

Crop Rotations Have Been Around Since Roman Times

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While driving around the rural parts of the county this spring, you may notice that some of the scenery has changed and a field that was once there is there no longer. This is due to an agricultural practice called crop rotations. But what are crop rotations and why do farmers use them?

Crop rotations date back as far as the Roman Empire. European farmers followed a crop rotation system created by the Romans called, “food, feed, fallow.” Farmers using this cropping system divided their farm into three sections, rotating the sections to the next category the following year. In the “food” section, farmers would plant a food grain such as wheat, in the “feed” section barley or oats would be planted for their livestock and in “fallow” the ground would lay empty so it could recover some of its organic matter and nutrients that was lost in previous years. As European farms increased in size during the 15th century, farmers were able to experiment with their crop rotation schedules, which led to the development of the four-year crop rotation. This rotation was introduced in Great Britain by Viscount Charles “Turnip” Townshend in the mid-1700s and rotated wheat, barley, a root crop like turnips (where his nickname came from), and a nitrogen fixing crop like clover.

Crop rotation use by farmers has gone through cycles throughout history; however, today’s farmers realize the importance of using some kind of crop rotation to increase field yields and decrease weeds, disease and herbicide resistance. Not all farmers use the same crop rotation, for example a farmer in Central Oregon may plant bluegrass and leave that field in for 4-5 years, then plant it with wheat for one year and then carrots for another year, before replanting the field into bluegrass. Another farmer may plant bluegrass in their field, leaving it for 4-5 years, then leave it fallow for a year and then plant it with a carrot crop for a year. Crop rotations are not only beneficial for soil and crop yields, they also help producers operate their farms more efficiently allowing them to plan out their labor, equipment and costs for the year.

Crop rotations are not only important to farmers, they are also important to the home gardener. Many vegetable and ornamental varieties are susceptible to plant disease and insects, which in turn can reduce fruit and vegetable yields and can cause disfigurement of flowering plants. It is easier and more cost effective to prevent disease and insects than to treat them. A four-year rotation of garden crops is suggested while also planting disease resistant varieties and cleaning gardens on a regular basis. Rotating garden crops may be difficult due to space; however, gardeners should rotate vegetables as much as possible by not planting vegetables from the same family, in the same location for three years. To help assist home gardeners with rotating vegetables, a list of commonly grown vegetables and their plant families is provided.

-Apiaceae (Carrot Family): Celery, carrot, fennel, parsnip, parsley.

-Alliaceae (Onion Family): Onion, garlic, leek, shallot, chive.

-Brassicaceae (Mustard Family): Broccoli, Brussels sprout, cabbage, cauliflower, kale, horseradish, kohlrabi, mustard, radish, rutabaga, turnip, collards.

-Chenopodiaceae (Goosefoot Family): Beet, Swiss chard, spinach.

-Cucurbitaceae (Gourd Family): Cucumber, muskmelon, watermelon, squash, pumpkin, gourd, zucchini.

-Fabaceae (Pea Family): Garden pea, snap bean, lima bean, soybean.

-Solanaceae (Nightshade Family): Tomato, pepper, potato, eggplant.