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Permanent seeding is used to control runoff and erosion on disturbed areas by establishing perennial vegetative cover from seed. It is used to reduce erosion, to decrease sediment yields from disturbed areas, and to provide permanent stabilization. Seeding is economical, adaptable to different site conditions, and allows for the selection of the most appropriate plant materials.

Usage

- well-suited to areas where permanent, long-lived vegetative cover is the most practical or most effective method of stabilizing the soil
- can be used on roughly graded areas that will not be regraded for at least 1 yr
- results in vegetation that controls erosion by protecting bare soil surfaces from displacement by raindrop impacts, and by reducing the velocity and quantity of overland flow

Benefits

- economical, adaptable to different site conditions, and allows selection of the most appropriate plant materials
- requires little maintenance unless sediment deposits are heavy
- consists of lower initial costs and labor input

Limitations

- has a high erosion potential during establishment that limits seeding effectiveness
- requires reseeding of areas that fail to germinate
- has a limited seeding time depending on the season
- requires stable soil temperature and soil moisture content during germination and early growth
- does not immediately stabilize soils; temporary erosion and sediment control measures should be implemented to prevent offsite transport of pollutants from disturbed areas

Estimated Cost

\$200-\$1,000/ac
(\$400/ac is average)

Maintenance costs range from 15%-25% of initial costs (20% is average)

Alternatives

- Hydroseeding (p. 2-8)
- Mulching (p. 2-10)
- Sodding (p. 2-18)

Notes:

Seed Mix	Seeding Rate (lb/ac)	Notes
General Use		
Creeping Red Fescue	20 - 40	
Domestic Ryegrass	10 - 20	
Kentucky Bluegrass	10 - 20	
Tall Fescue	40	
Dwarf Fescue	40	
Steep Banks or Cut Slopes		
Tall Fescue	40	
Crown Vetch	10	Do not seed later than August
Tall Fescue	20	
Flat Pea	20	Do not seed later than August
Tall Fescue	20	
Road Ditches and Swales		
Tall Fescue	40	
Dwarf Fescue	90	
Kentucky Bluegrass	5	
Lawns		
Kentucky Bluegrass	60	
Perennial Ryegrass	60	
Kentucky Bluegrass	60	For shaded areas
Creeping Red Fescue	60	

Installation Tips

- seed or plant areas to be stabilized with permanent vegetation after the final grade is achieved
- loosen surface soil enough for water infiltration and root penetration
- mow, lime, and fertilize high-maintenance areas regularly; these areas either receive intense use or require maintenance to an aesthetic standard
- mow low-maintenance areas infrequently if at all; do not apply lime or fertilizer on a regular basis
- use grass and legume mixtures for these sites; legumes thereby improving soil quality (native plant mixes are preferred)
- include steep slopes, stream or channel banks, some commercial properties, and “utility” turf areas such as road banks as suitable sites for low-maintenance vegetation
- for specific seedbed preparation, refer to Clermont County Water Management and Sediment Control Regulations
- detailed installation tips can be found in the ODNR Rainwater and Land Development manual

Maintenance

Grasses typically emerge within 4-28 days; legumes emerge 5-28 days after seeding. A successful stand should exhibit the following:

- vigorous dark green or blue-green seedlings, not yellow
- uniform density; nurse plants, legumes, and grasses are well intermixed
- green leaves

Suggested seed mixes for Ohio.
Adapted from Mecklenburg, 1996.

Vendors

See Appendix pages F14-F15

References

Begin, Lisa. Stormwater Authority, LLC. 2005. Best Management Practices for Stormwater Control.

Clermont County Soil and Water Conservation District. . 1992. Clermont County Water Management and Sediment Control Regulations.

Mecklenburg, Dan. 1996. Rainwater and Land Development, Second Edition. ODNR. Columbus, Ohio.