



# Extension FactSheet

Horticulture and Crop Science, 2001 Fyffe Court, Columbus, OH 43210-1096

## Arial and Other Broadcast Methods of Seeding Wheat

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**A**erial and other broadcast seeding methods should be used only for emergencies when the soil is too wet to accommodate ground seeding equipment.

### Planned Aerial Seeding

Some growers plan to aerial seed wheat into soybeans just before leaf drop so that leaves will provide a mulch cover for the seed. Usually this occurs several weeks before the fly-free date. If the seed germinates before the fly-free date, there is an increased risk from Hessian fly, viral, and other diseases. Rain-fall is usually needed for germination, but there are frequently insufficient amounts soon after planting, and germination may be stretched out over several weeks. Research data suggests that soybean production factors which provide a dense leaf canopy would improve the environment for germination of the wheat seed.

In Ohio Agricultural Research Development Center (OARDC) trials, stands for surface broadcast seeded wheat were not significantly influenced by soybean maturity, row spacing, or cultivation. Seeding rates and time of seeding were important with early seedings, before the fly-free date, usually resulting in best stands. It is believed that early seeding increases the chances of a significant rain occurring, which will germinate seed before cold fall weather can have a significant influence on winter survival of the crop. Seeding rates at least 50% above the normal 90 to 110 lbs. per acre used in drill seeding are necessary to assure minimal stands. If the seed has not germinated by the time of soybean harvest, shallow tillage should be used to cover the seed and improve germination.

### Emergency Aerial Seeding

Most failures with aerial seeding have occurred where seeding was used as an emergency seeding method very late in the fall. If soil conditions prevent drill seeding, then aerial seed as near to the normal seeding time as possible. Seed can be incorporated with shallow tillage, if later conditions permit and the seed has not germinated.

### Special Considerations with Aerial and Broadcast Seeding

Seeding into soybeans is usually more successful than seeding into corn. If tillage is needed after harvest, shallow tillage distributes seed more uniformly in soybean residue than corn residue. Corn residue can be heavy enough to smother wheat, so it may be best to chop and spread corn stalks.

### Broadcast Seeding Effect on Wheat Yield

Yields of broadcast-seeded wheat are closely related to stand uniformity and density, with uniform, moderately dense stands yielding as well as drilled wheat. In a three-year study at Wooster, Ohio (see table), yields of broadcast-seeded wheat were usually within 3 to 5 bu. per acre of the best drilled wheat.

Stands of the broadcast wheat were usually only about 70% of the density and uniformity of the drilled wheat where 3 bu. per acre were broadcast seeded in mid-September. Yields were best where 3 or 4 bu. of seed per acre were broadcast seeded in mid-September. Maturity of the soybean variety did not significantly influence wheat stand and yield. The earliest seedings were accomplished after the earliest varieties had dropped their leaves.

#### Broadcast-Seeding Wheat into Soybeans. OARDC, Wooster, Ohio 1983-85

Method	Seeding Rate (bu/acre)	Avg. Wheat Yield (bu/acre)
Broadcast*	2	53
Broadcast	3	55
Broadcast	4	57
Drilled**	2	58
Drilled	3	60
Drilled	4	54
-----Broadcast Seeding Date-----		
10 Sept. – 15 Sept.		55
23 Sept. – 2 Oct.**		53
4 Oct. – 22 Oct.		52

\* Sept. 10 – 15. Seeded before leaf drop into Cumberland soybeans growing in 15-in. rows.

\*\* Sept. 28 – Oct. 4. After harvesting Evans soybeans.

\*\*\* Most soybean leaves were dropped by these dates.

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