

**Mode of Action:** Metolachlor is mainly taken up through the shoots of germinating plants and seedlings. Weeds are therefore killed before emergence, at emergence or shortly after emergence. Root uptake is less pronounced and much lower than shoot uptake. Atrazine can be taken up by roots and leaves of the plants.

# Spectrum of Activity

Primagram® Gold 660 SC is active against most annual grasses and annual broadleaved weeds.

Highly susceptible weeds

Portulaca oleraceae Acanthospermum australe Alopecurus myosuroides Raphanus raphanistrum Amaranthus spp. Senecio vulgaris Anagallis arvensis Setaria faberii Brachiaria deflexa Setaria glauca Setaria pallidefusca Brachiaria eruciformis Setaria verticillata Capsella bursa-pastoris Cerastium arvense Setaria viridis Sherardia arvensis Chenopodium spp. Chloris virgata Sinapis spp. Cleome monophylla Solanum nigrum Crotolaria spp. Stachys spp. Datura ferax Stellaria media Datura stramonium Thlaspi arvense Digitaria filiformis Urochloa panicoides Veronica spp. Digitaria horizontalis Digitaria ischaemum Vicia spp. Echinochloa crus-galli Viola tricolor Eleusine indica Fumaria officinalis Galeopsis tetrahit Galinsoga parviflora Hibiscus trionum Lamium spp.

Moderately susceptible weeds

Abutilon theophrasti
Acanthospermum hispidum
Ambrosia artemisiifolia
Antirrhinum spp.
Atriplex spp.
Cenchrus echinatus
Cenchrus pauciflorus
Commelina benghalensis
Cyperus esculentus
Euphorbia spp.
Tagetes minuta
\* Seedlings

Galium aparine
Geranium sanguineum
Linaria spp.
Malva neglecta
Plantago spp.
Ranunculus spp.
Sida spp.
Sonchus spp.
Sorghum bicolor
Sorghum halepense\*

#### Limitations Resistance

Primagram® Gold contains atrazine which is belongs to the class of triazines. The repeated use of atrazine or of herbicides with the same mode of action is known to lead under certain conditions to a selection of resistant weeds. Certain agronomic practices may reduce the likelihood that resistant weed population will develop and integrated strategies are known to manage such problem weeds. For specific recommendations please consult your local Syngenta representative, distributor or dealer. Please note: Avoid using Primagram® Gold where adjacent desirable plants may be injured.

## Application Information Spray Equipment

For the application of Primagram® Gold, tractor boom sprayers, knapsack sprayers, centre pivot irrigation systems and aircraft are recommended. Stop spraying if the wind speed is higher than 5 m/s. All application equipment has to be properly calibrated before use, with regard to forward speed, flow rate and evenness of distribution. With tractor boom sprayers volume rates of 200 – 400 lts/ha are best. Use  $110^0$  flat fan low drift nozzle types at 1.5-3 bar pressure and 40-50 cm boom height. With knapsack sprayers flood jet nozzles at volume rates of at least 80 lts/ha are recommended. The spray lance must be kept steady. Do not swing the lance. Use only aircraft equipped with boom and flat fan nozzles. The nozzles should have a spray angle of  $65-90^0$  and directed in relation to flight direction  $180-135^0$  backwards. Spray volumes of 20-50 lts/ha are best. Rotary atomizers are not recommended. Stop spraying if temperature is higher than  $30^0$  C or the relative humidity is lower than 60%.

## Mixing

Make certain the sprayer is clean and not contaminated. Calculate carefully the required amount of spray mixture in order to prevent any left over in the spray tank after treatment. For band treatments, adjust volumes proportionally to the ratio of treated / cropped area. Rinse empty containers three times and add the rinsate to the spray mixture. Fill 113 -114 of the spray tank with clean water, start agitation, add the calculated and measured quantity of product and continue to fill the spray tank with agitation. Continue agitation during mixing and application to maintain an uniform spray mixture. When filling the spray tank the filling hose should always be above water level in order to prevent suckback. Flush the sprayer with clean water after application or at the end of the day and spray the rinsing on the field. Clean also the filters.

## Compatibility

Primagram ® Gold can be mixed in the tank with other dry or liquid herbicides commonly used in the respective crops. Primagram ® Gold 660 SC can also be mixed with fertilizers. It is always advised to locally check compatibility.

# Polygonum aviculare Directions for Use

application

Lotus corniculatus

Medicago lupulina Panicum dichotomiflorum

## To avoid risks to man and the environment, comply with the instructions for use.

Matricaria spp. Nicandra physalodes

Panicum laevifolium Polygonum persicaria

<u>Crop</u>	<u>Timing</u>	Rate(lt/ha)	<u>Remarks</u>
Maize	Pre-emergence,	2.7 - 3.0	PPI application may be preferred under dry surface conditions in regions where long periods without
	or pre-plant		rain prevail after application. Incorporation of Primagram® Gold has to be shallow (5 cm).
	incorporation		Early post emergence application (up to 2 leaf stage of the grasses) is recommended on turf soils.
Sugar cane	Pre-emergence	2.7 – 3.0	Apply after sugar cane sets have been planted, but before weeds emerge.

#### Timina

- 1. Pre-plant surface application. Only for minimum tillage or no tillage systems. Primagram ® Gold can be applied upto 45 days before planting.
  2. Pre-plant incorporated (ppi). Apply Primagram ® Gold to the soil and incorporate into the top 5 cm. of soil within 14 days before planting using a finishing disk, harrow, rolling cultivator or similar implement. Use preplant incorporated application when a period of dry weather after application is expected.
- 3. Pre-emergence. Apply Primagram ® Gold during or after planting but before weeds and crop emerge.
- 4. Early post-emergence. When grasses are beyond 2- leaf stage as a less reliable emergency treatment.

#### Safety Aspects

#### Precautionary measures

KEEP LOCKED UP OUT OF REACH OF CHILDREN and other unauthorized persons and animals.

#### Operator safety

AVOID any contact of eyes, skin or clothing with concentrate or spray mist. DO NOT eat, drink or smoke while handling the product, wash hands and face before doing so. If any indisposition occurs, stop work, follow first aid measures, and call a physician. Spray strictly with the wind to prevent prolonged or repeated exposure to the spray mist. WEAR protective clothing, i.e. for preparation: impermeable gloves, overalls, and eyelface protection, for application: overalls, hat or cap, and solid footwear. AFTER USE, thoroughly clean protective equipment and wash entire body and change clothing. Wash contaminated clothing before re-use.

#### First Aid

If poisoning is suspected, stop work immediately and call a physician. Show the label to the physician. In case of contact with the skin, remove contaminated clothing, and wash affected body parts immediately with plenty of water and soap. Rinse splashes from eyes with abundant fresh and clean water for several minutes. If inhaled, move to clean air. If swallowed, repeatedly administer medicinal charcoal in plenty of water. Seek medical advice immediately if a large volume of concentrate was ingested. Note: Never give anything by mouth to an unconscious patient and never induce vomiting.

#### Environment and wildlife

Toxic to fish, very toxic to algae. DO NOT contaminate water used for irrigation or domestic purposes and water areas, such as ponds, ditches, lakes, drainage systems, etc. by disposal of product waste. Newly treated areas must not be grazed and livestock is to be kept out.

## Spillage and leakages

Remove heavily contaminated soil layer and bury in a safe place away from water supplies. Collect up spilt material thoroughly and bury it in a safe place or put it in a waste bin or in a plastic bag and dispose of on a landfill-site approved for pesticides.

## Product and container disposal

Local regulations governing the disposal of agricultural chemicals must be followed. Dispose of surplus product on a landfill-site approved for pesticides or bury in a safe place away from water sources. Dilute surplus application mixture, pour it broadcast on fallow land. Empty the containers well, rinse several times and spray the rinsate on fallow land. Dispose of the empty plastic containers by burning in a safe place away from crops and animals. DO NOT RE-USE EMPTY CONTAINERS FOR ANY OTHER PURPOSE.

## Storage

Store away from sun and damp, in a well ventilated area away from food and feed, in a locked place. Do not contaminate water, food or feed. Avoid storage above +35<sup>0</sup> C. DO NOT stack containers more than 2 m high, in order to avoid compaction or damage.

## Shelf life

At least two years from the date of manufacturing, in original unopened containers.

## User's risk

The user bears risk for damage resulting from factors beyond the manufacturer's control.

Resistant strains of weeds may develop or may exist against which herbicides may be less effective. Since the occurrence of such strains can not be forecast, neither the manufacturer nor its distributor can assume responsibility for any loss or damage caused by failure to control resistant weeds.

All recommendations for use of the herbicide are based on the current state of the manufacturer's knowledge. Since the manufacturer can not control the farmer's choice of herbicides, its application, use, storage, or other agronomic practices, the manufacturer can not assume responsibility therefor.

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Before using the product, please read the attached label and accompanying packaging leaflet.

Use pesticides safely

**Emergency Call:** Syngenta Alarm Centre, Huddersfield, UK; Phone: + 44 1484 538 444, Fax: + 44 1484 433 197