino
---------------	---------------------	---	---	--

## B. MATENDA A MFODYA NDI MANKHWALA OTETEZERA

### 1. Chiwawu, Nthomba, Chisaka ndi kuwola kwa mizu

Mtundu wa mankhwala	Maina ena	Kasakanizidwe kake m'madzi okwana malita 10	Nthawi yothira mankhwala ndi zomwe zimaletsedwa
Copper oxychloride 85 WP	Copper oxychloride	Magalamu 300 mpaka 50 m'madzi okwana malita 100 kuthira pa nazale	Poperani mamililita 200 mpaka 500 a mankhwala omwe mwaskaniza pa malo okula mita imodzi mbali zonse kuyambira sabata ya chinayi mbewu zitamera. Poperani sabata iliyonse. Mankhwalawa siowfunika kupopera m'munda.
		Galamu imodzi m'madzi a padziwe okwana lita imodzi kuthira pa nazale	Thirani pakatha masabat atatu mutangofesa. Thirani padziwe ndikusakaniza kwambiri. Mankhwalawa siofunika kuthira m'munda.
Sporekill	Didecyldinethyl Ammonium Chloride	Mamililita a mankhwala okwana 0.25 m'madzi a padziwe okwana lita imodzi kuthira panazale	Thiriani kamodzi pa masabata atatu mukangofesa. Thirani padziwe ndi kusakaniza kwambiri. Mankhwalawa siofunika kuthira m'munda.

### 2. Nyongolotsi, udzu

Velum 400 SC	Fluopyram	Lita imodzi yamankhwala m'madzi okwana malita 420	Thirani mamililita 30 amankhwala osungunula pa phando lililonse pa nthawi yobzala (Gwiritsani ntchito Velum ku mbeu yopilira ku mandolo)
--------------	-----------	---	--

### 3. Nthomba zoderako, mandolo

Dithane M45	Mancozeb 80 WP	Magalamu 150 a mankhwala m'madzi okwana malita 100 kapena makapu nambala 5 kawiri kapena kapu nambala 16 imodzi m'madzi okwana malita 10 kuthira pa nazale	Poperani mamililita 200 mpaka 500 a mankhwala omwe mwasakaniza pa malo okula mita imodzi mbali zonse potengera kukula kwake. Yambani kupopera mankhwala pakatha masabata awiri zitangomera pa masabata awiri aliwonse. Yambani kupopera mamililita 200 mpaka kufika mamililita 500 pa malo okula mita imodzi mbali zonse
Kocide 10L	Cupric hydroxide 77	Magalamu 150 mpaka 250 a mankhwala m'madzi okwana malita 160 kapena kapu nambala 16 imodzi m'madzi okwana malita khumi kuthira pa nazale	Poperani mamililita 200 mpaka 500 a mankhwala pa malo okula mita imodzi mbali zonse potengera kukula kwa malo pakatha masabata awiri zitangomera pa masabata awiri aliwonse. Yambani kupopera mamililita 200 mpaka kufika mamililita 500 pa malo kula mita imodzi mbali zonse kuti fodya azikula bwino.
Bion 50 WG	Acibenzolar – S-methyl	Magalamu a mankhwala okwana 12.5 m'madzi okwana malita 10 kuthira pa nazale	Poperani mankhwala pakatha masabata asanu ndi awiri fodya atangomera. Bwerezani kupopera pakatha masabata awiri.
		Magalamu 60 a amankhwala pa hekitala m'madzi okwana malita 400 kuthira pamunda okwana hekitala.	Thirani mankhwalawa mbewu zikakwanitsa masabata anayi mutawokera. Tsatirani nthawi yopeperera ndipo bwerezani kupoperako pakadutsa masabata awiri Musapopere koposa kawiri. Sibwino kupopera pakatha masabata asanu ndi limodzi.
Rovral	Iprodione 25 SC	Malita awiria mankhwala m'madzi okwana malita 400 kuthira pamunda okwana hekitala.	Poperani kawiri pa masabata awiri aliwonse kuyambira pa masabata anayi mutawokera.
Ortiva 250 SC	A z o x y s t r o b i n 250g/L	Lita imodzi ya mankhwala m'madzi okwana malita hekitala imodzi	Poperani mankhwalawa pogwiritsa ntchito sipuleya ya knapsack. Poperani mbewu omwe zakwanitsa masabata pakatha masabata awiri ngati nyengo ya mvula ikupitirira.
Cabrio Duo	Pyraclostrobin 3.8% w/w + dimethomorph 6.9% w/w	Sakanizani mankhwa okwana malita 2.5 mumadzi okwana malita 300	Poperani mankhwalawa pogwiritsa ntchito sipuleya ya knapsack. Poperani mbewu pomwe zakwanitsa masabata anayi muthabzala. Mutha kupoperaso pakatha masabata awiri ngati nyengo ya mvula ikupitirira.

### 4. Zotupatupa

Baytan	T r i a d m e n o l 15WP	Magalamu 330 a mankhwala m'madzi okwana malita 100 kapu imodzi ya nambala 30 m'madzi okwana malita 10 pa nazale	Thirani malita awiri a mankhwala omwe mwasakaniza pa malo okula mita imodzi mbali zonse pa masiku awiri musanafike tsiku lozula mbande kuti mukawokere.
--------	--------------------------	---	---

## C. KUTETEZA FODYA KU UDZU

### Udzu, zitsamba

Mtundu wa mankhwala	Maina ena	Kasakanizidwe kake	Nthawi yothirira mankhwala ndi zomwe zimaletsedwa
Focus ultra	Cycloxydimm ethylo-leate	Malita okwana 1.2 pa hekitala kapena mamililita 80 mu mpopi wa malita 15 kuthira pa mzere otalika mamita 500 m'munda	Mankhwala amapha udzu omwe wangomera ndipo thirani mankhwala omwe mwasakaniza okwana malita 200 mpaka 400 pa hekitala. Kapena thirani lita imodzi ya mankhwala mu mpopi wa malita 15 pa mzere otalika mamita 500.
Trif	Trifulalin	Malita okwana 1.2 mpaka 1,6 pa hekitala kapena mamililita 80 mpaka 105 MU mu mpopi wa malita 15	Mankhwala ayenera kuthiridwa m'munda udzu usanamere ndipo thirani malita 200 mpaka 400 a mankhwala. Poperani mankhwala ndi kumasakaniza ndi dothi m'mizere. Mungathenso kupopera mutamaliza kukonza mizere ndipo onetsetsani kuti mankhwalawa akulowa m'dothi kwa masentimita 10 mpaka 15 udzu usadamere.
Dual magnum 960 EC	S Metolachlor	Lita imodzi ndi theka pa hekitala kapena mamililita 100 mu mpopi wa malita 15. Ndipo athiridwe m'munda	Thirani malita 200 mpaka 400 a mankhwala omwe mwasakaniza pa hekitala kapena lita imodzi mu mpopi wa malita 15, pa mzere otalika mamita 500. Thirani mankhwala udzu usanayambe kumera kapena poperani pa masiku atatu omwe mukuwokera fodya.
Frontier Optima	Demethenamid	Thirani malita okwana 0.7 amankhwala mumadzi okwana madzi okwana malita 200	Poperani mukangomaliza kubzala. Nthawi yabwino ndi mmawa kapena madzulo  Thirani mankhwala udzu usanamere.
Pree	Metazachlor	20% ya dothi la makande, lita imodzi ya Mankhwala pa hekitala, 20% kuphatikiza malita okwana 1.2 pa hekitala pa munda	Thirani mankhwala udzu usanamere. Kumadera omwe amabzala mbewu mvula isanagwe musagwiritsa ntchito mankhwala a metazachlor komwe dothi lake lili makande ochepera 20%.
Command 4 EC	Clomazone	Malita okwana 1.5 mpaka 1.7 a mankhwala hekitala kapena mamililita 100 mpaka 110 mu mpopi wa malita 15 othiridwa pa munda	Thirani malita 200 mpaka 400 a mankhwala pa hekitala kapena lita imodzi ya mankhwala mu mpopi wa malita 15 pa mzere otalika mamita 500. Cholina chake ndikufuna kupopera mukamaliza kuwokera fodya ndipo kungathe kuchitika mpaka kwa masabata anayi. Chonde musapopere mankhwalawa pakatha masabata anayi mutawokera fodya.

## D. MANKHWALA OTETEZERA FODYA KU SAKASI

Mtundu wa mankhwala	Maina ena	K a s a k a n i z i d w e kake	Nthawi yothirira mankhwala ndi zomwe zimaletsedwa
Antak	N- decanol	Gawo limodzi la mankhwala otetezera fodya ku sakasi ku magawo 25 a madzi kuthira pa munda	Thirani kapu imodzi ya nambala 5, kapena nambala 8 kapenango nambala 12 ya mankhwala pamalo omwe mwathena fodya. Kuthena ndi kuthira mankhwala oteteza fodya kusakasi kuyenera kuchitikira panthawi imodzi kuti akhale wa maonekedwe abwino. Musapopere mankhwalawa nthawi yomwe kuli mvula.
Fair 85	N- decanil/ Octanil	Gawo limodzi la mankhwala otetezera fodya ku sakasi ku magawo 25 a madzi ndi kuthira pa munda	Thirani kapu imodzi ya nambala 5 kapena nambala 8 kapenango nambala 12 ya mankhwala pa malo omwe mwathenafodya. Kuthenandikuthiramankhwalaoteteza fodya ku sakasi kuyenera kuchitikira pa nthawi imodzi kutifodya akhale wa maonekedwe abwino. Musapopere mankhwalawa nthawi yomwe kuli mvula.
Tabamex 360	Butralin	Malita okwana 1.5 a mankhwala m'madzi okwana malita 100 kapena mamililita 150 a mankhwala m'madzi okwana malita khumi pothira kumunda	Thirani kapu imodzi yaa nambala 5 kapena nambala 8 kapenango nambala 12 ya mankhwala pa malo omwe mwathenafodya. Kuthenandikuthiramankhwalaoteteza fodyakusakasikuyenerakuchitikirapanthawiimodzikuti fodyayo akhale wa maonekdedwe abwino.
Y a m a o t e a Super 305 EC	Flumetraline 205g/l + B u t r a l i n e 80g/L	Gawo limodzi la mankhwala otetezera fodya ku ku magawo 120 a madzi ndi kuthira pa munda mamilita 80 a mankhwala mu malita 10 a madzi	Thiranikapuimodziyanambala16yamankhwalapamalo omwe mwathena fodya. Kuthena ndi kuthira mankhwala oteteza fodya kusakasi kuyenera kuchitikira panthawi imodzikutiakhalewamaonekedweabwino. Musapopere mankhwalawa nthawi yomwe kuli mvula.
Fabulin Forte 305 EC	Flumetraline 205g/l + B u t r a l i n e 80g/L	Gawo limodzi la ankhwala otetezera fodya ku sakasi ku magawo 120 a madzi ndi kuthira pa munda kapena mamilita 80 a mankhwala mu malita 10 a madzi	Thiranikapuimodziyanambala16yamankhwalapamalo omwe mwathena fodya. Kuthena ndi kuthira mankhwala oteteza fodya kusakasi kuyenera kuchitikira panthawi imodzikutiakhalewamaonekedweabwino. Musapopere mankhwalawa nthawi yomwe kuli mvula
To b u l a r i n Super	Flumetraline 205g/l + B u t r a l i n e 80g/L	Gawo limodzi la mankhwala otetezera fodya ku sakasi ku magawo 120 a madzi ndi kuthira pa munda kapena mamilita 80 a mankhwala mu malita 10 a madzi	Thiranikapuimodziyanambala16yamankhwalapamalo omwe mwathena fodya. Kuthena ndi kuthira mankhwala oteteza fodya kusakasi kuyenera kuchitikira panthawi imodzikutiakhalewamaonekedweabwino. Musapopere mankhwalawa nthawi yomwe kuli mvula
Flumetralin	Flumetralin	Thirani mamililita okwana 13.5 mumadzi okwana lita imodzi	Mamililita okwana 8 pamalo pamene mwathena fodya. Mankwala ayenderere mpaka patsinde pamtengo
Royaltac	N-decanol	Thirani mamililita okwana 42 mumadzi okwana lita imodzi	Thirani mamililita okwana 8 pamalo pamene mwathena fodya. Mankwalaayendererempakapatsindepamtengo

<b>MANKHWALA M'FODYA</b>		
<b>MTUNDU WA MANKHWALA</b>	<b>MAINENA</b>	<b>CHILETSO</b>
2,4,5-T	2,4,5-T	Kumunda ndi malo osungilamo fodya
2,4-D	2,4-D	
Accotab	Pendimethalin	
Actellic	Pirimiphos methyl	
Aldrine	Aldrin	
Ambush	Permethrin	
Antex	Dieldrin	
Azodrin	Monocrotophos	
Benlate	Benomyl	
Benodanil	2-idobenzanilide	
BHC	Hexachlor (BHC)	
Bulldock 0.05GR	Beta-cyfluthrin	
Chlordane	Chlorodane	
Compound B	Dicamba	
DDT	DDT	
Dipterex	Trichlorfon	
DMDT, Marlate	Methoxychlor	
Dursban 480 EC	Chloropyriphos	
Dysyston	Disulfoton	
EDB	Ethylene dibromide 92	
Fusillade	Fluazifop-P-Butyl	
Heptagran	Heptachlor	
Herbifume	Metham Sodium	
J-38, Athio	Formothion	
Lannate	Methomyl	
Metaxystox	Demeton-S-Methyl	
Methyl Bromide	Methyl Bromide	
Nativo 300 SC	Tebuconazole+trifloxystrobin	
Nenagon	Dibromochloropropane	
Orthene	Acephate	
Penite	Arsenicals	
Planavin	Nitralin	
Ridomil	Metalaxy	
Ripcord 20 EC	Cypermethrin	
Rogor 40 EC	Dimethoate	
Sanocide, HCB	Hexachlorobenzene	
Tamaron	Methamidophos	
TDE	TDE	
Temik	Aanacarb	
Thunder 145 OD	Imidacloprid+Beta-cyfluthrin	
Tilam	Pebulate	
Toxaphene	Camphechlor	
Vydate	Oxamyl	
Zineb	Zinc enthylen	



## CHENJEZO!!

- Musagwiritsentchito mankhwala ophera tizilombo oletsedwa popeza amasemphana ndi zomwe ogula akufuna komanso malamulo a dziko lanu.
- Alimi ayenera kugwiritsa ntchito mankhwala moyenera pakasakanizidwe, kathiridwe komanso nthawi yomwe adzasungidwe yomwe idalembedwa pa mankhwalawo.
- Musachedwetse kapena kuthira mankhwala oposa mulingo pa fodya chifukwa amatha kuononga fodyayo.
- Valani zovala zodzitetezera monga majombo, ovolo, zotchinga kumaso komanso magalavu nthawi iliyonse yomwe mukugwiritsa ntchito mankhwala ophera tizilombo m'fodya.

Mukafuna kudziwa zambiri za mankhwalawa, funsani kwa :-

**The Chief Executive Officer  
ARET, P/Bag 9  
Lilongwe**

**Tel. (265) 887 482 432  
(265) 887 482 433**

**Email: [ceo@aret.org.mw](mailto:ceo@aret.org.mw)  
Website: [www.aret.org.mw](http://www.aret.org.mw)**

**Alimi akupemphedwa kuti adzimvera malangizo onse ochokera kubungwe la ARET kuti ulimi wa fodya ukhale opindulitsa. Bungweli lidakhazikitsidwa kuti lizithandiza inu alimi ndi ena onse otenga nawo gawo pa ntchito za ulimi wa fodya**