Info VISION®

SILVICULTURE HERBICIDE by Monsanto
SYLVICIDE FORESTIER de Monsanto

Technical Bulletin for Forest Vegetation Managers

Bulletin Number: 2000-013

Vision Herbicide and Large Mammals: Important facts to remember.

Glyphosate, the active ingredient of Vision® herbicide is used to control grass, brush and other unwanted vegetation in forest cutovers, on edges of roadsides and other forest areas where foresters wish to protect their regeneration investment. Of natural concern is the possible effect of glyphosate on large mammals - directly on the animals themselves, on the species of plants that these animals use for food, and on the overall effect that changes in the habitat will have on wildlife.

Studies involving laboratory animals have shown that glyphosate is poorly absorbed when ingested. This conclusion is supported by numerous feeding studies on laboratory animals where the majority of glyphosate ingested was eliminated from subject animals through urine and faeces. Since glyphosate is highly soluble in water, the likelihood of bioaccumulation is low and studies have shown that any absorbed glyphosate is rapidly eliminated resulting in minimal retention. Feeding studies with chickens, cows and pigs have shown extremely low to no residues in meat and fat following repetitive exposure.

In cooperation with Quebec hunters during hunting season, studies were conducted on donated samples of meat, organs, stomach and faeces from deer, moose and other game species which had recently browsed in freshly-treated sites. No detectable amounts of glyphosate were found in the meat or livers of the animals. Trace amounts were found in the stomach and feces which indicated that glyphosate was acting in wild animals as was to be expected. There was no accumulation of glyphosate in the animals' muscle tissue and ingested glyphosate was being excreted through their faeces and urine.

The action of any herbicide is to alter the plant diversity of a treated site. In a forestry context, this generally means favouring conifer species over hardwoods and other non-crop vegetation that compete for sunlight, moisture and available nutrients. The immediate concern is the elimination of plants that act as prime browse species for moose and deer. However, several factors need to be considered. First, the objective of a herbicide is repression of the target species, not elimination. Vision® has been known to provide poor control of several major browse species. In particular, browse species such as Red-Osier Dogwood and most species of Willow are less affected by glyphosate and result in valuable browse being left after a Vision® application. Second, Vision® does not affect non-germinated seed. Following the application of Vision®, the objective is to control potential competing species for two to three years. However, the effect is not permanent as suppressed, invading and re-emerging plant species soon return the site to a rich diversity. A study from Ontario showed that the percentage of digestible protein in four important browse species was not significantly reduced four and eight years following treatment with Vision®.

Finally, many recent studies have begun to examine the need for a larger focus on the entire forest landscape. While a change in habitat is evident on treated sites, the site itself represents only a small portion of the entire landscape available to animals. A focus on the entire landscape shows the diversity of habitat that is truly available to all animals in managed forests.

Info VISION®

Technical Bulletin for Forest Vegetation Managers

Bulletin Number: 2000-012

Vision Herbicide and Wild Berries: Important facts to remember.

Glyphosate, the active ingredient of Vision® herbicide is used to control grass, brush and other unwanted vegetation in forest cutovers, on edges of roadsides and other forest areas where foresters wish to protect their regeneration investment. Two common species that may occur in and around Vision treated areas are blueberries and red raspberries. What is the risk to an individual who enters the sprayed area and eats some berries? Based on the extensive glyphosate data available, the risk to an individual is extremely small. A person would have to eat at least 450 pounds of contaminated wild berries in one day just to reach an exposure level equivalent to the no observable adverse effect level (NOEL) for animals.

Work by independent experts for government agencies involved in forestry herbicide use shows that a berrypicker's exposure to glyphosate (assuming the berries had been sprayed recently) is expected to range from 0.0011 to 0.0062 mg/kg/day. This is 1,623 to 9,300 times lower than the lowest NOEL determined in animal studies.

For most individuals, the risks may be even smaller. Warnings are posted in sprayed areas, and this undoubtedly discourages berry consumption.. Even if the warning is ignored, it is likely that the person would rinse or wash the berries before eating them. This would remove more than 80% of the glyphosate on the berries. Studies have also shown that blueberry skin is relatively impervious to the absorption of glyphosate. Under these conditions, the risk of adverse health effects is extremely small.

Why are warning signs posted? Forest companies are required by legislation to post spray warning signs indicating that the specific area will receive a herbicide treatment. As well, forest companies provide notices of areas planned for spraying in local newspapers. Signs are erected at road entrances and along other access points to identify spray areas. Spray signs are erected prior to treatment and remain posted for a period of time after spraying to discourage berry pickers from harvesting wild berries until the following year. The signs also provide forest users with other information such as date posted, date sprayed, Pest Control Products (PCP) product trade name and registration number as well as a forest management company contact and phone number.

A review of the glyphosate toxicological data base by Health Canada found no evidence that glyphosate caused mutations, birth defects or cancer. Additionally, the U.S. Environmental Agency classified glyphosate - the active ingredient in Vision herbicide - as Category E. This category indicates actual evidence of non-carcinogenicity for humans based upon a thorough review of the product's extensive toxicology database. This conclusion is endorsed by the World Health Organization.

ALWAYS READ AND FOLLOW LABEL DIRECTIONS
Vision® is a registered trademark of Monsanto Company