

GOVERNMENT

UPDATE

dent Gordon King and Past President Yvon Fournier discussed the need for a commercial arborist association of ISA. A planning committee of five ISA members was appointed to study and evaluate the needs for it. A student from the University of Massachusetts will run a survey of the membership, and the planning committee will submit its findings at next year's meeting in Michigan.

Executive Director Cal Bundy says the movement has strong support. Sixty percent or approximately 4,000 members of ISA are involved in commercial arboriculture.

INDUSTRY

Court upholds CPSC power mower standard

The safety standard for walk-behind power mowers issued by the Consumer Product Safety Commission (CPSC) has survived industry challenges and been upheld by the Fifth Circuit Court. Barring further delays, mowers with all the required safety features will be on the market in 1982.

The CPSC standard requires the following safety features for mowers: protective shields at the rear of the mower to keep the operator's feet clear of the blade; shields that will automatically close or prevent the blade from spinning when a grass-catcher or other accessory is removed; and a "deadman control" that must be held down to allow the blade to turn and that will, when released, stop the blade within three seconds, according to *Consumer Reports*.

The standard also requires the protective shields to pass two tests: one for strength, another to insure that the shields won't interfere with a mower's convenient operation, so consumers won't consider them a nuisance and remove them. As a final precaution, both rotary and reel-type mowers must carry a warning label. The safety devices and tests will add about \$35, on average, to the price of a mower, according to CPSC estimates.

CPSC claims that blade contact accounts for about two-thirds of the injuries, or 77,000 persons a year, that sustain bruises, cuts, or the loss of at least one finger or toe. The agency says that mowers could be designed to eliminate or reduce the severity of more than three-fourths of all blade contact injuries.

The Outdoor Power Equipment In-

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Farm labor bill introduced to House

Rep. Leon Panetta, D-CA, has introduced Farm Labor Contractor Registration Bill HR 7824 to the House of Representatives which will effectively exempt nurserymen from amendments to the FLCRA Act. This bill is identical to the amendments recently passed by the Senate's 57 to 37 vote.

Panetta said, "The passage of this bill would not only restore the basic intent of the law but would ensure that the Department of Labor directs its limited resources to the important and difficult job of protecting farmers and farm workers from the abuses of unscrupulous crew leaders who generally move with the harvest and serve as independent labor suppliers to more than one operation at a time."

The American Association of Nurserymen (AAN) and American Sod Producers Association (ASPA) are urging their members to write their representatives asking for the bill's support.

ASPA members are also being asked to send any copies of their replies to ASPA Washington representative Tom Hammer, % Nelson & Harding, 1101 Connecticut Ave. N.W., Suite 800, Washington, D.C. 20036.

Assistant ag secretary Cutler resigns

Rupert Cutler has resigned his assistant agricultural secretary position to accept a position with the National Audubon Society, which specializes in research and lobbying on wildlife, wilderness, public lands, endangered species, and water resource management.

LANDSCAPE

CONTRACTOR NEWS

Architects' exhibit will attract suppliers

Landscape industry suppliers are expected to exhibit their products and services to hundreds of landscape architects at the 1980 American Society of Landscape Architects' Educational Exhibit Nov. 22-24.

Held in conjunction with the 1980 ASLA annual meeting at the Fairmont Hotel in Denver, the industry show will attract landscape architects to learn 1980 state-of-the-art information for their design profession.

ALCA directory contains over 800 listings

The Associated Landscape Contractors of America has published the 1980/1981 Who's Who in Landscape Contracting with listings for commercial landscape contractors throughout the United States.

The new listing is available on request to landscape architects, general contractors, and other qualified buyers and specifiers of landscape work. Cost is \$3. Write on letterhead to: ALCA, 1750 Old Meadow Road, McLean, VA 22102.

PLANNING AHEAD FOR COLORFUL AND MIXED VARIETIES IN PLANTING DESIGNS

By Gary A. Anderson, Chairman, Horticultural Industries Technologies Div., Agricultural Technical Institute, Ohio State University, Wooster, OH

Autumn is a good time to sit back and reflect on the performance of annual plantings during the past season and begin planning next year's combinations. It is easier to visualize the size, color compatibility, and design impact when looking at the plants in a garden than it is when thumbing through a seed catalog or gardening book. The success or failure of certain plants in the specific growing site can be noted. Plant growth may reflect drainage problems, shade that is too dense for the particular plant, or presence of a soil-borne disease.

Any conclusions reached should be viewed in the light of the particular growing season. If the latter part of summer has been unusually wet, it is not uncommon to witness poor performance of geraniums and petunias. Frequent rains spoil the



Mixed border near the entrance to the Agricultural Technical Institute in Wooster, OH, shows salmon cannas, mixed coleus, blue salvia, blue petunias, salmon geraniums, and ageratum. Mixed plantings can add interest to building entrances where viewers can see the plant material at close range.

flowers and high humidity provides ideal conditions for fungus growth. During a more normal season, these flowers will bloom profusely and can rightfully form the color backbone of the landscape.

Versatile Plantings

Some flowering annuals are slow to get established in the spring, but once they start growing they provide a reliable source of color under a wide range of environmental conditions. Vinca or periwinkle (*Catharanthus roseus*) is one such plant. During cool spring weather, especially if this condition is combined with moisture and fertilizer stress, the young plants may look chlorotic and

show little growth. As the season progresses and temperatures increase, the plants fill in, giving a rich green mat of shiny foliage topped with hundreds of delicate pink and white blossoms. The plants hold up under periods of extreme heat and prolonged drought but are not damaged by frequent rains and high humidity.

Wax begonias remain one of the most reliable plants for garden color throughout the entire season. They bloom freely both in sun and shade, making them an excellent choice when light conditions vary significantly within a given planting area. When flower beds are partly shaded by trees or extend around to the north side of a building, a sun loving annual in these beds will not perform well. Fibrous rooted wax begonias flower heavily in the sun; however, foliage may be somewhat sun scorched. This blemish is seldom very noticeable since the plant is covered by so many flowers. Wax begonias can tolerate drier conditions than impatiens but grow and develop much better when adequate water is available.

Begonias fill out into nice mound-shaped plants. Although plants spaced 8 inches apart will quickly fill in forming a solid ground cover, some feel that a greater spacing allows for more definition of the plant's natural growth habit and requires fewer plants per planting area. Another aspect to consider is that greater spacing allows for more air movement around the plant and reduces the probability of disease problems during wet, humid weather. Wax begonias are good candidates for well delineated planting patterns and also combine well with other plants in mixed plantings.

Petunias are a widely used annual and a favorite of many groundskeepers for sunny areas. When they are in full bloom they are very showy; however, they do have a few drawbacks. After a peak of bloom in late June or early July, the plants become tall and lanky, often breaking over. This condition is worsened if there is a lot of rain. Water tends to spot the petals, and rain, especially when it is accompanied by wind, riddles the open flowers and helps break down the plants. The solution is to cut back the plants several inches, which induces lateral branching and eventually more compact flowering stalks. But while this vegetative rejuvenation is occurring, the petunia bed is devoid of color. This problem can be lessened by cutting back different areas of the bed at different times so that future blooming peaks are staggered. Starting the growing season with compact, stocky plants will also result in improved growth throughout the season. When petunias are grown in combination with other plants, either in the ground or in containers, the legginess is less of a problem, since the other plants serve as a source of support and new blossoms continue to form on the ends of stems.

Continues on page 14

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Flowers That Highlight Certain Seasons

Some flowering plants provide spectacular seasonal color. The spring flowering bulbs are a good example of this. Bulbs planted in the fall develop into showy harbingers of spring without much special care. The bulbs make a good alternative planting with annuals since they can be planted after frost has killed the annuals. In the spring, they finish flowering before it is safe to set out most annuals. The bulbs can either be removed before planting the annuals or the annuals can be set between the bulb foliage. The foliage must be allowed to die back naturally so that enough food is stored in the bulbs for growth and flowering the subsequent year. If this method is practiced, there is a period in late May and early June when the beds look a bit untidy, but it is an economical and labor-saving technique for bulbs that retain their quality year after year.

Narcissus are excellent plants for reliable spring bloom. They multiply over the years and do not usually decrease in flower size. Tulips are less robust and usually produce smaller flowers with much less uniformity the second year. Hyacinths are showy and fragrant the first year, but are notorious for running downhill in successive years.

Chrysanthemums are outstanding for fall color and are especially valuable when early frosts kill many of the annuals. Chrysanthemums can be grown in beds by themselves or mixed with other plants. Since no color can be expected from them until late August or early September, patches of mums should be scattered among other flowers or perhaps placed to the back of a border. Violas are a good candidate to plant with mums. These frost tolerant plants can be put out very early in the season when the mums are small. Violas perform best when temperatures are cool but many varieties bloom throughout the summer.

Foliage Plants

Some foliage plants can be used effectively by themselves or as a reliable backbone in the annual garden. Coleus is a showy plant, free of insect and disease problems. It can be used in shade or full sun to give showy mounds of interesting foliage. Rain may cause many flowers to fade but the bright color of coleus will be unaffected.

Dusty miller is an extremely dependable plant that combines well with almost all other annuals. The silvery leaves tie together other colors that might normally clash. Silver and white give unity to planting and enhance other colors. Red begonias and nicotiana appear more red when accented with white than they do by themselves.

Kochia, parsley, opal basal, flowering kale, amaranthus and 'Irish Lace' marigold are plants grown primarily for their foliage. They can be combined to make an all foliage garden with interesting color and texture variation. When combined with other flowers they can compliment or accent the flower color.

Garden Designs

Planting designs should be worked up before plant material is purchased. There is no right or

wrong scheme. One should be aware of different possibilities and constantly look for new combinations. Otherwise, one can fall into a rut of planting the same thing year after year.

The simplest scheme is a bed of all one variety of plant. Large areas of a single color have high visual impact and carry a great distance. Red geraniums against a railroad tie retaining wall are distinctive and can be seen many yards away.

Mixed colors of a single plant variety can be used to add more interest to a bed without getting into any complexities of combining plants. Beds of mixed floral carpet snapdragons, mixed zinnias, or mixed portulacca can sparkle like jewels in the sun. The variation lures the onlooker to come closer and examine the different colors.

Simple borders of two or three plants usually require plants of different height. Shorter plants are placed in the front of the border or outside of the bed. The result is a stair-stepping effect. Color combinations may be either contrasting or analogous. An example of a contrasting color scheme is 'Nicki Red' nicotiana and white sweet alyssum. Yellow sunflowers and orange African marigolds with gold dwarf marigolds in the foreground provide an analogous color scheme with considerable height difference.

More complex planting schemes may include geometric and mixed designs. Patterned designs are usually somewhat formal. Triangles of dusty miller may enframe areas of wax begonias, geraniums, ageratum, or other plants of approximately the same height. Designs of flags, maps, clocks, or faces are possible if tidy plants with a low growth habit are selected. Wax begonias, telanthera, santolina, and parsley are good choices.

Mixed plantings can be used to give a European look or a more informal country garden appearance. Combinations of several plants are best appreciated when viewed close up. They are good near entrances to buildings or places that are not passed by too rapidly. An advantage of this type of planting is that during the growing season those plants which are best adapted to the weather or soil conditions take over while the others recede into the background. This may be referred to by some as a "never-fail" approach to gardening. It is practical since one never can predict accurately what kind of a season is ahead.

In planning a mixed planting, one should scatter the various plants throughout the area with the taller ones being generally placed toward the back. The stair-stepping effect should be staggered gradually toward the front. The larger more dominant plants are usually placed first, with smaller accent plants added last. One possible combination set in front of a background of salmon cannas is assorted coleus, blue salvia, salmon geraniums, salmon wax begonias, and blue ageratum. Another good background plant is cleome.

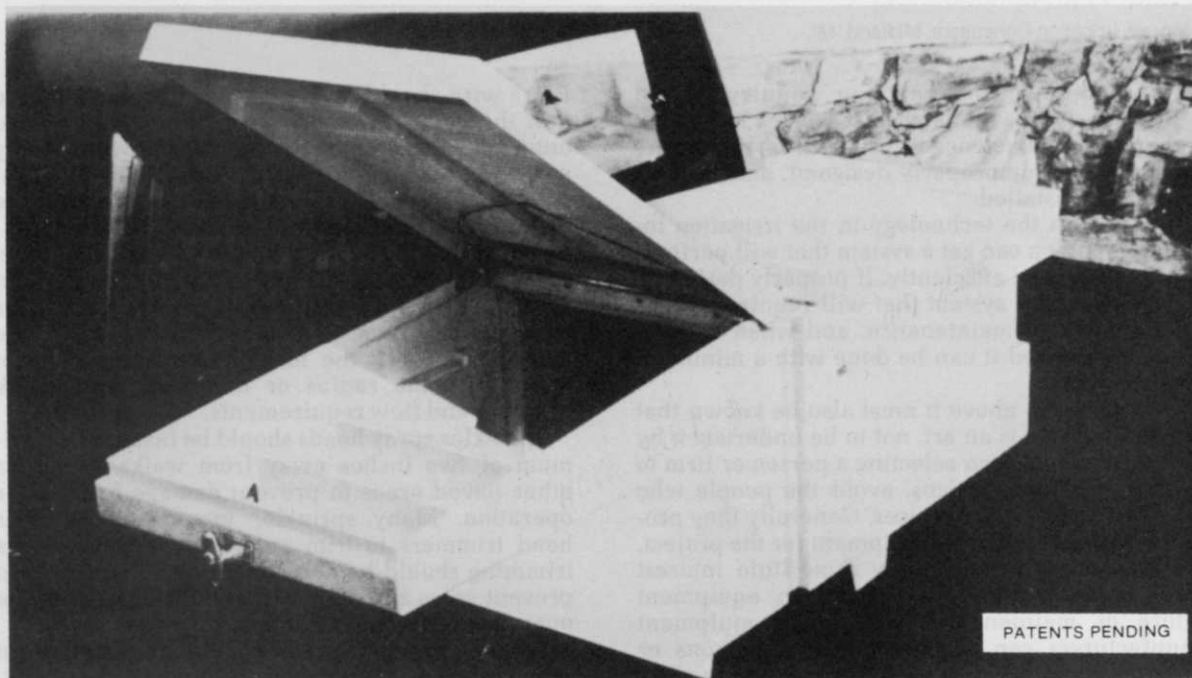
If you are not familiar with some of these plants, now is a good time to look for them and decide if they would be an asset to your grounds. If you haven't tried some of the different plants, plan to do so next year. Variety not only pleases the public but makes the groundskeepers job more exciting.

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IRRIGATION PROJECTS REQUIRE THE RIGHT DESIGN AND PROPER EQUIPMENT

By Mike Morey, Irrigation Consultant, Midland, MI

Many people throughout the country would hesitate to specify that a project receive irrigation. Perhaps their reluctance is formed from a past project which was improperly designed, and in turn, improperly installed.

Today, with the technology in the irrigation industry, a person can get a system that will perform economically and efficiently. If properly designed, he can also get a system that will require a minimum amount of maintenance, and when maintenance is required it can be done with a minimum amount of time.

In view of the above it must also be known that irrigation design is an art, not to be undertaken by the unknowing. When selecting a person or firm to provide irrigation designs, avoid the people who don't charge for their services. Generally they provide the plans to sell the equipment for the project, and once it is installed they show little interest about what happens in regards to equipment failure or maintenance costs. Most equipment manufacturers can provide a list of persons or firms that are trained in irrigation design. The American Society of Irrigation Consultants has members throughout the country.

An irrigation design consultant can provide the following services: 1. Preliminary studies and cost estimates 2. Preliminary plan for review 3. Construction plans and specifications 4. Assistance in receiving and reviewing bids. 5. Construction supervision 6. Final project reports. The design consultant can provide many other services. It is best to contact your local consultant for specific details. A qualified consultant can design using any manufacturers' equipment as per your choice.

The following are just a few items that if used will prevent many problems found in irrigation systems.

Velocity of water in the piping system must be controlled. If not, it can cause lines to burst or will weaken piping over a period of time. Many polyethylene (PE) pipe failures can be directly attributed to excess velocity. The Plastic Pipe Institute (PPI) recommends the following: "The maximum safe water velocity in a thermoplastic piping system depends on the specific details of the system and the operating conditions. In general, 5 ft/s is considered to be safe." Many pipe manufacturers do not recommend any velocity over 5 ft/s. for use in turf irrigation.

Sprinkler control valves should be equipped with manual bleeds to permit operation without the controller. This feature can save on maintenance time if controller location is not close to the valve area. Valves also should be equipped with manual flow controls to enable a person to close the valve if it fails to close automatically. Valves should be installed in valve boxes large enough to permit manual operation for removal of solenoid and/or valve cover without any earth excavation required. Box depth should extend to depth of valve to prevent any earth cave-in onto the valve.

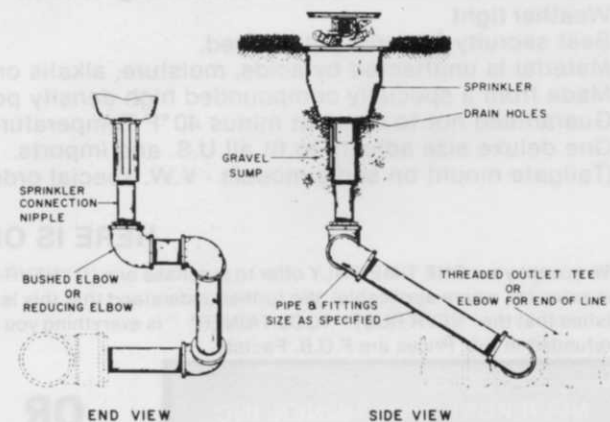
Extra wire should be provided in the valve box so that the valve cover can be removed and placed onto the earth next to the valve box without any cutting of solenoid wires. Wire connections at valves and on all underground splices should be water tight by the use of dri-splice connectors.

Sprinkler heads are rated by each manufacturer for maximum spacing and should be derated for existing wind conditions as per manufacturers recommendations. When approving alternate equipment check the maximum spacing and not necessarily the radius or diameter. Also check pressure and flow requirements.

Sprinkler spray heads should be installed a minimum of two inches away from walks, curbs, or other paved areas to prevent damage from edger operation. Many sprinkler manufacturers offer head trimmers to trim grass around heads. This trimming should be done on a regular schedule to prevent grass and debris from interfering with the operation of the sprinkler heads.

Rotary sprinkler heads should be installed on swing-joints on large projects for two reasons: 1. Protection of lateral piping against damage from heavy maintenance equipment running over heads and 2. Facilitating setting heads to proper grade.

Figure 14-53, taken from The Turf Irrigation Manual by James A. Watkins, illustrates the swing



joint. Note that the horizontal nipple just below the head is shorter than the nipple connected to the lateral. This is important. If the upper nipple is too long, and the head is depressed deep enough from the vertical load of heavy equipment, the lateral could be crushed.

These joints must be assembled from threaded nipples and fittings to be effective. Threads provide the swivel action needed to counteract either top loading or side impact. Swing-joints should be installed in a manner that the nipple into the lateral pipe fitting will loosen under load on the head, not tighten.

Caution: Pressure loss in swing-joints can affect head performance if not sized correctly. Often,

Continues on page 21



Healthy Turf Next Spring Starts With IBDU This Fall

Sure, there's more to maintaining quality, disease-free turfgrass than a couple of fertilizer applications. But turfgrass scientists across the country are reporting that a fall application of IBDU (31-0-0) can produce turfgrass with better root development and less disease problems.

Dormant turfgrass plants continue to produce rhizomes and roots, even though vertical growth has stopped. During this time nitrogen should be made available to the turfgrass plant as carbohydrates are naturally accumulating. Thus, scientists say, the optimum timing for nitrogen applications is during the fall and early winter months.

IBDU (31-0-0) is ideally suited for dormant nitrogen fertilization. Because of its slow release characteris-

tics based on hydrolysis, IBDU releases nitrogen later in the fall and earlier in the spring promoting better rhizome and root growth. A fall fertilizer program using IBDU should produce healthier more vigorous turfgrass plants and reduce the severity of several turfgrass diseases.

Remember. Healthy turf next spring starts with IBDU this fall.

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