

NEWS FROM THE WONDERFUL WORLD OF SOIL AND PLANTS

By John Ferguson

A question I have been asked hundreds of times over the years is: "I have weeds in my (lawn, garden, flowerbed, etc.) where did they come from?

There are many sources and factors that affect weed germination and growth.

1st. - weed seeds were already present in the soil.

Chemicals applied to one's lawn or garden cans stimulate the germination of many types of weed seeds. For example, a fungicide kills off all fungi (good and bad) leaving the soil dominated by bacteria. Weeds love bacterial dominated soils, hence soil conditions now favor weed seeds that will easily germinate if a seed is present.

Some species of weed seeds require a lot of available nitrogen for quick growth. Hence water-soluble artificial fertilizers encourage many weed species to germinate.

Soils (lawn, flowers, or vegetable) if not mulched will encourage weed seeds to germinate. Many species of weed seeds requires sunlight to germinate hence if the soil is not covered by mulch, they do what nature has taught them and they germinate. Nature hates bare ground.

Over watering favors the germination of many weed species. Think of dollar weed or nutsedge for examples.

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If compost is used to top dress a lawn it will often wake up seeds lying dormant in the soil that were waiting for soil conditions improve, to wake up and grow. Numerous species of weedy plants have seeds that can lay dormant for many decades.

Some weeds prefer or even require compacted soil that is low in oxygen. Their role in nature is to correct the problem. Earthworms, ground loving beetles, microarthropods, etc. all help aerate the soil. When one applies a pesticide, one loses the benefits they provide.

Other weed species thrive on soils that are low in certain nutrients and the weeds' role in nature is to produce deep roots that will find the element in the sub-soil and bring it to the surface to correct the deficiencies. This is why applying re-mineralizer every few years helps eliminate this issue not to mention its other benefits.

2nd. – weed seeds come from an outside source

Wind often blows seeds in. To determine if it is windblown or bird droppings look for where the seed is and its germination. If the seeds (junction of plant leaves and roots) are on or near the surface, it most likely came from the wind or birds. If the seeds are a mix of germinating at different depths from 1-4 inches, then most likely it was in the soil or product.

Often tilling the soil brings up buried weed seeds and exposes them to sunlight hence they germinate.

Neighbors using rotary mowers are a common source of weed seeds as they throw the seeds into the air where they can travel hundreds of feet.

Often a gardener will find different species of weeds in different parts of their yard, One species in the front yard and a different one in the backyard. This often occurs in the

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spring when many trees are producing their seeds and many are designed to be spread by the wind, so one gets different species in different areas (front yard versus back yard for example).

Animal and bird dropping are often a source of weed seeds that we have no control over. Many seeds require passage through an bird or animals digestive system to germinate.

Another source of weed seeds include dump trucks, loader buckets, trailers, etc. that were not cleaned before loading. Typically, this would only be a limited amount of weed seeds. Equipment is used for multiple things and often picks up weed seeds from what it is carrying. Hence, when the new product (soil, mulch, or compost) is loaded into the delivery vehicle it may be contaminated with a few seeds from the previous load. This is common for many landscape companies where they haul off weed contaminated soil to make a new garden bed for someone. They then load up the new soil from a supplier and the weed seeds get transferred. This is more common when they are working in damp conditions.

3rd. – deceit

Another common source of weeds is from the "Bait and Switch" often used by some landscapers or truckers. The customer asks for a good product and then the landscaper or trucker buys a low cost (low quality) product from a competitor. They then sell it to the customer at a much higher price increasing their profit claiming that it came from NWR or other good quality provider.

Most soil companies use topsoil that was scrapped off abandoned properties or fields since it is cheap but loaded with weed seeds. They also use bank sand in their mixes as it is much lower cost than washed sands. The low-cost providers do not compost their

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products, and often use sewage sludge or other toxic ingredients as they are cheap. Hence, their products are cheap.

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