

Environmental assessment

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Environmental Assessment Case Study; Surflan Introduction Herbicides are chemicals used by farmers to control weeds and different types are applied for this purpose. They are categorized according to their modes of action that include pre and post emergent and organic herbicides, and are chosen according their impacts on the environment. If not properly chosen, they pose dangers to plants, soil and human beings (Sondhia & Varshney, 2010). This study will look at an herbicide – Surflan, used by many farmers to control weeds, its selection, mode of action, formulation, human health related complications and environmental impacts.

Selection

Surflan or oryzalin as it's commonly referred, is a pre-emergent herbicide used to control turf grass, it's selected for use during dry seasons and applied at the onset of rain to kill turf grass. It lasts for 2 to 8 months upon application and provides efficient control for annual grass and weeds with broad leaves.

Mode of action

This refers to the way in which the herbicide suppresses the growth or kills a weed. Surflan acts by inhibiting plant growth when the recommended amount of 1.5 ounces is applied per 1000feet. The plant absorbs the solution, and then translocates it to the active sites in the plant cells where it stops various biomedical reactions thereby killing the plant.

Formulation: It is found in the form of aqueous suspension and a wet table powder.

Human health related complications

It has been noted that long exposure to Surflan herbicides may increase

one's chances of contracting certain types of cancer. Among the people at higher risk are farmers and gardeners, technical salespersons and manufacturer's agents. The herbicide has been known for cancers of large intestines, prostate, nose, pancreas, breast, lungs and ovary. It has also been linked to leukemia, skin rashes and Parkinson's disease.

Environmental impacts

Despite its effectiveness in controlling turf grass and other stubborn weeds, Surflan herbicides are among those that pose great danger to the environment. This is so because it is less volatile and has fewer tendencies to leaching. Volatile here means the easiness with which the solution can change from its liquid to gas state through the process of evaporation.

Leaching on the other hand refers to loss of soluble nutrients from a carrier as a result of rain. This indicates that Surflan, when applied, stays on the top of the soil for long and can be swept by water to rivers where it causes undue hazard to fish and other animals that consume and live in that water (Johnson & Hall, 2002).

In places where the farm fields are across the street and playing grounds, Surflan has effects on a number of individuals including the street and play ground users. This occurs mainly when it is applied and rains do not fall for a long time. The herbicide is very acute during the first three months and may lose its acuteness in a period of about four months.

Even if the herbicide under discussion poses threats to the environment, it has benefits to farmers since it is one herbicide that takes lead in the control of turf grass and weeds with broad leaves.

References

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