Senate Ag Testimony
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TREATED SEED

Since experiencing an inordinate amount of rainfall in recent years soil conservation has become a topic of increased focus. It is understood that healthy soil improves crop yield, that it contains a higher level of carbon, but also retains a larger volume of water which helps to reduce runoff during a storm event. Farmers are required to maintain an annual account of their nutrient management program to recognize all fertilizer applications by acre. Typically, a field planted to corn and harvested for silage would be cover cropped to improve soil carbon, if it was harvested for grain the plant residue, or litter, would be worked into the soil after harvest. Healthy soil is teeming with life, it is a breeding ground for a variety of pests, some of which can put a farmer's crop in jeopardy. Replanting would come at the expense of farm economics, provided there are enough degree days remaining to grow another crop. Farmers use treated seed to promote seedling stand establishment and vigor. A healthy start increases the potential for maximum yield, it heightens grower confidence and stalls off the possibility of having to replant. Examples of early season pests in corn crops are Black Cutworm, Wireworm, White Grubs and Seed Corn Maggots. Examples of pests in the soybean crop are Bean Leaf Beetle and Seed Corn Maggots.

Seed treatments can include insecticides, fungicides, and nematicides (parasitic worm control). Seed treatment, as such, serves to manage against early season pests and diseases as an alternative to foliar and soil applications. Years ago an acre of corn was protected by spraying the entire acre (broadcast spraying). The next method to emerge was "in furrow treatment" using granules, rather than treating the entire area with spray, granules are dropped from the planter tubes to cover a 7 inch wide strip, seed in the center, all of which are covered by the closing wheels on the planter. The idea of improving the practice was to do more with less, treat only the seed, which is planted 2 inches or so deep, the seed is then covered with soil and compacted by the closing the wheels. Representative treated seed samples are submitted for dust off testing, the desired result is 1 gram or less of dust in a 50 lb bag of corn seed. A bag of treated seed costs $400 and covers about 2 1/4 acres, planting 1000 acres would require 445 bags of seed.

When choosing which seed to plant several things have to be recognized, beyond cost, the farmer wants to know if it plants well, if the treatment adheres to the seed well, if it is a sustainable solution, does it affect germination, how does it perform, does it comply with regulations, does it have an adverse affect on pollinators, and is it considered good stewardship ?

The American Seed Trade Association offers a guide to Seed Treatment Stewardship which covers Best Management Practices for applicators and users of treated seed. It offers input from farmer groups, stewardship experts, and experts in seed treatment application. Topics also include Safe Use and Handling, Selection of Treatment Product, Locating Hives and Communication with Beekeepers, Planting Treated Seed, Storage and Disposal.

There are multiple stressors affecting Bee Health; Parasites (varroa mites), Diseases (nosema, bacteria and viruses), Bee Nutrition (lack of varied diet), Weather Patterns and Changing Climate, Beekeeping Practices (transportation stress, lack of genetic diversity, artificial food sources, pest management within colonies), Pesticides (used in hives, and in agriculture), Lack of Suitable Habitat, and Queen Failure.