

Biorational Pesticides in Brief

Biorational pesticides are a relatively new class of pesticides which cover the full spectrum of pesticide applications, that is Herbicides, Fungicides, Insecticides, etc.. Since I am only familiar with some of the insecticides in the class, this will be all that this discussion will cover for now. In order to begin this discussion we must first define the term biorational.

Biorational is a very loosely used term without a standardized definition meaning different things to different people in different applications, however there are some generally agreed upon terms. When talking to someone about this class of chemicals, unfortunately you must always make sure that the discussion is about the same criteria of this class. Biorational is a reduced risk, or minimum risk pesticide which has certain favorable characteristics which we will get into later.

To start with we must first define Organic chemicals which in the strictest sense come directly from nature without any chemical processing. The definition that we will use for Organic will be the industrial standard, which is defined as being made of only EPA listed materials. These can be one or more of either; [EPA List 4A](#) INERT INGREDIENTS and/or [EPA 25B List](#) EXEMPTED PRODUCTS and/or a more complex group called Biopesticides not so easily defined but registered singly with the EPA. Biopesticides are broken down into three groups. 1. Microbial pesticides, contain bacterial, fungi, viruses, etc., as their active ingredient. 2. Plant pesticides, contain substances produced from added genetic material such as Bt or *Bacillus thuringiensis* toxins. 3. Biochemical pesticides contain naturally occurring substances which are nontoxic such as growth regulators or pheromones.