



# FALL LAWN CARE GUIDE

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ecology friendly lawn care

Fall is a great time of the year for lawn care. Taking advantage of the optimal growing conditions can set the lawn up to come back more beautiful than ever next spring.

Inside you'll learn:

- Recovering from Summer Stress
- Fall Seeding Options
- Fertilizing in the Fall
- Fall Weed Control
- Insects & Diseases in the Fall
- Preparing the lawn for Winter

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# RECOVERING FROM SUMMER STRESS

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Summer heat, drought stress, and insect damage can have a major impact on the health of a lawn heading into the fall. If stress pressures and conditions were extreme, minor to severe turf damage may have occurred leaving the lawn damaged and in need of some repair.

Fall is a great time of the year to fix damage resulting from summer stress. Warm soil temperatures, cool weather, and ample precipitation make for great growing conditions. These conditions help make the success of the recovery process much easier. Depending on the extent of the turf damage, minor or major repair steps may be required to help get the lawn back in shape before the winter.

## Self Recovery

Turfgrass is very resilient. More often than not, lawns can typically recover on their own as long as conditions of drought, heat stress, disease pressures, and insect incidence do not persist for extended periods of time. Maintaining watering recommendations, mowing practices, along with balanced fertility will drastically improve the ability of a lawn to withstand stress and recover much quicker when the stressful conditions lessen.

## Minor Lawn Repair

Minor lawn repair is generally required when small isolated areas of the lawn sustain damage that will not recover on its own without the assistance. These areas are typically small in size and affect less than 25% of the lawn. Hand-spot seeding or general broadcast overseeding can help the lawn recover. This is relatively inexpensive and quick and easy to do without the requirement of large equipment.

## Major Lawn Repair

Major lawn repair is required when large sections or areas of the lawn totaling more than 25% are damaged beyond recovery. Depending on the extent and severity of the damage, full renovation repair options are required to expect full lawn recovery. Installing new sod, vertical slitseeding, or establishing a new lawn from bare seed and soil may be required. Major lawn repair can be very costly and time consuming. Larger renovation equipment is required to perform major lawn repairs.



# FALL SEEDING BEST PRACTICES



Fall is highly regarded as one of the best times of the year to plant grass seed. Taking advantage of the optimal fall growing conditions can help make establishing seed for the average do-it-yourselfer much easier. By following a few easy steps and remembering a handful of helpful guidelines, new grass will be growing in no time.

Even the best maintained lawns usually have at least one area of concern that can use seeding in some way or another. Ensuring the lawn is ready for winter is very important and this can have a major impact on how prepared it is to come back more beautiful than ever next spring.

## Seed Selection

Among many things, selecting the right type of seed is an essential step in the process of successfully establishing turf. It is very important to select a seed blend that will accommodate the growing conditions and environment it is planted in. Some grass species perform well in sun, but poorly in shade. To help make things easier, most seed manufacturers label the seed bag for the condition the blend is recommended to grow best in. For example, a bag of seed might be labeled Sun Mixture, Sun/Shade Mixture, or Shade Mixture. Most mixtures contain several species of grass so they can accommodate multiple growing conditions. Kentucky Bluegrass and Perennial Ryegrass perform best in full sun environments, while Fine Fescue can perform well in sun or shade conditions.

## Timing is Everything

Fall is a great time for seeding. Soil and air temperatures are warm while natural rainfall is usually common making the establishment process optimal. Seeding beginning in late Summer (Mid August) into the early part of Fall (late September) is a good reference point to use as a seeding window. This generally gives the new seed plenty of time to germinate and fully establish before heavy frosts and cold winter temperatures come. Missing the ideal seeding window or waiting too late before seed is put down can make it very challenging as soil and air temperatures are too cool for optimal germination. Even when the seed does germinate late in the season, often these young seedlings do not survive winter as they are too young and immature for the harsh winter conditions. Heavy frost can also be hard on new seedlings making it difficult during the establishment process.

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# FALL SEEDING BEST PRACTICES

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## Fall Dormant Seeding

Fall dormant seeding involves putting down grass seed before the ground is frozen, but yet the soil and air temperatures are far too cold for the seed to germinate at this time. Dormant seeding is typically done in November when temperatures are too low for germination. The grass seed will lie dormant until next spring when the soil temperatures warm and germination begins. Covering the seed with mulch or a very thin layer of soil will greatly increase the success of the dormant seeding. Seed that is left fully exposed to the harsh elements has far less chance of germinating and establishing itself come spring.

## Water Requirements

The most important rule to follow when establishing grass seed is "If the seed dries, it dies." Water is essential and without it the seed cannot germinate. Maintaining a light frequent watering schedule multiple times a day until the grass fully establishes is vital. This ensures the seed always stays moist and doesn't dry out. Watering heavy for long periods of time poses a risk of washing the seed away before it can establish itself.

## Germination

The speed at which seed germinates and establishes itself can be determined by several factors. Aside from weather conditions, grass species has the biggest influence. Each species germinates at a different speed, some quicker and some slower than others. Assuming optimal weather and growing conditions, some seed can germinate in as quickly as 4-7 days, or it can take as long as 21 days before germination begins. Perennial Ryegrass is considered a quick germination grass species, while Kentucky Bluegrass is considered very slow.

## Establishment and Aftercare

Depending on the grass species, it can take several weeks or months to fully establish new seedlings. As seedlings mature they develop their independent root system they require to grow healthy and withstand the natural stresses of its environment. Special aftercare is involved as it relates to mowing during establishment. New seedlings are tender and can be easily damaged if mowing frequency and mowing height are not adjusted to favour the seedlings. Wait 4-6 weeks after full germination until regular mowing practices are adopted. Watering practices can also be adjusted to a deep and infrequent schedule provided the seedlings are not stressed. Balanced fertility is recommended to maintain and provide the essential plant nutrients the seedlings require to promote healthy establishment and growth.

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# FALL SEEDING OPTIONS

Whether it's seeding to fill in bare patches, repairing damaged areas, thickening up thin weak spots, or to establish a new lawn from bare soil, seeding is one of the most important things you can do for your lawn. Hand-spot seeding, broadcast overseeding, slitseeding, and complete lawn renovation seeding are several options to consider for different lawn conditions.

## Hand-Spot Seeding

Small areas no larger than the size of your hand can be spot seeded. Large renovation equipment is not required, just your hand to scoop seed out of a bag and sprinkle over these small areas. Best results can be achieved when dead grass or matted areas are lightly raked away before the seed is applied. For bare soil areas, lightly scratch the surface prior to seeding so the soil is broken up and seed to soil contact is optimal. A light layer of high quality soil can also be used to cover the seeded areas to enhance germination.

## Broadcast Overseeding

Broadcast overseeding is a great seeding option for lawns that are thin, weak and have minor damage or areas of concern. Overseeding is the process of introducing new grass seed to a lawn assisting it by thickening up and filling in damaged areas before they continue to get worse. Broadcast overseeding is commonly done using a manual push spreader the same or similar to the ones used for fertilizing. The seed is broadcast evenly across the lawn using this method. Drop spreaders can be used to accurately distribute seed around flower bed edges to ensure seed is not spread into these areas.

## Slitseeding

Slitseeding is an aggressive seeding option performed using a special machine that slices vertical rows into the soil, dropping seed directly into the slits. This provides excellent seed to soil contact which optimizes germination and improves establishment. Although this process takes much longer than installing new sod it is a very effective and the cost is substantially less than sod.

## New Sod Installation

Installing new sod is the most expensive repair option. New sod replaces damaged or undesirable areas instantly without having to wait weeks or months for new grass seed to fill in and establish. Soil preparation prior to laying the new sod is essential in the success of the sod establishment. New sod generally takes 2-4 weeks to fully establish before regular activities can take place again.



# THE IMPORTANCE OF FALL FERTILIZING



One of the single most important things you can do for your lawn is to provide it with the plant essential nutrients it requires to grow healthy. Balanced fertility ensures the lawn will stay green, thick, healthy, and robust.

Fertilizing provides some of the best visual impacts with relatively minimal effort and expense. Fertilizing in the fall is very important in the overall process of the lawns fertility requirement and provides many benefits. Using a fertilizer blend that contains the 3 major nutrients: Nitrogen, Phosphorus, and Potassium (NPK) is recommended. These 3 nutrients are required in the greatest quantity by the plant and will have the biggest impact on how the lawn performs.

## NPK

The 3 major components to a fertilizer blend are Nitrogen (N), Phosphorus (P), and Potassium (K). The NPK ratio is also referred to as the analysis. These numbers represent how much of each nutrient is in the blend. For example a fertilizer blend with an analysis of 25-5-10 represents 25% Nitrogen, 5% Phosphorus, and 10% Potassium. Nitrogen is required in the greatest quantity and promotes the dark green colour, leaf and blade growth, and density to the lawn. Phosphorus is important for root growth and plant establishment. Potassium contributes to the overall general vigor of the plant and strengthens its resistance to wear, drought, disease, and hardiness against winter.

## Application Timing

**Early Fall Application** timing should be made between (Mid August – Mid September) for most areas. This timing is important in order to help the lawn recover from any damage that has occurred during the summer or other parts of the growing season.

**Late Fall Application** timing should be made between (Mid October – Mid November) for most areas. More specifically, this timing should be when the lawn has stopped growing, but it is still green, and the ground is not frozen. This timing is a great way to ensure winter survival and early spring green up. The nutrients will be used to encourage deep root growth instead of shoot growth as the roots remain active in cooler temperatures. Fertilizing after the ground is frozen is too late and will be of no benefit to the lawn.

# THE IMPORTANCE OF FALL FERTILIZING



## Fertilizer Benefits

Both early fall and late fall fertilizer applications provide direct benefits for the lawn including the following:

- Promotes deep rooting in late fall and early spring
- Prolongs dark green turf colour into early winter
- Ensures good winter survival
- Enhances the storage of carbohydrates
- Increases shoot density
- Provides early spring green up

## Application Rate

Fertilizer must be applied equally and evenly across the lawn. It also must be applied at the correct rate based on the time of year and the plants requirement. In general, no more than 1 lb of Nitrogen per 1000 sq ft should be applied at one time. It is important to accurately measure the total treatment area and only apply the required amount of fertilizer. More is not better. Over fertilizing can create a number of problems including stripping, burning, and excessive growth resulting in a weaker plant that is susceptible to insects, disease, and winter kill.

## Fertilizer Options

Fertilizer comes in 2 forms depending on the desired outcome. Quick release fertilizers are designed to provide quick plant response. These products typically last for a short time and require multiple timely applications throughout the season. Slow release fertilizers are designed to release slowly and provide even feeding for long periods of time. These products are generally used over summer months and during the fall when immediate response is not required. Fewer applications are made further apart throughout the season. Some slow release technologies only require one application for the entire season.

# THE IMPORTANCE OF FALL FERTILIZING

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## Product Selection

Granular fertilizer is generally the product of choice for both do-it-yourself home owners and professional lawn care companies. This has a lot to do with convenience and ease of handling. Liquid fertilizer is seldom used by comparison.

## Equipment

Having the right equipment to do the job makes a big difference. A rotary broadcast spreader is easy to use and most effective dropping the fertilizer from the hopper on a spinning impeller that throws fertilizer in 5–10 foot swath. This evenly distributes the fertilizer across the lawn and provides effective application coverage.

## Application Technique

When it comes time to spread fertilizer, application technique couldn't be more important. There are certainly more ways than one to effectively fertilize depending on the equipment being used. The most common technique is to fertilize in straight lines in a back and forth pattern across the lawn. Each pass should include an overlap to help avoid streaks and stripes. A perimeter pass is required around the edges to ensure application is even right to the edges.

# FALL WEED CONTROL

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Although Fall marks the beginning of the end to the lawn care season, it is a great time of the year to control broadleaf weeds that infest lawns. Weeds, just like grass enjoy the same pleasantries the fall growing conditions have to offer. Treating weeds when they are actively growing is the most effective time and can provide the best results.

Fall weed treatments can effectively control both annual and perennial type weeds. Taking a proactive approach to prevent these weeds from germinating, spreading and depositing their seeds will greatly reduce the amount of weed infestation come spring time next season. Even the best maintained lawns are prone to infestation. If and when weeds do persist there are several options to consider both natural and synthetic.

## Traditional Synthetic

The effectiveness of weed control has a lot to do with the choice of the product that is being used and the timing of the application itself. Traditional products tend to have a broader spectrum of control, are more effective, and have consistent predictable results under varying conditions. Depending on the rules and regulations, certain products may or may not be available to use. Always refer to local regulations before selecting a control product. Traditional synthetic 3-way herbicides containing the active ingredients 2,4-D, Dicamba, and Mecoprop are commonly used to effectively control a wide range of broadleaf weeds. Killex is a common trade name product that homeowners and professionals use. Ready to use mixtures are typically sold for homeowners at retail outlets.

## Natural Organic

Natural Organic herbicides containing the active ingredient FeHEDTA is registered to control many common broadleaf weeds found in lawns. Natural weed control products can be very effective and provide great results, however they tend to be less predictable when they are affected by non-favourable environmental conditions, and they generally don't provide the same level of broad spectrum control for all weed types. Fiesta Weed Killer and Scotts Weed-B-Gon are the common trade name products used by professional lawn care companies and home owners.

## Selective Herbicides

Broadleaf weeds are generally controlled using selective herbicides. Selective herbicides are safe to use in lawns as they are specially designed to selectively control weeds without

# FALL WEED CONTROL



harming the lawn. Products containing the active ingredients 2,4-D, Dicamba, and Mecoprop are examples of selective herbicides. Killex is a common selective herbicide trade name.

## Non-Selective Herbicides

Non-selective herbicides effectively kill everything they are applied to including the desired turfgrass. These are not designed to control weed infestations in a lawn. Non-selective herbicides are better suited for applications on hard surfaces or other areas where killing grass is not a concern. Products containing the active ingredient Glyphosate are used for these applications. Roundup is a common Non-selective herbicide trade name.

## Spot Spraying

Depending on the level of weed infestation, spot or blanket spray applications may be required. Spot spraying simply refers to only spraying the direct area where a weed exists leaving the surrounding areas unsprayed. Spot spraying is used when a small number of weeds infest the lawn and it doesn't make sense to spray large areas that do not have weeds.

## Blanket Spraying

Blanket spraying is used for areas that are heavily weed infested, so much so that spot spraying in such cases would be impractical and inadequate coverage would be achieved. The entire weed infested area as well as surrounding areas are all treated with a blanket application.

## Crabgrass

As quickly as crabgrass seems to appear out of nowhere every summer, the fall season signals an end to the crabgrass. Crabgrass is an annual plant, which means it dies each year in the fall and then germinates again the next year beginning in late spring and into summer. As the crabgrass plants begin to die off, the colour generally turns from lime green colour to a purplish/reddish colour. This discolouration indicates its time to begin a combination of cultural practices such as core aeration and overseeding that can help fill these infested areas back in with desired grass again. The fall is a great time for seeding and establishing new grass, and aggressively overseeding or slit-seeding these areas is recommended. Core aerating and topdressing these areas in conjunction with seeding will help speed up this re-establishment process.

# COMMON FALL LAWN DISEASES

There are several common fall turfgrass diseases that can affect and cause damage to a lawn. A turfgrass disease is a condition that interferes with the normal growth and development of the grass plant causing the plant to look and perform abnormal. Visually, noting the appearance of distinctive patterns, specific colour variations, and particular grass species affected can help diagnoses what disease is present. Under close investigation examining individual grass blades up close can reveal lesions, spots, changes in colour, and stunting that help determine what disease is affecting the lawn.

Turfgrass diseases are typically easier to prevent than they are to cure. Preventative and curative fungicide applications are not common practice for home lawn applications. Fungicide treatments are predominantly reserved for professional turf applications including golf courses where high intensity maintenance practices increase disease presence and turf susceptibility.

Aside from environmental conditions, managing a home lawn by way of maintaining the recommended maintenance practices, improving the growing conditions, selecting resistant grass species, and by managing all turf inputs, greatly reduces disease incidence and susceptibility without the requirement of fungicides. Some common fall turfgrass diseases include: Red Thread, Rust, Powdery Mildew, and Fairy Ring.

## Red Thread

Red thread disease affects all cool season grass species, but perennial ryegrass and fine fescue are most susceptible. Red thread can easily be identified by the observation of red/pinkish coloured branched or stranded sclerotia extending between leaf tips. This sclerotia appears very similar to that of tiny red threads loosely woven in-between the grass blades, hence the name red thread disease. Turf damage from red thread disease is generally minor with full recovery expected.

## Powdery Mildew

Powdery mildew disease is most severe on Kentucky Bluegrass, but also can be seen on fine fescue and perennial ryegrass. Powdery mildew is more unsightly than damaging. The disease can be identified by the white, dusty powder appearance on the leaf blades. The disease is most active in shady, cool moist areas of the lawn. Severe infections can cause the leaves to turn yellow or brown. Damage is usually considered minor causing thinning and weak turf growth.



# COMMON FALL LAWN DISEASES

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## Rust

Rust Disease affects all cool season grass species, but perennial ryegrass and Kentucky bluegrass are most susceptible. Rust disease appears as small flecks on the upper and lower surfaces of the leaf blades. These flecks are yellow to orange to reddish in colour and can easily be rubbed off the surface with your fingers or on shoes when walked across. Rust is considered minor persisting in late summer and into fall with full turf recovery expected.

## Fairy Ring

Fairy ring disease is common in all cool season grass species. It is easily identified by its circles or arches of dark green rings. Mushrooms may grow in these dark green areas as well. Fairy rings are typically the result of decaying organic matter in the soil such as rotting tree trunks, roots or other debris. The dark ring is created by the releasing of nitrogen in the soil causing the grass to grow quickly and darker green.



# COMMON FALL INSECTS

There are several common fall destructive turfgrass insects that can damage a lawn. As is with many other conditions that cause lawn stress, the best defense against insect damage is a well maintained healthy lawn. A healthy lawn can often endure insect feeding if infestations are low without showing any signs of damage. As insect populations increase, damage can become quickly apparent resulting in the need to control the insects in order to prevent further damage. Common fall destructive insects include: White Grub larvae, and Leather Jacket larvae (European Crane Fly). When these insect infestations occur, significant damage can result if left untreated.

## Leather Jackets/European Crane Fly

The larvae of European Crane Fly are known as Leather Jackets. Leather jacket larvae feed on the roots and the crown of the grass plant causing substantial damage to a lawn when infestation populations are high and left untreated. The European crane fly have 1 generation per year. The adult crane fly resembles the look of a giant mosquito, emerging in late summer before laying its eggs and hatching into the leather jacket larvae stage of its life cycle. Leather jacket larvae are present from early fall until late summer the following year completing their lifecycle in 1 year. The larvae are about  $\frac{3}{4}$ " in length and are greyish/brown in colour. Raccoons, skunks, and birds digging for larvae often indicate the possible presence of an infestation if visual damage isn't noticeable. Additionally, larvae can commonly be seen crawling at the lawn surface or across driveways and sidewalks directly after long periods of precipitation.

## White Grubs

Damage caused by white grubs can be extensive and devastating with costly repairs resulting if left untreated. White grub larvae live in the soil and feed on the roots of the grass plant resulting in death or cause stress that creates wilting. Larvae are cream white in colour, have six legs, and are about 1" in length. Visual damage usually starts to appear in late summer/early fall when the larval life stage of the white grub are actively feeding. White grub infestations often go unnoticed until more severe damage is created by raccoons, skunks, and birds digging, ripping and tearing sections of the lawn away as they feed on the grubs. The damage created by animals is often a lot more extensive than the damage caused by the white grubs feeding themselves. Timing grub applications that target the early larvae life cycle are most effective and will prevent any further insect damage.

Contrary to what many home owners believe, lawns need



# OTHER FALL PRACTICES

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just as much care and attention during the fall as it does throughout the rest of the season. Making sure the lawn is maintained and prepared before winter is very important. When things are managed correctly, in the spring the rewards of what was done the previous fall will pay dividends.

As winter approaches there are several important fall lawn practices to keep in mind before the lawn is put to bed.

## Aerate the Soil

Fall is one of the best times to perform a core aeration. This service is highly recommended and provides many benefits including: relieves soil compaction, removes undesirable thatch layers, encourages deep root growth, improves air and water exchange, and improves fertilizer and other control product uptake.

## Keep Mowing

It important to continue to closely follow regular mowing practices throughout the fall. Mow frequently as required, never remove more than 1/3 of the leaf blade, maintain a height of 2.5–3", keep the blades sharp, and always mow in different patterns. Mulching clippings can add a great source of natural fertilizer and can also help to keep leaves to a minimum. The final mow before winter should be adjusted so that the lawn is cut shorter than usual. Adjust the height between 1.5"–2". This can help prevent disease over the winter as longer grass gets easily matted down making it ideal for diseases to damage the lawn.

## Watch Out for Frost

Walking over a lawn that is frost covered can cause significant damage to a lawn. Early morning frost is most common. A frost covered lawn should always be stayed off until the frost has lifted. Damage first appears as blackening on the leaves in the areas the lawn was walked across. This blackening quickly turns to brown clearly indicating turf damage. Spring frost damage will normally recover after a couple mowings, however damage that occurs during the fall when the lawn is growing slowing may not recover and still be visible next spring. A quick test to determine if the lawn is safe to walk across is to simply take your hand and wipe it across the leaf tips. If your hand stays dry, it is still too soon to walk on the turf. If your hand is wet this indicates the frost has started to melt and it is safe to walk on.

# OTHER FALL PRACTICES

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## Apply Lime

Optimal soil pH ranges between 6.5 – 7.5. Readings below 6.9 are considered acidic and readings above 7.1 are considered alkaline. Fall is a great time to apply Enhanced Calcitic Limestone to neutralize soil pH when conditions below 6.5 exist. Optimizing soil conditions help increase the availability of plant essential nutrients and enhance turf establishment. Lime treatments should be made before the soil is frozen.

## Rake the Leaves

Raking leaves can be a big job, especially if large trees are on a property. Fallen leaves should be raked up as soon as possible, don't wait to rake before all the leaves have fallen from the tree. If leaves are left unraked, they can pile up to the point of suffocating the grass causing dead patches. Fungal diseases can also become a problem over the winter if matted down leaves are covering the lawn. Using a lawn mower to mulch leaves, or a bagger to pickup leaves can make the job easier than raking.

## Water as Required

Even though its fall, the lawn still requires water. Always maintain the recommended irrigation practices if water is required outside natural precipitation. Water deep and infrequent, water early morning, and avoid overwatering. In-ground sprinkler systems require winterization to prevent overwinter damage. Be sure to schedule system winterization well in advance of freezing temperatures.