What Happens to Fertilizers and Pesticides Applied to Turf?

Research at Purdue and many other universities has shown that fertilizers and pesticides applied to turf will not move horizontally (runoff) or vertically (leaching). This is because the relatively dense vegetation on the surface allows very little product to reach the soil surface. If fertilizers and pesticides do reach the soil, they are quickly bound by the thatch or organic matter associated with turf stands. And fertilizers or pesticides that make it past the thatch are quickly broken down by the high microbial activity associated with the continuous fibrous root system of a turf stand. However, fertilizer and pesticides have been shown to move off turf under very unusual conditions. Heavy downpours on steep slopes with thin grass increase the chance of runoff, whereas thin turf over very sandy soil increases the chances of leaching. If common sense is used and the product label is closely followed, there is little or no chance for turf products to move off-target. To further minimize the chances of turf products to move off-site, mow your lawn at 3 inches or more, avoid misapplication to sidewalks and drives, leave an untreated "buffer strip" 10-50 feet wide around bodies of water (the greater the slope, the wider the buffer), use fertilizer products containing slow release N, do not apply during the threat of thunderstorms, and water-in fertilizers with 0.25-0.5 inches of gently applied irrigation.

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