ASK THE EXPERT

DR. BALAKRISHNA RAO

Best time to collect maple syrup

Problem: When is the best time to collect maple syrup? What are the conditions which maximize sap flow? *(Massachusetts)*

Solution: Dr. Roger Funk, vice president of human and technical resources for The Davey Tree Expert Co., offers the following:

In Massachusetts, the sap flow occurs from October to April, if freezing nights are followed by warm days. It ceases if temperatures are consistently above or below freezing, and it starts on the south side of the tree. Most sap flows occur between 9 a.m. and 12 noon.

Maple sap contains sucrose, small amounts of glucose, inorganic salts, nitrogenous compounds such as peptides and amino acids, amylases, and unidentified organic consituents. Sugar comes from starch, which is converted by enzymes and then secreted into xylem.

The flow seems to be caused by stem pressure. This is produced by rising temperatures followed by low—but not necessarily freezing—temperatures. Another possible explanation is that carbon dioxide accumulates in intercellular spaces during the day. This would cause pressure that forces sap out of wounds at night, when carbon dioxide is absorbed.

Reducing the pressure would cause water to move upward from the roots which would then refill the xylem vessels.

Product review: Pendulum herbicide

Problem: We are a small landscaping company. One of our employees mentioned that a product called Pendulum can be used for weed control in landscapes. Can it be applied over the landscape plants? *(Michigan)*

Solution: Pendulum is a pre-emergence herbicide from American Cyanamid Co. It is available as Pendulum WDG (water dispersable granular) formulation. Its active ingredient is called pendimethalin.

Pendulum herbicide is labeled for use on top of and around many established ornamental plants. It is labeled for a number of trees, shrubs, flowers, budding plants and groundcovers, and is active against many grasses and several broadleaf weeds. It prevents weeds from emerging as they germinate.

Pendulum is also labeled for use in non-crop areas, such as utility right-of-ways.

Read and follow label specifications for additional information and better results.

Sand, nutrients will improve athletic turf

Problem: Will fertilizer or lime improve the turf on a football practice field? How about adding round sand before coring to help increase the rooting zone? *(New York)*

Solution: Based on soil test results and as needed, fertilizer and lime can be used when trying to improve turf on football practice fields.

Adding sand before coring would not be as beneficial as adding it after coring. By adding sand after coring, there is a greater chance for the sand particles to fall into the aerification holes.

Reports suggest that adding medium to coarse sand (0.25 to 1.2 mm in diameter) is useful when trying to reduce compaction and increase root depth.

Continued use of sand could lead to layering or the development of a soil interface.

Guidelines for firmly-rooted sod

Problem: Last year we repaired a number of lawns which were severely damaged by insects or diseases. We used sod as a means for fast recovery. The problem is that it is not rooting very well. What can be done, and how can we avoid the problem in the future? *(Michigan)*

Solution: Poor rooting of newly-sodded turfgrass may be due to several factors, such as lack of sufficient moisture, soil interface or improper soil preparation at planting.

After installing the sod, you must provide sufficient moisture during establishment. The edges of sod pieces, if not sealed properly, can lose excessive moisture during high temperatures.

In addition, most sod is grown on muck soils, and when placed on clay-type soil without good soil preparation, interface problems can develop. The difference in soil types results in incompatibility, causing poor penetration and surface runoff whenever watered. This affects proper rooting.

Prior to sod installation, the soil should be tilled and prepared. At this time, it is easy to incorporate phosphorus, a needed element for root development.

Similarly, any pH correction should be done at this time.

In the future, make sure the soil is prepared properly for root penetration, and sufficient moisture is provided during the establishment period. The areas showing poor rooting can be helped by core aerifying in fall or early spring. If possible, aerify annually for faster results.

Dr. Balakrishna Rao is Manager of Research and Technical Development for the Davey Tree Co., Kent, Ohio.

Mail questions to "Ask the Expert," LANDSCAPE MANAGEMENT, 7500 Old Oak Blvd., Cleveland, OH 44130. Please allow two to three months for an answer to appear in the magazine.