



AZA Wildlife Contraception Center

MGA MILLED IN FEED

Manufacturer - Purina Mills LLC/Mazuri, St. Louis, USA.

Product Information - Mazuri ADF-16 Herbivore pellet with MGA (a synthetic progestin) provides an alternative contraceptive method particularly for ungulates housed and fed in mixed species/mixed sex herds. The product is considered suitable for bovids, giraffes, cervids, camelids and hippos, but ***is not effective in suids or equids.***

The product is available only as part of an experimental trial coordinated by the AZA Wildlife Contraception Center in collaboration with Purina Mills LLC/Mazuri brand. The goal of the study is to obtain approval for use of MGA-treated feed as a contraceptive method for exotic hoofstock species. However, at this time the feed must be considered experimental and ***all participants must adhere to strict protocols for data collection and reporting as dictated by the Food and Drug Administration (FDA).*** The AZA Wildlife Contraception Center is responsible for maintaining data collected by study participants and, in conjunction with Purina Mills LLC, submits regular reports to the FDA. The FDA requires all medicated diets be manufactured under an INAD (Investigational New Animal Drugs, 21 CFR 511.1(a)). Purina Mills LLC was granted permission to manufacture MGA-treated herbivore pellet for use in this project under their existing INAD on file with the FDA. Therefore, all participating institutions must obtain the experimental MGA feed through the AZA Wildlife Contraception Center and Purina Mills LLC until such time as it is approved by the FDA for general manufacture and feeding. ***NOTE: Under the current INAD the product is only available for bovids, giraffes, cervids, camelids, and hippos, and its use in other species or without registering with the AZA Contraception Center is prohibited.***

Safety to humans - When used as directed, this product poses no health risk to humans. Domestic cattle are 240 times more sensitive to MGA than are humans, i.e., a human would have to ingest a dose 240 times higher than that ingested by cattle to have the same effect. The doses being recommended for exotic ungulates are within the range used for cattle. Purina Mills, Inc. believes it is not hazardous material according to the OSHA Hazard Communications Standard, 29 CFR 1910.1200 or the EPA Community Right-to-Know regulations. Questions about the Purina Mills MSDS program should be directed to Mr. Paul Luther at 314-768-4630.

Safety to treated animals - MGA has been fed for decades to domestic cattle without untoward effects, which suggests that it should be generally safe for ruminants. However, exotic species have not been treated for more than 10 years, so possible longer term effects have not been recognized. Also, species differences may apply.

Recommended doses - Mazuri ADF-16 0.5MA, containing 0.5 mg MGA/lb, can be used either alone or in combination with standard Mazuri ADF-16 to achieve the recommended daily MGA dose/animal for your individual feeding program. The following daily MGA doses are recommended:

- 0.5 mg MGA/day/animal: for species with body size smaller than an adult, female banteng. (about 800 lb).
- 1.0 mg MGA/day/animal: for species with body size similar to or larger than an adult, female banteng but smaller than a giraffe.
- 3.0 mg MGA/day/animal: giraffes and hippos

The maximum safe dose is considered to be more than 3 times those recommended here. **NOTE: If the full dose is not consumed every day, the female should be separated from males, since follicle growth and ovulation may occur.**

Nutritional considerations - The amount of pellet used depends on the species, the body size and on your particular feeding program. The MGA herbivore pellet is intended to replace the regular herbivore pellet in the current diet. The pellet should still be fed in conjunction with hay in an amount that meets the recommended minimum daily MGA dose, while still meeting the nutritional needs of the animals.

In general, ruminant herbivores have a daily diet intake of 1.5 – 4.0% body mass (BM), with larger species consuming food at a smaller percentage of BM than medium or small species. The amount of herbivore pellet to feed is based largely on the quality of hay fed, and the pellet is intended to correct the nutrient imbalances or deficits that might occur on a diet of only hay. Regular analysis of the nutrient content of your hay is highly recommended. It may be necessary to make adjustments in your current feeding regimens in order to deliver the appropriate dose of MGA via the new herbivore products. Current recommendations from zoo nutritionists suggest that medium to large size ruminant herbivores should receive 30-40% of the diet (by weight, as fed basis) as a nutritionally complete herbivore pellet and 60-70% of the diet (by weight, as fed basis) as hay. The type of hay(s) used (e.g., legume or grass hay, species of hay) in the diet is dependent on the nutrient content of the hay, the species being fed and hay types available in your area.

If you would like assistance in determining an appropriate feeding plan, please contact Jan Dempsey, Nutritionist, at Janet.Dempsey@purina.nestle.com.

Latency to effectiveness - As with MGA implants, separation or alternative contraception should be used for 1-2 weeks after initiation of the feed.

Estrous cycles during contraceptive treatment - Synthetic progestins may affect contraception by blocking ovulation, causing thickening of cervical mucus, slowing ovum transport, and/or interfering with fertilization or implantation. However, follicle growth may continue and sometimes be accompanied by estrogen production sufficient to cause estrous behavior. Ovulation may occur even though pregnancy does not ensue. Higher progestin doses may be preferred so that estrous behavior is prevented, but may not be effective in completely suppressing follicle growth and all estradiol production.

Duration of efficacy and reversibility - Duration of efficacy may not be much more than one day, so the product **must be administered daily**. Following cessation of treatment, rapid clearance can result in ovulation within a few days, but actual latency to conception will vary by individual.

Use during pregnancy - Progestins are not recommended in pregnant animals because of the possibility of prolonged gestation, stillbirth, abortion, etc. in some species, although the effect may depend on dose. Progestins in late pregnancy seem not to interfere with parturition in primates, but this is a taxon-specific phenomenon.

Use during lactation - Progestins are sometimes prescribed for lactating women and are considered generally safe for nursing infants.

Use in pre-pubertals or juveniles Future reproduction was not affected in calves of domestic cows on MGA-treated feed, but no studies of pre-pubertal treatment with MGA or other progestins have been conducted with other species, so possible long-term effects on fertility are not known.

Precautions – Progestins likely cause weight gain in all species. Possible deleterious effects on uterine and mammary tissues vary greatly by species; see cautions for each taxon.

Consideration for seasonal breeders - Treatment should begin at least one month before the anticipated onset of the breeding season.

Reporting requirements - All institutions using MGA feed must submit a bi-annual [MGA Feed Survey](#) to the AZA Wildlife Contraception Center. Any adverse effects must be reported in writing to the AZA Wildlife Contraception Center. ***The product will no longer be sold to any institution that fails to submit the bi-annual survey.***

Request for purchase - Before placing your first order with your Purina product dealer, or to add species to an existing order, ***you must register with the AZA Wildlife Contraception Center.*** The Center will then notify Purina Mills, Inc. that you are an approved buyer, so you will be able to make the purchase through your regular Purina product dealer. Please submit the [MGA Feed Registration Form](#) to:

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