



TREATED SEEDS & VT'S WATERWAYS AND AQUATIC ECOSYSTEMS

Coating crop seeds in potent insecticides before planting is a practice that has become widespread—**really widespread.**

Treated seeds are used to grow nearly *all* corn and the majority of soybeans planted in the U.S. They are also used in a variety of other crops, including sugar beets, squash, wheat, sorghum, sunflowers, and many more.

Contamination from seeds treated with insecticides is a growing threat to the health of rivers, streams, and lakes. **Neonicotinoids ("neonics")**, the most common insecticide seed treatment, are increasingly turning up in samples of surface and groundwater across the country, including Vermont.

THE PROBLEM

Neonics are "systemic" which means they dissolve in water and can be absorbed by the plant's tissues as it grows. Yet only a small fraction of a pesticide seed coating is taken up by the crop plant: **over 90% ends up in soil, water, and plants elsewhere in the environment.**



10%

90%

IS TREATED SEED AN ISSUE IN VT?

Neonic seed coatings are the **largest contributor to insecticide use** in Vermont, with estimates of their use ranging up to ~7,400 lbs annually.

Treated seeds are planted on about 100,000 acres of corn and 3,000 acres of soybeans in Vermont **every year.**

HOW DOES TREATED SEED AFFECT WATERWAYS IN VT?

Vermont's waterways are alive with beneficial invertebrates that support healthy fish populations and contribute to valuable ecological services such as water filtration and erosion control. *(Albertson & Daniel 2016)*

The widespread use of insecticide-treated seeds has been linked with **declines of critically important creatures** like caddisflies, mayflies, stoneflies, and other aquatic invertebrates.

Neonicotinoids, in particular, can **seriously harm fish populations** by reducing their invertebrate food sources. Important Vermont recreational fish species such as smallmouth bass, brook trout, and yellow perch all rely on insect larvae as a food source.



DID YOU KNOW?

Over a third of Vermonters participate in fishing, and over half birdwatch. When aquatic insects decline, the effects can be far-reaching and ripple up the food chain: fish and birds rely on healthy populations of aquatic insects for their food.

(Hallman et al. 2014, Suter & Cormier 2014, Yamamuro et al. 2019, Stepanian et al. 2020)

THE SOLUTION

The effects of neonic pesticides extend **well beyond our waterways** in Vermont. Bees and other pollinators that our food systems rely on are dying off in record numbers — in fact, the EPA recently found that **neonic use is likely driving over 200 species toward extinction**.

(Find that report and other resources at POPVT.org/resources)

We need to stop the use of neonic-treated seeds and help our farmers *transition* to more sustainable alternatives.

Support the regulation and legislation proposed in Vermont, sign the Protect Our Pollinators petition at POPVT.org, and share information with friends and family.