READ THE LABEL (AND LEAFLET) BEFORE USE
KEEP LOCKED AWAY AND OUT OF REACH OF CHILDREN

Gardomil® Gold

syngenta

Reg. No. **L6246** Act No. 36 of 1947 **N-AR 0811** (Namibia)

A suspension concentrate herbicide for selective pre-emergence and early post-emergence control of most annual broadleaf weeds and some annual grasses in maize.

GROUP 5 15 HERBICIDE

Active Ingredients:
atrazine (and related active triazines)..... 248,6 g/ℓ
terbuthylazine (and related active triazines).. 248,6 g/ℓ
s-metolachlor (α-chloroacetamide)..... 102,8 g/ℓ

WARNING

Hazard statements:
May cause an allergic skin reaction. May cause damage to organs through prolonged or repeated exposure. Very toxic to aquatic life with long-lasting effects.

Precautionary statements:
Prevention: Do not breathe mist or vapours. Wear protective gloves. **Response:** Get medical advice/attention if you feel unwell. If skin irritation or rash occurs, get medical advice/attention. Take off contaminated clothing and wash it before re-use. Collect spillage.

EMERGENCY TEL NO.:
+27 82 446 8946 (Griffon)

UN 3082

Registration holder
Syngenta South Africa (Pty) Ltd
Co. Reg. No. 1998/013761/07
Private Bag X 60
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1. WARNINGS:

Hazard statements: May cause an allergic skin reaction. May cause damage to organs through prolonged or repeated exposure. Very toxic to aquatic life with long-lasting effects.

- Poisonous if swallowed.
- Store in a cool place.
- Store away from food and feed.
- Keep out of reach of children, uninformed persons and animals.
- **In case of poisoning:** Call a doctor and present this label.
- **Re-entry:** Do not enter treated area within one (1) day after application unless wearing protective clothing.
- **Aerial application:** Notify all inhabitants in the immediate vicinity of the area to be sprayed and issue the necessary warnings. Do not spray or allow drift to contaminate water or adjacent areas.

Although this remedy has been extensively tested under a large variety of conditions, the registration holder does not warrant that it will be efficacious under all conditions because the action and effect thereof may be affected by factors such as abnormal soil, climatic and storage conditions; quality of dilution water, compatibility with other substances not indicated on the label and the occurrence of resistance of the weed against the remedy concerned, as well as by the method, time and accuracy of application. The registration holder furthermore does not accept responsibility for damage to crops, vegetation and the environment, or harm to people or animal or for lack of performance of the remedy concerned due to failure of the user to follow the label instructions or to the occurrence of conditions, that could not have been foreseen in terms of the registration. Consult the supplier in the event of any uncertainty.

2. PRECAUTIONS:

Precautionary statements: Prevention: Do not breathe mist or vapours. Wear protective gloves. **Response:** Get medical advice/attention if you feel unwell. If skin irritation or rash occurs, get medical advice/attention. Take off contaminated clothing and wash it before re-use. Collect spillage.

- Do not inhale the spray mist.
- Avoid skin contact.
- Wash with soap and water after use.
- Wash contaminated clothing after use.
- Do not eat, drink, or smoke while mixing or applying the product or before washing hands and face.
- Do not mix and load within at least 15 meter from boreholes, streams, rivers and dams.
- Do not apply within at least 15 meter from boreholes, streams and rivers.
- Do not apply within 60 meter from dams.
- Ensure that no back-siphoning to boreholes or dams takes place when product is applied through the irrigation system.
- Avoid drift of spray onto other crops, grazing, rivers, dams, boreholes and areas not under treatment.
- Clean applicator after use. Dispose of rinsate where it will not contaminate crops, grazing, rivers, dams, boreholes and areas not under treatment.
- Prevent contamination of food, feed, drinking water and eating utensils.
- Rinse the empty container three (3) times with a volume of clean water equal to a minimum of 10% of the container. Add the rinsate to the contents of the spray tank before destroying the container in the prescribed manner.

Symptoms of human poisoning: No case of human poisoning is on record.

First Aid and Medical Treatment

If poisoning is suspected immediately call a doctor. Remove patient from further contact with pesticide and place patient in a well-ventilated area. In case of eye contact hold eyelids open and flush with a steady, gentle stream of water for 15 minutes. In case of skin contact, wash with plenty of soap and water. Consult a doctor if irritation persists. If the substance has been swallowed promptly administer a large quantity of milk, egg whites, gelatine solution or, if these are not available large quantities of water. Do not induce vomiting or give anything by mouth to an unconscious person.

Note to doctor: No specific antidote is known. If ingested, induce emesis or lavage stomach. Administration

of aqueous slurry of activated charcoal may be considered. Apply symptomatic therapy.

3. RELEVANT SUBSTANCES:

Chemical name	
terbuthylazine (ISO)	
Classification	**Concentration (% w/w)**
Acute Tox. 4; H302 STOT RE 2; H373 Aquatic Acute 1; H400 Aquatic Chronic 1; H410 M-Factor (Acute aquatic toxicity): 10 M-Factor (Chronic aquatic toxicity): 10	≥ 20 - < 25
Chemical name	
atrazine (ISO)	
Classification	**Concentration (% w/w)**
Skin Sens. 1; H317 STOT RE 2; H373 (Heart) Aquatic Acute 1; H400 Aquatic Chronic 1; H410 M-Factor (Acute aquatic toxicity): 1 M-Factor (Chronic aquatic toxicity): 1	≥ 20 - < 25
Chemical name	
s-metolachlor	
Classification	**Concentration (% w/w)**
Skin Sens. 1; H317 Aquatic Acute 1; H400 Aquatic Chronic 1; H410 M-Factor (Acute aquatic toxicity): 10 M-Factor (Chronic aquatic toxicity): 10	≥ 2,5 - < 10
Chemical name	
Reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1)	
Classification	**Concentration (% w/w)**
Acute Tox. 3; H301 Acute Tox. 2; H330 Acute Tox. 2; H310 Skin Corr. 1C; H314 Eye Dam. 1; H318 Skin Sens. 1A; H317 Aquatic Acute 1; H400 Aquatic Chronic 1; H410 M-Factor (Acute aquatic toxicity): 100	≥ 0,0002 - < 0,0015

4. RESISTANCE MANAGEMENT:

GARDOMIL GOLD is a group code 5 and 15 herbicide. Any weed population may contain individuals naturally resistant to **GARDOMIL GOLD** and other group code 5 and 15 herbicides. The resistant individuals can eventually dominate the weed population if these herbicides are used repeatedly and exclusively in programs. These resistant weeds may not be controlled by **GARDOMIL GOLD** or any other group code 5 and 15 herbicides.

To delay herbicide resistance:

- Avoid exclusive repeated use of herbicides from the same herbicide group code. Alternate or tank mix with products from different herbicide group codes.
- Integrate other control methods (chemical, cultural, biological) into weed control programs.

For specific information on resistance management contact the registration holder of this product.

5. USE RESTRICTIONS:

To avoid damage to follow-up crops the following waiting periods should be observed:

a	Maize and sugarcane	nil
b	Grain sorghum	6 months
c	Sunflowers, groundnuts, soybeans, potatoes, dry beans, forage sorghum and small grains	18 months
d	All other crops	24 months (a test planting is recommended)

Where the rate of **GARDOMIL GOLD** applied does not exceed 2.2 ℓ/ha the waiting period mentioned under (c) above may be reduced to 9 months except on the sandy soils of North West Province and North Western Free State which contain 0 - 10% clay.

- The above-mentioned waiting periods are valid only if the correct dosage rate of **GARDOMIL GOLD** according to soil type was applied and normal or above average rainfall occurred after **GARDOMIL GOLD** application.
- When **GARDOMIL GOLD** is applied to soils, which expand on wetting and crack or crumble on drying out, such as turf soils, it may remain active in the soil for much longer than the above-mentioned waiting periods. For this reason **GARDOMIL GOLD** should not be used on such soils if sensitive crops might be planted in the foreseeable future. On such soils **GARDOMIL GOLD** may also give poor control of the weeds when applied pre-emergence.
- Do not apply **GARDOMIL GOLD** onto poorly drained soils or soils with a compaction layer, since this can cause damage to triazine sensitive crops under waterlogged conditions.
- Do not apply **GARDOMIL GOLD** to inbred parent plants of maize and sorghum hybrids or to experimental or newly released maize or sorghum cultivars without first consulting a Syngenta representative/agent or seed supplier.
- For optimal results with **GARDOMIL GOLD**, approximately 10 - 20 mm of rain or irrigation is required for activation of the product. If there is no rain for more than two (2) weeks, certain weeds will germinate and consequently, control will be poor or erratic.
- Due to the low adsorption capacity of sandy soils (0 - 15% clay), the herbicide present can drop to sublethal levels within the upper 50 mm of the soil profile after soaking rains (> 25 mm per day) with a subsequent reduction in weed control. Continuous rains (> 50 mm spread over 3 - 7 days) will also lead to reduced weed

control and possible crop damage.

- Do not apply **GARDOMIL GOLD** under stress conditions, e.g., waterlogged conditions, drought, extremely cold conditions, excessive rain, poor fertiliser application, low pH etc. Application under these conditions will result in poor weed control and possibly crop damage.
- Fields that have been burned, must first be well-cultivated before applying **GARDOMIL GOLD**. Ash on the soil surface can lead to inactivation of the applied herbicides with subsequent poor control.
- Due to the translocation of treated top soils and leaching of **GARDOMIL GOLD** on sandy soils, suboptimal weed control may result under flood irrigation.
- Under abnormal climatic conditions, such as excessive rain followed by long periods of cloudy weather shortly after planting can cause crop damage when applications are made early post-emergence (1 - 3-leaf stage of the crop).
- DUAL GOLD **should not** be added to **GARDOMIL GOLD** on poorly drained soils.

Warning: Possible damage to triazine sensitive crops

- Where soils have been treated with lime to correct the soil pH, the possibility of crop damage increases dramatically in fields where triazines were previously applied. This is due to the triazine molecules being replaced on the clay complex with calcium cations and the triazine thus becoming more available in the soil-water complex.
- Only maize should be planted in the season directly after soil pH adjustment with lime.
- No triazine sensitive crops should be planted in the season after the soil pH adjustment has been done with lime. This applies even if triazines were used at crop rotation rates in previous years.
- Triazine sensitive crops include all broadleaf crops e.g., different bean crops, sunflowers and all cereals e.g., wheat.
- These warnings however do not guarantee that no damage would be experienced to even the following maize crop as large volumes of previously applied triazines might now be available depending on the volume of lime applied and the rainfall experienced.

Warning: Possible increased efficacy, phytotoxicity and residual action

- Increasing the soil pH levels above 7 could produce conditions for increased efficacy and reduced selectivity. This increased pH may also result in increased soil residual action by certain herbicides influencing the choice of following crops especially under irrigation.
- In situations where pH adjustments has been done, take care when sulphonyl urea herbicides, triazolopyrimidine sulfonanilide herbicides and imidazolinone herbicides, which are all sensitive to soil pH fluctuations, have been used or are about to be used.

Contact your local SYNGENTA representative to discuss crop rotation and crop protection program to follow before embarking on any pH adjustment program.

6. WEEDS CONTROLLED:

The following weed species are normally controlled by **GARDOMIL GOLD** at the dosage rates recommended below:

BROADLEAF WEEDS	
Acanthospermum australe	**eight-seeded prostrate starbur**
Acanthospermum glabratum	**five-seeded prostrate starbur**
Amaranthus hybridus	**common pigweed**
Amaranthus thunbergii	**red pigweed**
Bidens bipinnata	**Spanish blackjack**
Bidens pilosa	**blackjack**
Chenopodium album	**white goosefoot**
Chenopodium carinatum	**green goosefoot**
Cleome monophylla	**spindlepod**
Cleome rubella	**pretty lady**
* *Commelina benghalensis*	**Bengal wandering Jew**
**Cosmos bipinnatus*	**cosmos**
Crotalaria sphaerocarpa	**mealie Crotalaria**
* *Datura ferox*	**large thorn apple**
* *Datura stramonium*	**thorn apple**
Galinsoga parviflora	**gallant soldier**
Gisekia pharnaceoides	**Gisekia**
* *Hibiscus cannabinus*	**kenaf**
Hibiscus trionum	**bladderweed**
Nicandra physaloides	**apple of Peru**
Physalis angulata	**wild gooseberry**
Portulaca oleracea	**purslane**
Richardia brasiliensis	**tropical Richardia**
Schkuhria pinnata	**dwarf marigold**
Tagetes minuta	**khaki weed**

***** When **GARDOMIL GOLD** is applied pre-emergence the weeds marked above with an ***** may not always be well-controlled. All the above-mentioned weeds are well-controlled when **GARDOMIL GOLD** is applied post-emergence. In addition, **cocklebur** *(Xanthium strumarium)*, **dubbeltjie** *(Tribulus terrestris)*, **common morning glory** *(Ipomoea purpurea)* and **striped wild cucumber** *(Cucumis myriocarpus)* are also controlled by post-emergence applications of **GARDOMIL GOLD**.

GRASSES	
Chloris virgata	**feathertop chloris**
Eleusine coracona	**goose grass**
Panicum schinzii	**sweet buffalo grass**
Setaria pallide-fusca	**red bristle grass**

Reliable control of the above-mentioned grasses is only obtained with pre-emergence applications of **GARDOMIL GOLD**. **Sweet buffalo grass** *(Panicum schinzii)* may not always be well controlled.

7. DIRECTIONS FOR USE: Use only as indicated.

7.1 Compatibility

The compatibility of **GARDOMIL GOLD** with other products may be influenced by the formulation of the products involved as well as the quality of the water. Since the formulation of other products may change without the knowledge of Syngenta and the quality of water may vary from farm to farm, a physical compatibility test should always be carried out prior to application.

GARDOMIL GOLD is compatible with COMPLEMENT

SUPER (L8169), DUAL® GOLD (L3612), EPTC and GRAMOXONE® (L1174) as recommended on this label.

7.2 Mixing Instructions

Shake well before use. Replace cap after use.

- Half-fill the spray tank with water and pour the required quantity of **GARDOMIL GOLD** through a 50 mesh sieve into the spray tank while stirring.
- Top-up the spray tank with water to the final volume required.
- When DUAL GOLD is added to **GARDOMIL GOLD**, the DUAL GOLD should be added last, just prior to the final volume being obtained. When EPTC is added to **GARDOMIL GOLD**, the same procedure as with DUAL GOLD should be followed. When GRAMOXONE is added to **GARDOMIL GOLD** or **GARDOMIL GOLD** plus DUAL GOLD, the **GARDOMIL GOLD** should be mixed first as indicated above and well agitated followed by which the spray tank should be filled almost to capacity. Only then should DUAL GOLD be added and well-agitated followed by the GRAMOXONE, which should be added last. When mixtures containing GRAMOXONE are applied at least 400 ℓ spray mixture/ha should be used.
- Ensure thorough agitation during filling and spraying operations.
- Tank mixtures must be sprayed out immediately and not allowed to stand in the spray tank.

7.3 Application Techniques

7.3.1 Pre-emergence

GARDOMIL GOLD should be applied at/or immediately after planting on a fine, even and firm seedbed, thoroughly cultivated immediately prior to planting to ensure a weed-free seedbed. Rainfall shortly after application is necessary to activate the herbicide. Should dry conditions prevail for a period of 7 - 14 days after application, weeds may emerge and develop. In such cases a shallow cultivation, e.g,. with a rotary cultivator, should be carried out to destroy these weeds.

7.3.2 Post-emergence

GARDOMIL GOLD may also be applied post-emergence if broadleaf weeds have not developed beyond the 4-leaf stage. A grass killer should be applied pre-emergence to control the grass weeds. Where grasses were not controlled or broadleaf weeds have developed beyond the 4-leaf stage, these weeds **must** first be destroyed by a cultivation and **GARDOMIL GOLD** then applied onto clear soil. Where **GARDOMIL GOLD** is applied post-emergence to weeds a suitable surfactant should be added to the spray mixture.

GARDOMIL GOLD may also be applied in a tank mixture with GRAMOXONE as a directed inter-row application. The maize should be at least 30 cm tall to facilitate proper directing of the spray mixture. Weeds should not be taller than 10 cm to ensure effective control. This treatment may be used instead of the above-mentioned cultivation. For further information consult the GRAMOXONE label.

7.3.3 Ground application

GARDOMIL GOLD may be applied with any medium- or high-volume sprayer equipped with an efficient agitation mechanism and which is capable of adequate coverage and even distribution. Best results are obtained by applying a minimum of 200 ℓ water/ha. Consult the mobile application Cropwise Spray Assist

7.3.4 Aerial application

(Pre- and post-emergence)

Aerial application of this product may only be done by a registered aerial application operator using a correctly calibrated, registered aircraft according to the instructions of SANS 10118 (Aerial Application of Agricultural Remedies). It is important to ensure that the spray mixture is distributed evenly over the target area and that the loss of spray material during application is restricted to a minimum. It is therefore essential that the following criteria be met:

a) Application parameters:

- **Volume:** A volume of 30 ℓ pre-emergence and 35 ℓ post-emergence per hectare is recommended. As this product has not been evaluated at a reduced volume rate, the registration holder cannot guarantee efficacy or be held responsible for any adverse effects if the product is applied aerially at a lower volume rate than recommended above.
- **Droplet coverage:** Droplet coverage of 20 - 30 (pre-emergence) and 30 - 45 (post-emergence) droplets per cm^2 must be recovered at the target.
- **Droplet size:** A droplet spectrum with a VMD of 350 - 400 microns (pre-emergence) and 300 - 350 (post-emergence) microns is recommended. Ensure that the production of fine droplets (less than 150 microns - high drift and evaporation potential) is restricted to a minimum.
- **Flying height:** The height of the spray boom should be maintained at 3 - 4 metres above the target. Do not spray when aircraft is in a climb, at the top or during a dive, or when banking.

b) Equipment:

- Use suitable atomising equipment (hydraulic nozzles or rotary atomisers) that will produce the desired droplet size and coverage but which will ensure the minimum loss of product either through endodrift (within target field) or exodrift (outside target field).
- The operator must use a set-up that will produce a droplet spectrum with the lowest possible relative span.
- All nozzles/atomisers should be positioned within the inner 60 - 75% of the wingspan to prevent droplets from entering the wingtip vortices.

c) Meteorological conditions:

- The difference in temperature between the wet and dry bulb thermometers, of a whirling hygrometer, should not exceed 8°C. The addition of a suitable anti-evaporant is recommended if the VMD of the droplets is less than 200 - 250 microns.
- Stop spraying if the wind speed exceeds 15 km/h.
- Aerial application of this product must not be done under turbulent, unstable conditions during the heat of the day when rising thermals and downdraughts occur. Also note that the application of this product under temperature/

inversion conditions (spraying in or above the inversion layer) may lead to the following:

- Reduced efficacy due to suspension and evaporation of small droplets in the air (inadequate coverage).
- Damage to other sensitive crops and or non-target areas through the movement of the suspended spray cloud away from the target field.

It is essential to obtain assurance from the aerial spray operator that the above requirements are met.

7.4 Application Rates

Important: All dosage rates recommended below are for overall application. In the case of band application calculate the appropriate quantities to be used according to the band and row widths.

7.4.1 GARDOMIL GOLD

TABLE 1: GARDOMIL GOLD applied pre-emergence:

		Pre-emergence
Soil type	**% Clay**	**GARDOMIL GOLD (ℓ/ha)**
Sand	0 - 10	2.2
Loamy sand/ sandy loam	11 - 20	2.5
Sandy clay loam	21 - 30	3.2
Heavier soils including turf	> 30	**NOT RECOMMENDED**

7.4.2 GARDOMIL GOLD plus DUAL GOLD

(Pre-plant incorporated and/or pre-emergence application)

To control other annual grasses such as **herringbone grass** *(Urochloa panicoides)* and **crab finger-grass** *(Digitaria sanguinalis)* and/or **yellow nutsedge** *(Cyperus esculentus)* DUAL GOLD should be added to **GARDOMIL GOLD** as recommended in table 2.

TABLE 2: GARDOMIL GOLD plus DUAL GOLD applied pre-emergence as tank mixtures or a pre-plant incorporated application of DUAL GOLD followed by pre-emergence application of GARDOMIL GOLD:

		Tank mixed pre-emergence or	
		Pre-emergence	**Pre-plant incorporated**
Soil type	**% Clay**	**GARDOMIL GOLD (ℓ/ha)**	**DUAL GOLD (ℓ/ha)**
Sand	0 - 10	2.2	0.4 - 0.65
Loamy sand/ sandy loam	11 - 20	2.5	0.4 - 0.6
Sandy clay loam	21 - 30	3.2	0.5 - 0.7
Sandy clay loam/sandy clay	31 - 40	4	0.6 - 0.7
Sandy clay/ turf	41 - 50	4.8	0.6 - 0.8

7.4.3 DUAL GOLD FOLLOWED BY GARDOMIL GOLD

On heavy soils (> 30% clay) including turf and/or where deep germinating broadleaf weeds such as **thorn apple** *(Datura* spp.*)*, **kenaf** *(Hibiscus cannabinus)*, **dubbeltjie** *(Tribulus terrestris)*, **cocklebur** *(Xanthium strumarium)*, **common morning glory** *(Ipomoea purpurea)* and **striped wild cucumber** *(Cucumis myriocarpus)* constitute an important part of the broadleaf weeds or where more reliable broadleaf weed control is required, a split application of DUAL GOLD applied pre-emergence followed by a post-emergence application of **GARDOMIL GOLD** is recommended (table 3).

TABLE 3: DUAL GOLD applied pre-emergence or pre-plant incorporated followed by GARDOMIL GOLD early post-emergence (split application):

		Pre-plant incorporated or pre-emergence	Early post-emergence
Soil type	**% Clay**	**DUAL GOLD (ℓ/ha)**	**GARDOMIL GOLD (ℓ/ha)**
Sand	0 - 10	0.55 - 0.65	2.3
Loamy sand/ sandy loam	11 - 20	0.5 - 0.6	2.8
Sandy clay loam	21 - 30	0.6 - 0.8	3.2
Sandy clay loam/sandy clay	31 - 40	0.7 - 0.9	3.2 - 4.8
Sandy clay/ turf	41 - 50	0.8 - 1	3.2 - 4.8

REMARKS TABLES 2 AND 3:

- Use the higher application rates of DUAL GOLD for improved control of **yellow nutsedge** *(Cyperus esculentus)*.
- Use the higher application rates of DUAL GOLD where heavy infestations of **crab finger grass** *(Digitaria sanguinalis)* exist.
- Use the higher application rates when DUAL GOLD is pre-plant incorporated.
- Use the higher application rates of DUAL GOLD where organic matter in the soil exceeds 1%.
- On soils containing more than 30% clay, broadleaf weeds may not be controlled satisfactorily pre-emergence (table 2) and preference should be given to post-emergence control of broadleaf weeds (table 3).
- On soils containing more than 30% clay where the DUAL GOLD plus **GARDOMIL GOLD** split treatment is selected, the rate of **GARDOMIL GOLD** can be varied according to the degree of pre-emergence control achieved and the prevailing weather conditions.
- A suitable adjuvant must be added to the spray mixture when **GARDOMIL GOLD** is applied post-emergence.
- The higher dosage rate of **GARDOMIL GOLD** may be used if grass weeds have started to emerge at the time of the post-emergence application.
- When DUAL GOLD is added to **GARDOMIL GOLD** the conditions and precautions as given on the DUAL GOLD label also apply. Therefore consult the DUAL GOLD label.

7.4.4 GARDOMIL GOLD (Split applications)

In order to improve the variable initial broadleaf control of DUAL GOLD it may be used pre-emergence in a tank mixture with a small volume of **GARDOMIL GOLD** followed early post-emergence with **GARDOMIL GOLD**.

TABLE 4: GARDOMIL GOLD applied pre-emergence in a tank mixture with DUAL GOLD for more reliable initial broadleaf control:

		Pre-emergence tank mixture		Early post-emergence
Soil type	**% Clay**	**DUAL GOLD (ℓ/ha)**	**GARDO-MIL GOLD (ℓ/ha)**	**GARDO-MIL GOLD (ℓ/ha)**
Sand/loamy sand/sandy loam	0 - 20	0.6 *plus*	0.8	2
Sandy clay loam	21 - 30	0.8 *plus*	1	2.2
Sandy clay loam/sandy clay	> 30	0.9 *plus*	1.2	2.8

Crop rotation

The above-mentioned quantities of **GARDOMIL GOLD** recommended in tables 2, 3, 4 and 5 may damage triazine sensitive follow-up crops such as groundnuts, dry beans, soybeans, sunflowers, wheat, vegetables, cotton and tobacco. Where these crops are to be planted as follow-up crops the application rate of **GARDOMIL GOLD** should not exceed 2.2 ℓ/ha. On soils with 0 - 10% clay in the North West Province and North Western Free State and high lime content soils, the lower rates of **GARDOMIL GOLD** may still damage follow-up crops. These low rates may result in poorer weed control and shorter residual. Post-emergence control of broadleaf weeds is recommended when crop rotation with sensitive crops is practised.

TABLE 5: DUAL GOLD applied pre-emergence or pre-plant incorporated followed by GARDOMIL GOLD early post-emergence in a crop rotation situation:

		Pre-plant incorporated or pre-emergence	Early post-emergence
Soil type	**% Clay**	**DUAL GOLD (ℓ/ha)**	**GARDOMIL GOLD (ℓ/ha)**
Sand/loamy sand/sandy loam	0 - 20	0.55 - 0.65	2.2
Sandy clay loam	21 -30	0.6 - 0.8	2.2
Sandy clay loam/sandy clay	31 - 40	0.8 - 1	2.2
Sandy clay/turf	41 -50	1 - 1.1	2.2

7.4.5 GARDOMIL GOLD PLUS EPTC

GARDOMIL GOLD may also be used with EPTC. EPTC should be used as recommended on the label. **GARDOMIL GOLD** should preferably be applied as a pre-emergence or early post-emergence treatment after an EPTC treatment and planting have taken place. Alternatively, **GARDOMIL GOLD** may also be applied in a tank mixture with EPTC.

GARDOMIL GOLD in a pre-emergence program or in a tank mixture with EPTC should be applied from two-thirds up to the full application rates as recommended above in combination with DUAL GOLD (table 2). The higher rates of **GARDOMIL GOLD** will provide longer residual control. In early post-emergence applications the full rate of **GARDOMIL GOLD** must be used (table 3).

7.4.6 GARDOMIL GOLD APPLIED EARLY POST-EMERGENCE IN A TANK MIXTURE WITH DUAL GOLD AFTER INITIAL APPLICATION OF EPTC.

Improved residual control of grass weeds and **yellow nutsedge** *(C. esculentus)* may be obtained if EPTC is followed by an early post-emergence application of a **GARDOMIL GOLD** plus DUAL GOLD tank mixture. EPTC should be used as recommended on the EPTC label.

TABLE 6: GARDOMIL GOLD in a tank mixture with DUAL GOLD applied post-emergence after EPTC:

		Early post-emergence (after EPTC incorporation)	
Soil type	**% Clay**	**GARDOMIL GOLD (ℓ/ha)**	**DUAL GOLD (ℓ/ha)**
Loamy sand/ sandy loam	11 - 20	2.5	0.55
Sandy clay loam	21 - 30	3.2	0.6

IMPORTANT TABLES 1 - 6:

- A suitable adjuvant e.g., COMPLEMENT SUPER should be added to **GARDOMIL GOLD** plus DUAL GOLD when sprayed post-emergence.
- Grass killers belonging to the α-chloroacetamide group of herbicides (which includes DUAL GOLD) are absorbed via coleoptiles of grass weeds. Therefore, for good grass control the herbicides needs to be present at lethal concentrations in the top ± 50 mm of the soil profile.
- The adsorptive capacity of a soil for these herbicides, as well as the amount of water that moves through the soil profile with rain/irrigation, determines the resultant concentration of these herbicides in the top layers of the soil profile. As a result of the low adsorption capacity of sandy soils (0 - 15% clay, < 1% organic matter) the amount of these herbicides can be reduced to sublethal concentrations in the top ± 50 mm after the occurrence of permeating rain (25 mm and more within one (1) day).
- Persistent rain (50 mm and more distributed over 3 - 7 days) will have the same effect. It can therefore happen that grasses germinate if such conditions prevail.
- A split application (as recommended in table 3) is recommended if DUAL GOLD is used on such soils.
- Permeating and/or persistent rain after the spilt application will have the same effect.

7.4.7 GARDOMIL GOLD APPLIED POST-EMERGENCE IN COMBINATION WITH SERVIAN

For the control of nutsedge and broadleaf weeds in maize

use 50 g SERVIAN/ha plus 1,5 ℓ - 2,9 ℓ **GARDOMIL GOLD**/ha. Refer to the SERVIAN label for detail information.

7.4.8 GARDOMIL GOLD APPLIED POST-EMERGENCE IN COMBINATION WITH CALLISTO PLUS METAGAN GOLD

GARDOMIL GOLD can be used for the post-emergence control of grasses and broadleaf weeds in tank mixtures with CALLISTO + METAGAN GOLD. The rate of **GARDOMIL GOLD** can be up to 1ℓ/ha. Refer to the CALLISTO and METAGAN GOLD labels for detail information.

STALE SEEDBED/MINIMUM TILLAGE/STUBBLE MULCH

Where minimum tillage or stubble mulch is practised, weeds may have emerged at the time of planting. If crops are planted under such conditions or into a stale seedbed, where grass weeds have already emerged and/or the broadleaf weeds have developed beyond the 4-leaf stage, it is recommended that GRAMOXONE be added to **GARDOMIL GOLD** according to the recommendations of the manufacturer. The GRAMOXONE will destroy the emerged weeds and create a pre-emergence situation for the **GARDOMIL GOLD** or **GARDOMIL GOLD** plus DUAL GOLD to act effectively.

Important

- When GRAMOXONE is added, spraying should be carried out prior to the emergence of the crop, as GRAMOXONE will damage the crop if it is applied post-emergence.
- In the case of minimum tillage or stubble mulch, the density of the stubble and humus may affect the efficacy of **GARDOMIL GOLD** or **GARDOMIL GOLD** plus DUAL GOLD. Therefore consult a representative of Syngenta or distributor.

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