Aggressive post seeding care quickens recovery from winterkill
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Most with extensive winter damage have already reseeded and now soil temperatures have finally warmed up to the point for germination and growth. Post seeding care is critical to insure rapid maturation and recovery in the shortest time possible.

- Though we tend not to fertilize turf in the spring, new seedings are the exception to rule and need to be fertilized more aggressively. Starter fertilizer should be applied at or shortly after seeding. Aim to apply 1.0 lbs of P_2O_5 from the starter and look for products with at least 50% quick release (water soluble) nitrogen. Re-apply starter fertilizer about four weeks after germination to aid recovery. If possible, supplement starter fertilizer with lower rates (0.25 lbs N/1000 ft^2) of soluble fertilizer every week. Products such as feed-grade urea can easily be dissolved in a sprayer and applied to affected areas. Fertilizers containing nitrate are also preferred because nitrate is quickly taken up by the plant and stimulates seeds to germinate. Avoid slow release nitrogen sources since N is required now and not later in the summer in heat and stressful conditions. Try to spot treat areas injured by winterkill with fertilizer and avoid large unaffected areas. Adequate nitrogen to essential to recover as quickly as possible.
- Water lightly and often to keep the seedbed moist. Reduce irrigation frequency as root mass increases. Monitor root depth weekly and adjust irrigation frequency as necessary.
- Limit traffic on newly seeded areas (golfers, golf carts, athletes), but mow the areas as soon as a few of the leaf blades reach the projected mowing height. Consider temporary greens when a large majority of a putting surface has been affected by winterkill, especially two weeks after seedlings have germinated.
- Early and frequent mowing will increase density and spreading in seedlings. A good mowing height for bentgrass seedlings on putting greens is between 0.150 and 0.250". Lower mowing will accelerate seedling maturation.
- Once daytime temperatures are in the high 80sF, nighttime temperatures in the high 60sF, and high humidity, pythium and damping off diseases may become problematic and should be treated preventatively. Monitor rooting depth and try to reduce irrigation once seedlings mature.
- Thin turf or bare soils will require aggressive weed control to minimize competition with desired seedlings. Refer to label recommendations limiting use on seedling turf. Label recommendations are conservative, always erring on the side of seedling safety. However, experience dictates that minor damage to seedlings with aggressive herbicide use is easily compensated for by reduced weed competition.
- Crabgrass and broadleaf weed control:
  - Mesotrione (Tenacity™) or siduron (Tupersan™) can be used in the seed bed and will likely provide three to four weeks of PRE control of crabgrass. Mesotrione can be applied POST to Kentucky bluegrass at 28 days after emergence (DAE) to control crabgrass and some broadleaf weeds.
  - Quinclorac (Drive XLR8™, Quinstar™, Quinclorac™, and others) can be applied PRE or 28 DAE of Kentucky bluegrass for POST control of crabgrass and some broadleaf weeds. Omitting the methylated seed oil will enhance seedling safety, but reduce weed control.
  - Carfentrazone (QuickSilver™) can be applied at any time after seeding for POST broadleaf weed control
  - SquareOne™ (quinclorac+carfentrazone) can be applied within 7 days after emergence (DAE) of tall fescue or Kentucky bluegrass for POST control of crabgrass and broadleaf weeds.
  - Dithiopyr (Dimension™, Dithiopyr™) can be applied once the root system is well established and after at least two mowings for PRE/POST control of crabgrass.
- Goosegrass control: Most of the previously listed herbicides may only provide partial control of goosegrass. Two years of data over multiple states suggests that Speedzone™ will effectively control goosegrass when applied at 3 qts/A to even tillered goosegrass. Multiple applications at two week intervals are required for optimum control, but label statements limit applications to every 4 weeks. Some biotypes may not totally controlled. Speedzone's label recommends applications after the second mowing of seedling turf, but our preliminary data suggests adequate safety on creeping bentgrass or perennial ryegrass seedlings http://turf.unl.edu/ResearchReports/2013SpeedzoneGoosegrassSeedlingSafety.

- Annual bluegrass control: Even though the primary objective should be turf recovery, it makes sense to limit annual bluegrass during this process. Since annual bluegrass is ubiquitous in golf turf, it will start to germinate anywhere there is bare soil this spring and likely out-compete any other species we seed. Allowing the annual bluegrass to germinate will heal the area most rapidly, but also maintains or increases the susceptibility to future damage from winter and summer stresses. Therefore, the most sustainable choice is to limit the annual bluegrass competition through aggressive herbicide use during seeding. As mentioned earlier, any seedling damage that may occur with herbicide use will likely be quickly compensated for by reduced competition from annual bluegrass.
    - Mesotrione (Tenacity™) can be used in the seedbed and/or 28 days after emergence to control annual bluegrass in seedings of Kentucky bluegrass and/or perennial ryegrass. Our data suggest Tenacity is extremely safe over seedlings Kentucky bluegrass and/or perennial ryegrass (Figure 4), but it should not be used on creeping bentgrass.
    - Bispyribac (Velocity™) can be applied 30 days after emergence of creeping bentgrass or perennial ryegrass. Our research summarized in 2010 indicates more than adequate safety on creeping bentgrass seedlings (Figure 5).
    - Ethofumesate (Prograss™) can be 1-2 weeks after emergence of perennial ryegrass, 3-4 weeks after emergence of creeping bentgrass, or 8 WAE of Kentucky bluegrass (Figure 4).
    - Growth regulators that favor the desired species over annual bluegrass should be avoided until the desired turf is mature. Additionally growth regulators that limit seedheads (ethephon [Proxy™]) or (mefluidide [Embark™]) should also be avoided until the desired seedlings are mature.

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Figure 1. New seedlings require higher amounts or spring nitrogen fertilization to quickly recover before summer stress. Reduce traffic, irrigate to seedling root depth, mow frequently, and use herbicides increase the rate of recovery.