

WINTER RYE

Cover Crop and Green Manure

Why plant a cover crop or green manure?

Cover crops and green manures improve the health of your soil by:

- ❖ Conserving soil and water
- ❖ Adding organic material and improving soil tilth (structure)
- ❖ Creating airspaces for improved root growth
- ❖ Maintaining a balanced Ph and enhancing nutrients
- ❖ Producing nitrogen (if leguminous)
- ❖ Encouraging microbial activity in the soil
- ❖ Suppressing weeds either through competition or *allelopathic* chemicals
- ❖ Attracting beneficial insects
- ❖ Providing an inexpensive alternative to bagged mulch or manure

What is the difference between a cover crop and green manure?

A cover crop is primarily grown to prevent erosion and reduce evaporation. The cover crop is later harvested. A green manure is incorporated into the soil to increase the organic content.

Why choose winter rye as a cover crop?

With its vigorous root system and allelopathic qualities, winter rye is a great choice to combat soil compaction and weeds. In addition, winter rye grows quickly and survives Virginia winters without protection. Although winter rye is not a nitrogen fixing legume, its roots will bring up subsoil nutrients and absorb excess nitrogen. If rye is treated as a green manure and turned into the soil, these nutrients will become available as the rye decomposes.

When to plant winter rye?

To achieve consistent germination, plant rye from October to mid-November. Germination will take about 10 days depending on the temperature.

How to plant?

Remove garden debris, loosen the soil, break up clumps and try to prepare a smooth seed bed, broadcast seed, rake in, and water well until germination is established. In order to have minimal weeds, it is important to cultivate the soil immediately before sowing the rye. Even light cultivation with a hoe makes a difference.

Green manure or cover crop?

Winter rye makes a great green manure if turned into the soil when it is about eight inches tall. You can also mow the rye and it will grow back. Another option is to let the rye mature and produce pollen, and then harvest it for straw. The straw makes great mulch for garden paths.

What does allelopathic mean?

Allelopathic means that the rye produces a natural chemical which keeps the seeds of other species from germinating. This includes vegetable as well as weed seeds. Transplants are OK. The allelopathic chemicals diminish two to three weeks after the rye is turned into the soil.

Therefore, incorporate the rye two to three weeks before sowing garden seeds. Only use rye straw as mulch around transplants, or in pathways as it continues to release the chemicals.