

TWIGASATE 480 SL

GLYPHOSATE 480 G/L

*A non-selective post-emergence herbicide for the control of annual and perennial grasses and broad-leaved weeds
(Dawa Maalum ya kuuwa kwekwe aina nyingi)*



Kikuyu grass



Couch grass



Cyperus spp.



Devils thorn



Black Jack



LEADERS IN CROP PROTECTION

ACTIVE INGREDIENT: GLYPHOSATE (480 G/LITRE)

FORMULATION: SOLUBLE CONCENTRATE (SL)

REGISTRATION: PCPB(CR) 0743

DESCRIPTION AND MODE OF ACTION.

TWIGASATE is a broad spectrum, systemic and non-selective post-emergence herbicide for control of annual and perennial grasses and broad-leaved weeds in crops. The active ingredient (glyphosate) is quickly absorbed by foliage and green stems upon application with rapid translocation through phloem to the growing points of the plant, above and below the soil (shoots, roots, rhizomes, stolons). It acts by inhibiting synthesis of essential aromatic amino acids which are needed for protein biosynthesis. This is vital for growth and survival of plants. TWIGASATE is inactivated on contact with soil. Weed growth stops within 24 hours after application with visual symptoms of control (chlorosis) being noticed 3-7 days after application.

DIRECTION FOR USE

TWIGASATE is best applied directly to actively growing weeds.

Crop	Dosage		Remarks
	Litres/Ha	ML/20 L of water	
Tea	2-3	200 - 300	Apply the lower rate to younger weeds while higher rate to mature weeds.
Maize	2	200	Apply before or immediately after planting on already emerged weeds before the crop emerges.

Note:

- Twigasate is inactivated on contact with the soil.
- Use clean water free of soil particles.
- Avoid any spraying or drifting on leaves or on any desirable crops or plants as Twigasate can be absorbed through green stem or foliage
- Do not cultivate before weeds turn yellow (chlorotic condition). Leave the sprayed area intact for at least 14 days.
- Do not apply if rain and irrigation is expected within 6 hours. Avoid spraying when weeds are stressed. Avoid conditions such as drought, heat, water logging and any other factor that may lead to stress as these interfere with the efficiency of Twigasate.

METHOD OF APPLICATION

TWIGASATE may be used by ground application (using tractor mounted boom sprayer or knapsack sprayer) or aerial application. It is advisable when doing aerial application to spray when the weather is calm in order to avoid spray drift. Half-fill the spray tank with clean water; add the necessary quantity of TWIGASATE and stir, then top up with water. Keep on agitating when filling and during spray operations.

COMPATIBILITY

TWIGASATE is compatible with most commonly used pesticides. However, DO NOT tank mix with any product unless your own prior testing has shown that the combination is physically compatible, effective and non-injurious under your conditions. Mixing with other herbicides may reduce the activity of TWIGASATE.

PHYTOTOXICITY

TWIGASATE is not phototoxic when used as recommended.

SOIL RESIDUAL ACTIVITY

Twigasate has no soil residual activity. The active ingredient (glyphosate) is strongly and rapidly adsorbed to the soil and is rapidly metabolized by soil micro-organisms.

MAIN ADVANTAGES

- * **Broad spectrum activity** - controls a wide range of annual and perennial grasses and broad leaved weeds.
- * **Highly systemic glyphosate herbicide** - this guarantees faster absorption and translocation to the shoots, roots and underground organs such as rhizomes and stolons thus effectively killing the weeds.
- * **Flexible usage** - can be used prior to planting or after sowing but before emergence in all crops and for general weed control in established plantation crops such as coffee, tea, sugarcane.
- * **No soil residual activity** - no effect on soil microbes or subsequent crops grown in an area where Twigasate has been sprayed.
- * **Safe to the environment** - glyphosate gets inactivated upon contact with soil thus poses low risk to the environment, wildlife and the user. It does not leach to contaminate ground water.
- * **Rainfast** - Rain falling after 6 hrs will not affect the performance of the product.
- * **Soil and moisture conservation** - Twigasate can be used in minimum/zero tillage and this minimizes soil and moisture loss.
- * **Compatibility** - can be used with other pesticides during application.

HANDLING PRECAUTIONS

- Do not smoke, drink or eat while using this product.
- Avoid eye contact. Wear safety goggles when handling the product.
- Avoid spray mist and exposure to the product. Wear rubber gloves, mask covering nose and mouth. Wear protective clothing such as long sleeved shirts, long pants and rubber boots when handling Twigasate.
- After application wash yourself and your work clothes.

ENVIRONMENT AND WILDLIFE

The product is not toxic to fish. However, do not contaminate water sources and supplies by disposal of product waste. Keep livestock out of treated areas. TWIGASATE is not toxic to natural enemies and beneficial insects such as bees and soil invertebrates when used at recommended rates.

MAELEZO KUHUSU DAWA

TWIGASATE ni dawa yenye uwezo mkubwa wa kuzuia kwekwe aina nyingi katika mimea, kama vile kwekwe wa dharura, kwekwe wenye majani mapana na makubwa, na kwekwe wanaojitokeza kila mwaka katika msimu wa upanzi wa mimea. Dawa utenda kazi kwa njia ya kutoa mvuke unayo-chukuliwa na tawi la mmea na kuenea pande zote halisi ya mmea, juu au chini ya udongo na kusababisha kizingiti kati ya chembe-chembe za mmea (chakula muhimu) na kufanya kwekwe kunyauka.

Nguvu za TWIGASATE huharibiwa punde tu inapogusana na udongo. Kwekwe huwacha kukua kabla ya masaa 24 kupita tangu dawa kutumika. Dalili za dawa kufaulu kuzuia kwekwe huonekana baada ya muda wa siku 3 hadi 7 ya dawa kutumika.



Devils thorn (emex)



Wild finger millet



Mexican Marigold

MAELEZO YA KUTUMIA DAWA

TWIGASATE ni bora zaidi ikinyunyiziwa moja kwa moja kwenye kwekwe

MMEA	KIPIMO		ILANI
	Lita/Ha	ML/20LT MAJI	
Chai	2-3	200 - 300	Nyunyizia dawa kipimo cha-chini kwa kwekwe waliyochanga na cha juu kwa kwekwe waliokomaa
Mahindi	2	200	Nyunyizia dawa kabla au muda mfupi baada ya kupanda na kwenye kwekwe walio ota na kuonekana.

ILANI

- Nguvu za Twigasate huharibiwa inapogusana na udongo.
- Tumia maji masafi yasiyo na vipande vya mchanga.
- Epuka mimea muhimu iliyokaribu kwa sababu mvuke wa dawa ya TWIGASATE waweza kupitia sehemu ya mti au majani yenye rangi ya kijani kibichi.
- Usilime sehemu ya shamba iliyonyunyiziwa dawa kabla ya kwekwe kuonyesha rangi ya manjano (chlorotic condition). Tenga Sehemu iliyo nyunyiziwa dawa kwa siku 14.
- Dawa isinyunyiziwe ikiwa kunatarajiwa mvua au unyunyishaji wa maji kabla ya masaa 6 kumalizika. Epuka nyakati za ukame, joto, kusimama kwa maji na aina nyingine yeyote ya kuzuia utekelezaji wa kupata matokea bora ya Twigasate.

KUTUMIA DAWA.

TWIGASATE yaweza kunyunyiziwa kwa kutumia tanga-tanga lenye kufungwa tanki ya dawa au bomba ya kawaida ya kunyunyizia dawa au kwa kutumia ndege yenye mashine ya dawa. Nimuhimu wakati wa kutumia ndega, kunyunyizia dawa wakati hali ya hewa imetulia (shwari) ili kuepukana na mvuke wa dawa kuchukuliwa na upepo. Jaza maji safi nusu tanki na halafu endelea kuongeza kiwango sawa cha TWIGASATE. Endelea kukoroga unapojaza maji. Hakikisha kutingisha tanki wakati wa kujaza na unaponyunyizia dawa.

UPATANIFU

TWIGASATE hupatana na madawa mengi ya kuuwa kwekwe. Hata hivyo, usiichanganye ndani ya tangi na dawa nyingine ila tu baada ya majaribio yako binafsi kabla ya matumizi ili kuonyesha kwamba mchanganyiko huo unaweza kupatana, unafaa na ni salama katika hali yako.

MABAKI YA DAWA KWENYE UDONGO

TWIGASATE haina madhara ya sumu katika udongo. Chembe chembe ya dawa (glyphosate) hunaswa kwenye udongo na nguvu zake kuharibiwa kutokana na utendaji kazi wa vijidudu vidogo katika udongo.

MANUFAA YA DAWA

- Inauwezo mkubwa kwa kuzuia aina nyingi ya nyasi, kwekwa wa majani mapana wanaojitokeza kila mwaka, hata wale wa kudumu katika msimu wa upanzi wa mimea.

- Mvuke wa dawa ya glyphosate huingia na kuchukuliwa upesi na kusambaa kwenye sehemu zote za mmea.
- Ni rahisi kutumia dawa. Yaweza kutumiwa mapema kabla ya kupanda mbegu, au kuzuia kwekwe kwenye mimea ya kudumu kama vile kahawa, chai na miwa.
- Haina madhara ya sumu kwenye udongo. Kwa hivyo haina madhara kwa wadudu muhimu kwenye udongo au mimea ambayo inakusudiwa kukuzwa shambani iliyonyunyiziwa Twigasate.
- **Ni boro kwa mazingara** – Chembe chembe ya dawa (glyphosate) haisababishi madhara ikiingia kwenye udongo, na kwa hivyo haina madhara kwa mazingara, wanyama wa pori na mwenye kuitumia. Dawa haivuji ili kuchanganya na maji kwenye mito.
- **Mvua kunyesha** – Dawa huingia na kufanya kazi kwa haraka kwenye kwekwe na kwa hivyo hakuna tisho la kutofanya kazi ikiwa mvua itanyesha muda mfupi baada ya masaa sita.
- **Kuhifadhi udongo na maji** – Twigasate hutumika kwa kuhifadhi udongo na maji inapotumiwa katika hali ya “mimum tilage”.
- **Upatanifu** – Dawa yaweza kutumiwa pamoja na madawa mengine wakati wa matumizi.

TAHADHARI WAKATI WA MATUMIZI

- Usivute sigara, usinywe, wala usile wakati unatumia dawa hii.
- Chunga isiingie machoni. Vaa miwani ya kuinga macho unapotumia dawa hii.
- Hepukana na mvuke wa dawa hii, na kujiweka wazi kwenye dawa. Vaa glovu za mkono za raba, vaa kifuniko cha pua na mdomo. Vaa nguo za kujikinga kama shati la mikono mirefu, suruali ndefu na gambuti za raba, unapotumia dawa hii.
- Baada ya kutumia dawa hii oga mwili na uoshe nguo zako za kazi.

MAZINGIRA NA MBUGA ZA WANYAMA

TWIGASATE sio sumu kwa samaki na viumbe vya majini visivyo na uti wa mgongo. Hata hivyo, usichafue njia za maji kwa kutupa ndani uchafu wa dawa. Weka mifugo mbali na maeneo yaliyowekwa dawa. TWIGASATE haiwadhuru wadudu wenye manufaa kama vile nyuki ikiwa itatumiwa kulingana na kiasi kilichopenedezwa.



DISTRIBUTED IN KENYA BY:
TWIGA AGRICULTURE, A Division of
Twiga Chemical Industries Ltd.
P.O. BOX 30172, 00100, GPO,
NAIROBI, KENYA.

TEL: 254-020-3942000 /3942300, FAX: 3942405
email:-info@twiga-chem.com
www.twigachemicals.com