



Oats

Avena sativa

This small grain is not particularly winter hardy. Spring-planted oats are used for green manure, while fall-planted oats provide winter-killed ground cover. The residue is incorporated before the early planting of vegetables. Oats are particularly useful in rotations with vegetable crops because they grow quickly and are easily killed. They are also useful as a nurse crop with legumes, such as hairy vetch and peas, for forage, erosion control, and weed suppression.



Land preparation

Work land to provide a weed-free seedbed. For spring seeding, provide about 40 lb/ac of nitrogen fertilizer.¹ For fall seeding or when using oats as a nurse crop with legumes, no additional fertilizer is required.

Seeding rate

When sown alone in the spring or fall: drill 80-110 lb/ac, broadcast 110-140 lb/ac.² Increase the rate 10% in late September.
When sown in grain/legume combinations: in late summer, sow oats with hairy vetch at oats 80 lb/ac and vetch 40 lb/ac.³ The oats provide a trellis for the vetch so the vetch may grow and overwinter as a fall legume.
In the early spring, sow field peas/oats and hairy vetch at a proportion of 60%/25%/ 15%.³ The oats provide support for the pea crop and are followed by the growth of the vetch in July. This can provide ground cover for the growing season and additional nitrogen.

Seeding date

April for green manure, mid-August -September for winter cover.

Seed sources

Local farm seed dealers, Seedway. Use spring oats for all planting dates. Feed oats produced "on farm" are acceptable if they contain no seed-borne diseases and weeds.³ There are many varieties of certified "forage oats" that produce more spring growth than oats grown for grain.⁴ Varieties recommended for New York state include Blaze, Rodeo, and Prairie.⁵

Maintenance

Soil crusting after heavy rain will affect the stand and it may require reseeding. Check for winter survivors that need managing in the spring.

Control

Incorporate spring-sown oats or winter survivors before seeds are set (mid-June). Oats incorporate more easily than rye.

Tips

The root systems of oats are not effective at breaking up compacted soils.

References:

- ¹Bergstrom, G. et al. 1987. Cornell Field Crops and Soils Handbook. p.148.
- ²Clark, A. 2007. Managing Cover Crops Profitably, 3rd ed., Sustainable Agriculture Network. p.70.
- ³<http://www.grazeny.com/Information/Small%20Grains%20For%20Grazing.doc>
- ⁴Stivers LJ, et al. 1998. Cover Crops for Vegetable Production in the Northeast. Information Bulletin 244.
- ⁵2005 Cornell Guide for Integrated Field Crop Management, p 114.

Disclaimer

This fact sheet reflects the current (and past) authors' best effort to interpret a complex body of scientific research, and to translate this into practical management options. Following the guidance provided in this fact sheet does not assure compliance with any applicable law, rule, regulation, or standard, or the achievement of particular discharge levels from agricultural land.

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For more information



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