FQPA: What Is This and How Does It Effect Me?

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By now, you should have at least heard the term FQPA (Food Quality Protection Act) and all the terminology associated with it; if not, you need to become familiar promptly. The FQPA is a law that amended the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) and the Federal Food, Drug and Cosmetic Act (FFDCA) in 1996. This new law calls for substantial revisions to the pesticide law, and it will effect the regulation currently registered pesticides and the registration and regulation of new pesticides.

Before 1996, the process in which pesticide manufacturers had a product registered for a specific pest (e.g., white grubs in turf) was amenable. This process involved the collection of data that provided both the risks and benefits of a compound for a specific target pest. If the benefits outweighed the risks, the compound was eligible for and was often registered. However, this process was abruptly changed in 1996 with the enactment of the FQPA. As a result, currently registered pesticides must be re-evaluated or assessed before they can be re-registered. In addition, new pesticides must undergo much more scrutiny before they are considered for registration.

There is a potential problem that the FQPA presents; it considers the sum total of risk associated with a specific compound, and combines all its potential uses. Risk is assessed two ways: aggregate or cumulative.

1) Aggregate risk assessment- All potential uses for a particular compound are combined.
2) Cumulative risk assessment- Any risks associated with a compound, and any compound with a similar mode of action, must be combined to assess its risk. For example, when assessing trichlorfon (Proxol or Dylox), risks associated with other compounds that have the same mode of action are factored in the process of measuring cumulative risk. As for trichlorfon, the risks associated with all organophosphates such as chlorpyrifos and diazinon would be included in the risk assessment of trichlorfon.

This assessment or evaluation process has the potential to impact numerous products since certain active ingredients may have multiple applications. One active ingredient may be formulated for turf and ornamental, agricultural, structural, greenhouse, aquatic, and vegetable uses. Consequently, because the FQPA considers the sum total of risk associated with an individual compound and combines all its potential uses, several products may be considered high-risk compounds. Thus, chemical manufacturers may be forced to re-prioritize their registration strategies of certain compounds to maintain or continue product availability.

In compliance with the FQPA, once the type of risk is defined, the level or amount of risk that is allowed must also be decided. This arbitrary level was created by the EPA (United States Environmental Protection Agency). It is known as the "risk cup." The risk cup is defined as the total amount of allowable risk, for each chemical or class of chemicals.

The EPA determines the risk cup of a specific compound by assessing the potential risk of that compound, and all chemicals with similar modes of action. Once identified, the total risk is assessed, and if the risk "overflows the risk cup" or is above a predetermined level, then the EPA deems action necessary. There are three approaches to reducing risk cup levels:

1) Eliminate uses- Manufacturers may elect to remove it turf and ornamental use registration in order to continue structural (indoor) uses of the same active ingredient.
2) Risk mitigation- Manufacturers may mandate unreasonable precautions to reduce risk associated with the use of a product.
3) No new uses- Manufacturers limit their labeling to specific areas, thus preventing the risk cup from increasing.

Because many active ingredients are used across multiple systems, and this can readily impact potential risk of a compound, thus manufacturers must decide whether they want to support a specific compound or product(s). As you may expect, economics plays an important role in this decision making process. Manufacturers consider the cost-effectiveness of supporting the use of an active ingredient in a small market such as turf and ornamentals versus its continued use in a larger market like agricultural field crops.

An important issue that all pesticide user groups are facing is the execution of the FQPA, and the approach the EPA is taking. It is understood that the agency is receiving pressure to make relatively "fast" decisions to meet certain deadlines. Consequently, there is great and justifiable concern across multiple disciplines that such decisions will be made without considering any reliable, hard, and scientifically based data. Otherwise, it is understood that the EPA will use worst-case scenarios to conduct risk assessments of compounds. Such an approach would be inappropriate and unrealistic as to what risks actually exist.

The green industry (golf course superintendents, lawn care managers, sod farm growers, athletic field managers, park managers, nurseries, landscape contractors, christmas tree growers, arborists, etc.) must demand that hard, scientific data are obtained and used by the EPA as part of its assessment process.