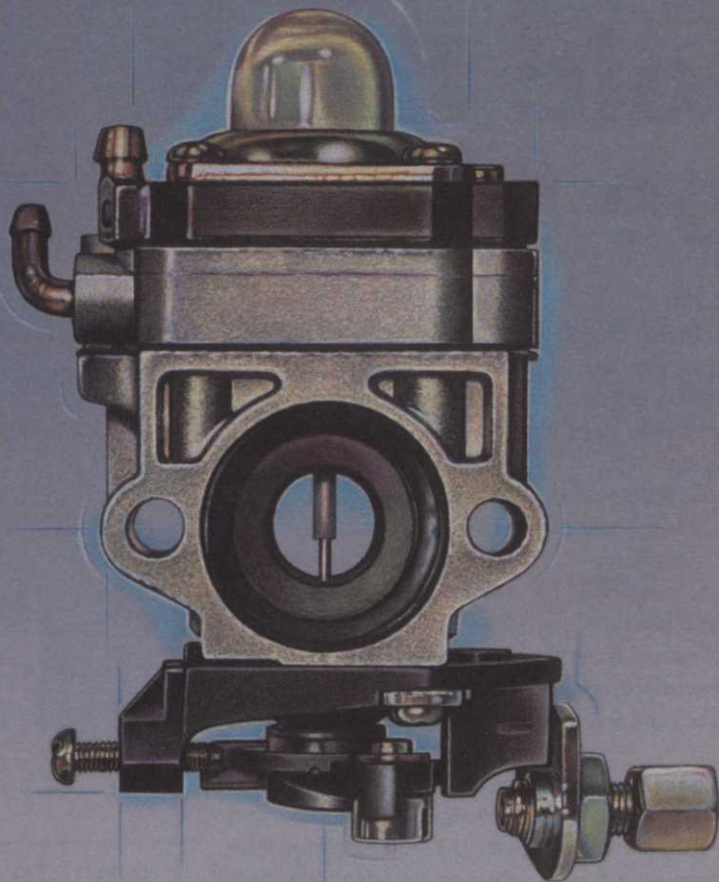


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## Avoid these pipe pitfalls

Install any one of these new irrigation system components and it's likely the job will involve solvent-cemented joints for the PVC piping.

Be happy with the new system – do the job right. Thomas Christy of T. Christy Enterprises, Orange, CA, says that solvent-cemented joints are foolproof if the installer is sure:

- ▶ the joining surfaces are cut square, cleaned and softened,
- ▶ sufficient cement is applied,
- ▶ assembly is done while the joining surfaces are still wet, and
- ▶ the joint is left to cure before it is moved.

Among the most common reasons for failure Christy sees are application of solvent cement to only the surface, or insufficient application to both surfaces; drying of solvent prior to assembly, or using a partly gelled or stringy cement which can't bite into the pipe or fitting; failure to prepare the cementing surfaces, or using the wrong solvent cement; excessive gap between pipes, not properly bottoming the pipe or failure to cut the pipe square; or climatic conditions.

Excessive humidity coupled with low temperature creates water while excessive heat

causes the fusion solvent to evaporate too quickly. Either can ruin a job.

### AGRIFIM, USA

559/431-2003

[www.agrifimusa.com](http://www.agrifimusa.com)

A complete catalog of sprinkler parts is available from Agrifim, Fresno, CA. Included is the Micro-Flo adjustable micro-sprinkler, rated at flows from zero to 25 gal. per hour. This adjustable micro-sprinkler comes with shut-off (10-32 NPT inlet). In addition, the company sells a complete line of Ever-Flo mini-dripperline and a range of tubing and pipe for every irrigation application.

Circle #260

### T. CHRISTY ENTERPRISES

800/258-4583

Be sure all lines and valves are marked correctly. A complete line of marking and identification products is available from T. Christy Enterprises, Orange, CA. Specializing in markers for recycled/reclaimed water, the company offers a complete catalog of valve box plates, adhesive labels, marking tape, warning tags, poly sleeving and paint products for use on any irrigation project.

Circle #261



Rain Bird's sensing and transmitting components

### what to avoid

- ▶ Application of solvent cement to only the surface
- ▶ Insufficient application to both surfaces
- ▶ Drying of solvent prior to assembly
- ▶ Using a partly gelled or stringy cement which can't bite into the pipe or fitting
- ▶ Failure to prepare the cementing surfaces
- ▶ Using the wrong solvent cement
- ▶ Excessive gap between pipes
- ▶ Drying of solvent prior to assembly



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## ELECTRONIC INDUSTRIAL CONTROLS

303/290-9159

[www.eiconinc.com](http://www.eiconinc.com)

Get computerized control of your irrigation with Ceres and Universal systems from Eicon, Englewood, CO. On the Ceres version, rain off may be initiated down to the valve level using the central computer, field controller keypad or hand held transceiver. Contact closure alarm is fully programmable in field controllers with data retrieval board. Runs under Windows 95 and Windows 98. Full two-way communication is available via digital data radio, telephone modem, hardwire connection or any combination. A hand-held transceiver allows for remote control of field controllers. The two way hand-held transceiver allows placing and receiving telephone calls with the optional telephone patch.

Circle #262

## GNC INDUSTRIES

800/462-2005

[www.gncindustries.com](http://www.gncindustries.com)

No longer is it necessary to broadcast spray chemicals that are only needed in specific areas. A new pumping system from GNC Industries, Pocahontas, AR allows the lawn technician to apply the chemicals only when needed, which reduces spray time and chemical usage but still allows the broadcast spraying of the fertilizer on one passing of the lawn. It consolidates two units into one. The system allows green crews to broadcast spray and spot spray using only one unit. The new unit consists of one hose, reel, spray gun and one engine. By combining a split piston pump and a new spot spraying option, it is possible to spray two chemicals simultaneously without mixing them together.

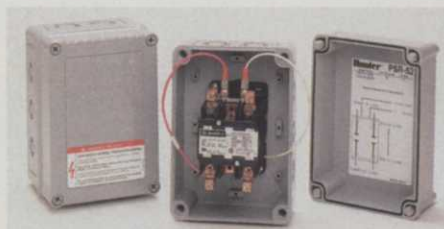
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## HUNTER INDUSTRIES

800/733-2823

[www.hunterindustries.com](http://www.hunterindustries.com)

A pump relay device from Hunter Industries, San Marcos, CA ensures timely and consistent irrigation pump operation on all resi-



### Hunter Industries' pump relay devices

dential and commercial landscapes. The Hunter PSR is available in three models. A compact 7x5x4 in., it is designed to activate on-site booster pumps and can help pull water directly from a creek or pond. Compatible with all 24-VAC controllers, it offers a range of contractor conveniences including flying leads that allow for 24-volt connections and a series of "knockouts" on the cabinet to simplify wiring and mounting.

Circle #264

## KIFCO, INC.

309/543-4425

[www.kifco.com](http://www.kifco.com)

The Series-B Water Reels from Kifco, Havana, IL are designed with turf in mind. The B140P will irrigate a football field with a single pass down the centerline.

There are a dozen other models, with longer tubes and machines for larger areas. They feature automatic shutdown for the water motor, stabilizer feet to anchor the machine during operation, pressure gauge, hose guide and disengagement lever for drive and anti roll-back pawl. Flow rates range from 4-100 gpm with pressures from 35 to 119 psi.

Circle #265

## MULTI-FITTINGS

800/523-3539

The Cycle Tough 4000 line from MultiFittings Corp., Port Huron, MI can handle the typical pressure surges encountered every day by golf course irrigation systems. The

4000 line of PVC pressure fittings for IPS pipe is engineered to meet long-term pressures of 200 psi. They are molded from 1.5 to 8 in. and fabricated from 10 to 24 in. Reinforcing ribs provide added strength in the body of molded fittings by reducing surge-pressure effects.

Circle #266

## NELSON IRRIGATION

509/525-7660

[www.nelson@nelsonirr.com](http://www.nelson@nelsonirr.com)

The R5 Rotator micro sprinkler from Nelson Irrigation, Walla Walla, WA emits a water stream from the nozzle and directs it onto an offset channel on the rotor plate. This creates reactionary drive force. A viscous silicone fluid in the rotor motor controls rotation speed, giving superb uniformity and distance of throw. Models range from the 10 to 23 gph R5 through the .61 to 1.25 gpm R10 Turbo and the big 1.64 to 5.4 gpm R2000VF.

Circle #267

## POINT SOURCE IRRIGATION

559/498-6800

The wear-resistant, clog-resistant design of the Dan 2001 PC spinner head from PSI, Fresno, CA makes it perfect for tough applications. This pressure compensating, pop-up micro-spinner allows a regulated flow from 18 to 60 psi. The diaphragm is made of chemical and wear-resistant EPDM. The

pressure compensating design reduces abrasion and wear on the nozzle and spinner. Also check out the firm's Dan Revolver, an economical alternative to impact sprinklers.

Circle #268

## RAIN BIRD

800/247-3782

The Rain Bird Flow Meter line of 11 sensing and transmitting components makes it practical to incorporate flow metering into new or existing systems. The firm's turf division is located in Azusa, CA and sells tee-type sensors available in 1-in. brass and 1.5-, 2- and 3-in. plastic models. Color coded irrigation-type wire leads and clearly marked flow direction ease installation. Models operate up to 400 psi and temperatures to 221° F. All provide accuracy to 1%. Signal-alone models can be used with all central control systems. Stand-alone models provide an LCD display which shows actual and total flow.

Circle #269

## SYNCRIFOLO

800/866-4443

[www.syncroflo.com](http://www.syncroflo.com)

The Gator line from SyncroFlo, Norcross, GA is perfect for small irriga-



### Low profile Gator pump unit

tion applications that require a reliable and affordable pump station



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# lm reports

for flows from 30 to 250 gpm at 130 psi. The Gator Pumping Systems blend with the environment as low-profile units concealed in weather-resistant, snap-hinged, lockable steel enclosures. Units react to flow pressure requirements. Digital flow display and backflow prevention devices available.

Circle #269

## **RAINMAN** **800/433-6745**

Several irrigation controller enclosures are available from Rain Man, Anaheim, CA. The stainless steel model is made of 14-gauge 304 stainless and has waterproof silicon gaskets. Despite its low price, it has a 6-year warranty. A cold-rolled steel version offers a 3-year warranty. Both units come in a variety

of widths and depths, and stand either 36 or 40 in. tall. The finishes on these boxes are as good or better than those found on a typical car, the manufacturer says.

Circle #270

## **TORO** **909/688-9221** [www.toro.com](http://www.toro.com)

The Flo-Pro line of valves from Toro, Bloomington, MN features no-leak performance and a three-



Toro's Flo-Pro line

year warranty. It delivers between 0.25 gpm water for drip irrigation

up to 30 gpm for full irrigation of residential landscapes. Available in 1-in. electric in-line and 1-in. angle models, it includes the optional QuickLink solenoid that provides watertight connection with the controller, 1-in. and 0.75-in. anti-vacuum breaker models, and a variety of connection options.

Circle #271

## **TRANSITIONAL SYSTEMS** **MFGR.**

### **530/751-2610**

The Doubler valve control module allows more valves to be installed using existing control wires and controller. When pressure drops, another valve may be added next to an existing valve to serve one or two sprinklers. Priced at \$139 from Transitional Systems, Yuba

City, CA, the Doubler is the answer to any drop in supply volume or pressure. It requires an 8-amp circuit and operates on 24 VAC.

Circle #272

## **WATTS ACV** **713/943-0688**

Whether it's float control, solenoid control or pump control valves, Watts Automatic Control Valves, Houston, TX has an efficient model. The main valve, globe or angle pattern is diaphragm actuated, hydraulically operated. It consists of only four major components: body and cover plus interior seat and diaphragm/stem assembly, which is the only moving part in the main valve. Irrigation valves come sized from 1.25 to 6 in.

Circle #273

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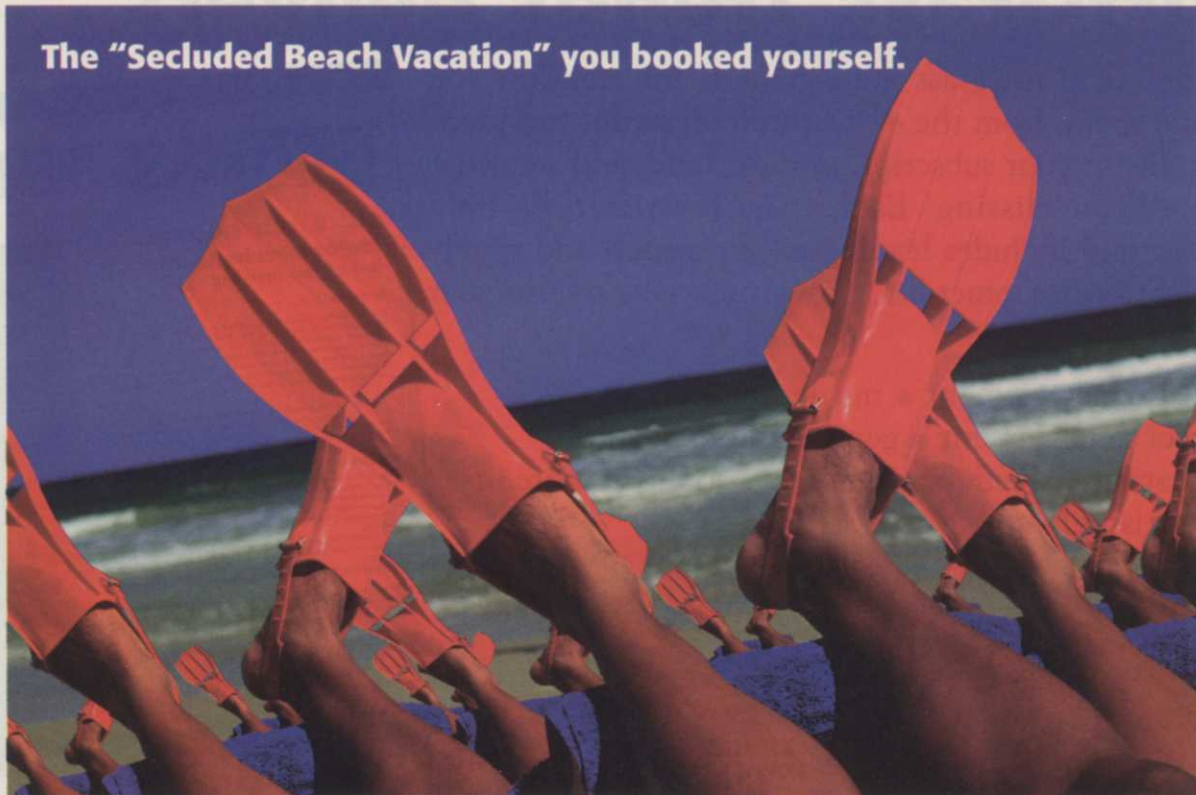
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# ask the expert

BY BALAKRISHNA RAO

## Gypsy moth infestation

**We are seeing an increase in the number of gypsy moth infestations in our area in recent years. How do you distinguish these gypsy moths from other similar caterpillars who cause defoliation through this feeding?**

— OHIO

The gypsy moth problem has been increasing in recent years in northeastern Ohio. The eastern strain is mostly found in the northeastern United States and eastern Canada. The gypsy moths overwinter in beige colored egg masses covered with short hairs. The eggs in this strain hatch in late April through May in Ohio. The other strain, called Asian, is found in western Canada and has been reportedly eradicated.

The young larvae hatch in spring and the small larvae feed by day, but as they go through five moltings and get larger, they begin feeding at night and moving to sheltered places during the daytime. This is when the burlap wrapping around trunks might be useful. However, some larvae may walk on top of burlap and escape. Trapping under burlap wrapping and discarding may eliminate a few larvae, but the larvae can move from one tree to another by producing silken threads and ballooning, spreading from tree to tree.

Fully grown larvae can be 60 mm in length, hairy, and have two rows of spots down their backs. The first five pairs are blue and the next six pairs are red. The maturing larvae feed singly and aggressively at night, and their droppings come down like raindrops.

By July, larvae mature and seek areas such as bark, lower sides of branches, bark

crevices, picnic tables, and house walls to pupate. Pupation lasts about 14 days and adult moths, light brown with black markings on the wings, emerge to mate. Females are larger than males. In the European strain, the females lay beige colored eggs (300-1,000) near their pupal case and don't fly. With the Asian strain, females can fly after mating and spread the egg masses.

Extensive larval feeding during May and June can cause premature defoliation. Oaks, poplars and maples can be defoliated by summer and prompted to produce new leaves using the stored energy. Yearly infestation can make the trees more susceptible to other problems. Oaks affected by gypsy moths can often become susceptible to borer and oak wilt diseases.

If practiced properly, burlap wrapping to collect and discard large larvae can be effective in managing gypsy moths. Another method is to remove the egg masses as much as possible. When the larvae are small, a bacterial insecticide *Bacillus thuringiensis*, a biological control agent, can be used. As they get larger, use products such as Sevin, Conserve, or Talstar.

One moth larvae that looks like the gypsy moth is the Eastern tent caterpillar. Unlike the gypsy moth, the latter produces egg masses on branch terminals. The newly hatched young caterpillars move to branch crotch areas, build webs and hide inside during the daytime. At night, they come out and feed. The larvae do not have colored dots like gypsy moths.

## Black vine weevil damage

**Quite often we find adult black vine weevil feeding damage as well as scale**

**problem on ground cover type euonymus. How do we manage this?**

— MICHIGAN

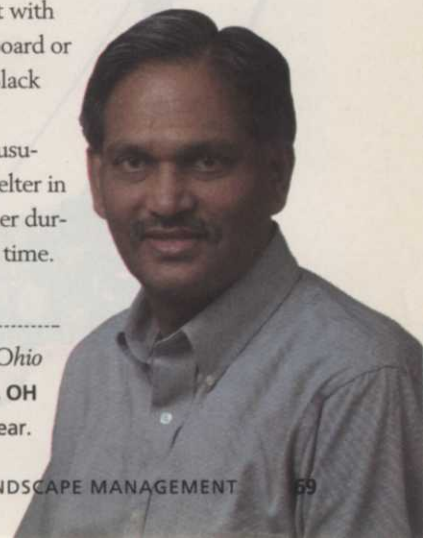
For managing euonymus scale, apply horticultural oil as a dormant spray in late fall or early spring. Oil can also be used as a foliar treatment throughout the entire growing season. However, mid-June, early July, and again in early November would be the peak application periods for using other contact insecticides such as Talstar.

For managing black vine weevil adults, apply pesticides such as Orthene, Talstar or Dursban on foliage. Treat the foliage at 3- to 4-week intervals from early May through August. Keep monitoring for any new feeding activity. You may not find the adults out during the day because they feed at night. If you find new feeding activity (notching on leaves), treat again. Continue treating at 3- to 4-week intervals until no living adults are found.

To monitor for black vine weevil activity, check the plants at night after 9 p.m. Place white paper or a cloth under the plant and shake the leaves and branches. If the adults are present, they will fall on the white paper or cloth. Another easy option is to collect the adults in traps. Simply bury a container at the soil line and cover it with some cardboard or plywood. Black vine weevil adults will usually take shelter in the container during the day time.

Manager of Research and Technical Development for the Davey Tree Expert Co., Kent, Ohio

**SEND YOUR QUESTIONS TO: "Ask the Expert" Landscape Management; 7500 Old Oak Blvd.; Cleveland, OH 44130, or email: [sgibson@advanstar.com](mailto:sgibson@advanstar.com). Please allow two to three months for an answer to appear.**

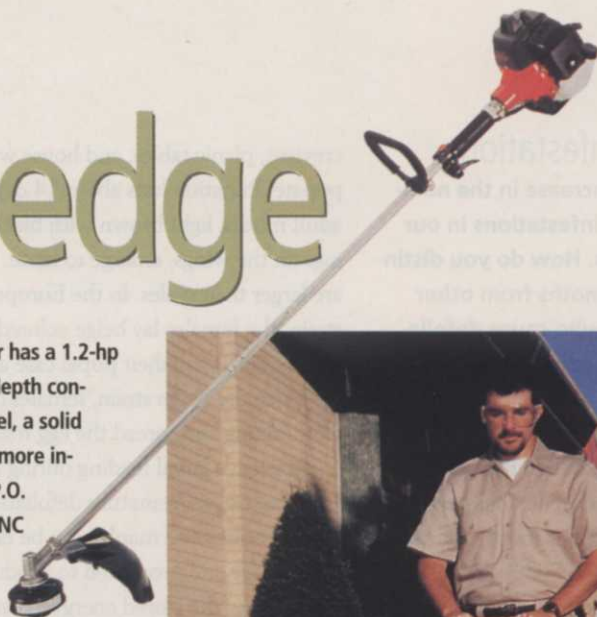


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