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# Weed Management Planner

## BEFORE PLANTING

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | *Plant Type* | broadleaf | | | | | | grass | |
| | *Lifecycle* | annual | | | | | perennial | annual | perennial |
| | *Emergence Period* | fall/early spring | | | late spring | | | fall/spring | |
| | *Growth Habit* | | | | | | | simple | creeping |
| | *Primary Reproductive Structure* | seed | | | | | | seed | rhizome |
| | *Example Weed* | chickweed | henbit/deadnettle | horseweed/ marestail | lambsquarters, common | ragweed, common | dandelion | brome, downy | quackgrass |
| Crop Rotation[1] | Continuous monoculture (base system) | N | N | N | N | N | N | N | N |
| | Corn/soybean | N | N | F | F | P | P | P | N |
| | Add winter small grain | F | F | F | G | G | G | P | P |
| | Add perennial forage legume crop | G | G | G | G | G | F | G | P |
| Cover Crops (fall seeded)[2] | Winter and spring competition | | | | | | | | |
| | small grain | G | G | E | G | F | G | F | N |
| | legume | F | F | G | F | P | F | P | N |
| | radish | F | F | F | D | D | F | P | N |
| | Early terminated (low residue)[5] | | | F | P | P | P | | N |
| | Late terminated (high residue)[5] | | | | | | | | |
| | small grain | | | E | G | F | E | | P |
| | legume | | | G | F | P | F | | P |
| | small grain-legume mix | | | E | G | F | E | | P |
| Tillage and Cultivation[3] | No-till (base system) | N | N | D | D | N | D | N | D |
| | Moldboard plow, once in four years[6] | E | E | E | E | G | E | E | F |
| | Annual fall moldboard plow | G | G | G | N | N | G | G | G |
| | Annual spring moldboard plow | E | E | E | N | D | E | E | F |
| | Spring disk or chisel plow[7] | E | E | E | N | D | E | E | P |
| | Vertical tillage/turbo till (fall) | P | P | P | N | N | N | N | N |
| Planting | Early planting date | | | | | | | | |
| | corn | N | N | N | P | P | N | N | N |
| | soybean | N | N | N | F | F | N | N | N |
| | *Equipment sanitation*[8] | P | P | F | F | F | F | P | P |
| Chemical[4] | Post harvest burndown | G | F | G | F | F | G | F | G |
| | after silage harvest | P | P | P | G | G | F | N | G |
| | after grain harvest | G | F | G | | | G | F | G |
| | Post harvest burndown with fall residual | G | G | F | N | N | – | G | N |
| | Residual with spring burndown | E | E | G | G | G | F | G | G |
| | Residual with burndown[9] | E | E | E | E | G | – | F | P |

*Tactics in italics target the weed seed bank rather than in-season management.*

[1] Crop rotation based on the impact of planting date altering crop architecture only - not other weed control strategies associated with different crops. Continuous monoculture is the base system; ratings within crop rotation are based relative to this.

[2] Assumes timely planting (by October 15 for small grains, by October 1 for legumes, and by Sept 15 for radish), attaining at least 6,000 lbs of biomass per acre at termination, and cash crop planting within 2 weeks after termination.

[3] No-till is defined as the base system and ratings within tillage/cultivation are relative to this.

[4] Assumes effective herbicide use. Please consult the Mid-Atlantic Field Crop Weed Management Guide.

[5] Ratings based on seedling emergence after cover crop termination.

[6] Ratings based on first season following moldboard plow/inversion tillage only.

[7] Spring tillage prior to planting.

[8] Ratings based on spread of weed from field to field, not within a field.

[9] Ratings based on effects of residual herbicide, not burndown.

## Efficacy ratings of weed management tactics in the mid-Atlantic region

| | |
|---|---|
| D | **Detrimental:** this tactic may increase weed problems by spreading propagules or increasing density |
| N | **No effect:** this tactic will not impact management of this weed |
| P | **Poor:** this tactic will marginally reduce weed density |
| F | **Fair:** this tactic will moderately reduce weed density and may reduce competitiveness |
| G | **Good:** this tactic consistently reduces weed density and competitiveness |
| E | **Excellent:** this tactic significantly reduces weed density and minimizes competitiveness |
| – | **No data:** or information available |
| | **Not applicable** |


## Authors

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# Weed Management Planner

## AFTER PLANTING

| | | broadleaf | | | | | | | | | | | | | narrow leaf | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | *Plant Type* | | | | | | | | | | | | | | | | | | | |
| | *Lifecycle* | annual | | | | | | | | perennial | | | | | annual | | | perennial | | |
| | *Emergence Period* | late spring | | | early summer | | | season long | | winter | | summer | | | early summer | summer | | | | |
| | *Growth Habit* | simple | | | vining | | simple | | vining | prostrate | | upright | | vining | prostrate/ short | upright | prostrate/ short | simple | creeping | |
| | *Primary Reproductive Structure* | large seed | small seed | | large seed | | small seed | | large seed | seed | taproot | rhizome | | | small seed | large seed | small seed | tuber | rhizome | |
| | *Example Weed* | ragweed, common | lambsquarters, common | cocklebur | velvetleaf | burcucumber | amaranth, Palmer/ waterhemp | pigweed | morningglory, annual | dandelion | pokeweed | dogbane, hemp | thistle, Canada | horsenettle | crabgrass | foxtail spp. | goosegrass | nutsedge, yellow | Johnsongrass (rhizome) | quackgrass |
| Crop Rotation[1] | Continuous monoculture (base system) | N | N | N | N | N | D | N | N | N | N | N | N | N | N | N | N | N | N | N |
| | Corn/soybean | P | P | P | P | P | P | F | N | P | N | N | N | N | N | N | N | N | P | N |
| | Add winter small grain | G | G | G | G | F | F | G | F | G | P | P | F | P | F | G | P | P | P | P |
| | Add perennial forage crop | G | G | G | G | G | G | G | G | G | F | F | P | N | F | F | P | P | P | P |
| Cover Crops (fall seeded)[2] | Early terminated (low residue)[5] | P | P | N | N | N | N | P | P | N | N | N | N | N | P | N | N | N | N | N |
| | Late terminated (high residue)[5] | | | | | | | | | | | | | | | | | | | |
| | small grain | F | G | F | F | F | G | G | F | F | N | N | N | N | F | F | F | P | N | N |
| | legume | P | P | P | P | P | P | P | P | P | N | N | N | N | P | N | P | P | N | N |
| | small grain-legume mix | F | G | F | F | P | G | G | F | F | N | N | N | N | F | F | F | P | N | N |
| Tillage and Cultivation[3] | No-till (base system) | P | P | P | P | F | D | D | P | D | D | D | D | D | N | N | N | N | D | D |
| | Moldboard plow, once in four years[6] | F | F | P | F | F | G | G | F | F | F | F | P | P | G | F | G | F | F | F |
| | Annual fall moldboard plow | N | N | N | N | D | N | N | N | G | G | F | F | F | F | N | N | F | F | F |
| | Annual spring moldboard plow | P | P | P | P | N | P | P | F | G | G | P | P | P | P | P | P | N | P | P |
| | Spring disk or chisel plow[7] | P | F | N | P | D | N | P | P | P | F | P | N | P | N | P | D | N | N | N |
| | Vertical tillage/turbo till (fall) | N | P | N | N | N | N | N | P | N | N | N | N | N | N | N | N | N | N | N |
| | Interrow cultivation | G | G | F | G | F | G | G | F | P | P | P | P | P | F | F | F | P | P | N |
| Planting | Early planting date[8] | | | | | | | | | | | | | | | | | | | |
| | corn | P | P | G | F | P | P | F | P | P | P | P | P | P | P | P | P | P | P | P |
| | soybean | P | P | P | P | P | P | P | P | P | P | P | P | P | P | F | P | F | P | P |
| | Late planting date (double-crop soybean) | G | G | P | P | P | P | F | P | P | P | P | F | P | F | P | P | P | P | P |
| | Increased soybean seeding rate | P | P | P | P | P | P | P | P | P | P | P | P | P | P | P | P | P | P | P |
| | Narrow row spacing (<15 inches) | F | F | F | F | F | F | F | F | P | P | P | P | F | F | F | F | P | P | P |
| Fertility | Timing (multiple applications vs all at planting) | P | F | P | F | P | P | F | P | P | P | P | N | N | P | F | P | P | P | P |
| | Placement (in-furrow or 2-by-2 vs broadcast) | P | P | N | N | N | P | P | N | N | N | N | N | N | P | P | P | N | N | N |
| Harvest | *Harvest weed seed control*[9] | F | F | P | N | N | G | G | N | N | N | N | N | N | P | N | N | N | N | N |
| | *Crop stubble mowing*[10] | P | P | P | P | P | P | P | P | P | P | P | P | P | P | P | N | P | P | P |
| | *Equipment sanitation*[11] | F | F | F | F | F | F | F | F | F | P | P | P | P | F | F | F | P | F | F |
| Chemical[4] | Spring burndown[12] | F | P | N | N | N | N | P | P | G | P | N | P | N | P | P | N | P | N | F |
| | Residual with spring burndown[13] | G | G | P | F | P | F | F | F | G | P | P | P | P | G | F | P | F | P | P |
| | Residual at planting | G | E | G | G | G | G | G | G | F | P | P | P | P | G | G | F | F | P | P |
| | Timely post | E | E | G | E | G | G | G | F | G | G | G | G | G | G | E | F | G | G | E |
| | Timely post with residual | E | E | E | E | E | E | E | G | G | G | G | G | G | E | E | E | G | G | E |
| | *Harvest aid* | P | P | P | P | P | P | P | P | P | P | P | P | P | P | P | N | P | P | P |
| | *Post harvest burndown*[10] | N | P | N | P | N | P | P | P | F | P | F | F | F | P | P | N | P | P | P |

*Tactics in italics target the weed seed bank rather than in-season management.*

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[4] Assumes effective herbicide use. Please consult the Mid-Atlantic Field Crop Weed Management Guide.

[5] Ratings based on seedling emergence after cover crop termination.

[6] Ratings based on first season following moldboard plow/inversion tillage only.

[7] Spring tillage prior to planting.

[8] Planted 2 to 3 weeks earlier than a typical planting date for the region.

[9] Harvest weed seed control with a grain head; do not use ratings for corn grain harvest.

[10] Implemented approximately 2 to 3 weeks after harvest.

[11] Ratings based on spread of weed from field to field, not within a field.

[12] Full season burndown (not double crop soybean burndown timing).

[13] Ratings based on effects of residual herbicide, not burndown.

## Efficacy ratings of weed management tactics in the mid-Atlantic region

| | |
|---|---|
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| N | **No effect:** this tactic will not impact management of this weed |
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