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Minimum truckload weights cancelled

Proposed increases in the minimum truckload weights of nursery stock have been cancelled by the Central States Motor Bureau. Bohman Industrial Traffic Consultants had vigorously protested the increases in behalf of the American Association of Nurserymen.

In line with this and the fact that truckers can now charge any rate they choose, a “Truck Broker Directory” is available which lists over 4,000 sources for return loads, including truck brokers, back haulers, distributors, and trip-lease contractors in all 50 states and Canada. The directory costs $25. and is available from J.J. Keller & Associates Inc., 145 W. Wisconsin Ave., Neenah, WI 54956 or call (800)558-5011.

Friends of the Earth expand petition

Friends of the Earth, who petitioned the EPA for buffer zones around fields sprayed by air or large broadcast systems, have also called for “permission to spray” notices from neighboring residences.

The EPA has dropped most of its activity on the petition because of too much pressure from the agriculture community and Congress. The agency will still look into the new proposal by Friends of the Earth, but no regulations are expected soon.

Carter signs act to aid small businessmen

Former President Jimmy Carter has signed into law the Equal Access to Justice Act (S-265). This permits reimbursement for attorney’s fees to small businesses involved as either plaintiffs or defendants in suits involving federal agencies unless the government is able to prove its position.

U.S. Arboretum will get Japanese herbarium

The U.S. National Arboretum in Washington, DC has made arrangements to purchase what is believed to be the largest private herbarium in Japan.

The herbarium comes from Miyoshi Furuse, an amateur botanist and retired Tokyo bus driver who has spent more than 40 years building the collection of about 60,000 specimens. His entire collection, including duplicates, has about 130,000 items.

“When the transfer of the Furuse collection is complete, the Arboretum will have the largest herbarium of Japanese plants outside Japan,” says Dr. Frank S. Santamour, acting director of the Arboretum. “The collection has great scientific value for botanical and horticultural research.”

EPA claims fungicide Captain hazardous

The Environmental Protection Agency is considering the restriction or banning of the use of Captain, a widely used agricultural and industrial fungicide, based upon studies linking it to cancer and genetic damage in laboratory animals. However, two major chemical companies are disputing these claims.

Chevron Chemical Co. will defend the fungicide’s use by trying to prove that it poses no significant hazard when used according to label directions.

A spokesman from Stauffer Chemical Co. said, “There isn’t any evidence of human risk or a scientific basis for extrapolation of the unvalidated laboratory data cited by EPA.”

At the conclusion of its investigation, EPA will decide whether to allow continued unrestricted use of Captain, to require new limits on its use, or to ban it.

EQUIPMENT

Independent distributors form association group

An association to help meet the needs of independent outdoor power equipment distributors was formed in October.

Named the Outdoor Power Equipment Distributors Association, the group elected Joe Brady of Joe Brady & Associates, Birmingham, AL, as president. Wyn Eaton of Eaton Equipment Corp., Hamburg, NY, was elected vice president. William Niemeyer of the Niemeyer Corp., West Chester, PA, was elected secretary and Joe Porter of Porter Brothers, Shelby, NC, was elected treasurer.

The firm of Fernley & Fernley, Inc., will provide association management services for the group. The address is 1900 Arch Street, Philadelphia, PA.

COURTS

Monsanto set to protest EPA lawsuit

Monsanto Co. says it will protest vigorously a lawsuit brought against it by the Environmental Protection Agency seeking to force it to clean up alleged polychlorinated biphenyl pollution in Waukegan Harbor, north of Chicago.

The two-year-old suit originally charged only Outboard Marine Co. with violating its discharge permit by dumping hydraulic fuels containing PCB’s, which it had bought from Monsanto. The EPA’s action is “a clear attempt by the government to hold manufacturers of chemicals responsible for alleged improper waste disposal by others,” says Monsanto’s manager of product and environmental safety, John H. Craddock.

NATURAL PESTICIDES

Desert shrubs sub for expensive pesticides

Scraggly desert shrubs that make their own natural pesticides may offer alternatives to products now made...
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from expensive petroleum, says a University of California biologist.

"We do have an alternative to petroleum-based chemicals, and we have it in natural sources," says Eloy Rodriguez of UC, Irvine. "And desert plants are not rare; they grow like weeds."

"The brittlebush is a good example. It is very common in Southern California, and it produces a whole repertoire of defensive chemicals," he says. Like most natural pesticides, the shrubs' defenses don't directly kill insects, at least not in concentrations found in nature. The brittlebush makes several chemicals classified as terpenoids, which repel hungry pests.

The brittlebush also makes chemicals called precocenes that produce more dramatic effects by confusing the bugs' development. "The adult (insect) will be sterile and sometimes they are deformed," he said.

Aside from pesticides, some desert plants may be farmed for use as substitutes for other kinds of petroleum products as oil supplies dwindle. Two popular possibilities, he said, are guaye, which produces a type of rubber, and jojoba, which contains a lubricant similar to whale oil. Both plants grow well in the desert but don't have the natural insecticides of the brittlebush. He cautioned, though, that just because a chemical is found in nature doesn't mean it's not dangerous.

**SEED**

**Good harvest, markets help Vaughan-Jacklin**

An excellent harvest of proprietary grass seed and promises of better sales in foreign countries and reclamation are brightening the profit picture for Vaughan-Jacklin Corp., Downers Grove, IL.

John Vaughan, president and chief executive officer, said sales have picked up and future bookings are very healthy for seed, foliage, and garden products sold by the corporation. Vaughan said potential sales to China, Japan and parts of Europe are great and implementation of reclamation regulations will start to take effect.

The corporation's sales for the third quarter of 1980 were down slightly but earnings increased. Bookings indicate a strong fourth quarter. Vaughan cited this year's hot, dry summer for decline in sales of some plant products.

**TURF**

**Study relates effect of petroleum spills**

A field study conducted on 'Tifgreen' bermudagrass has determined the injury symptoms and subsequent recovery rates from petroleum spill damage. D. Johns and J.B. Beard of the department of soil & crop sciences, Texas A&M University, applied five petroleum products commonly used in turfgrass maintenance equipment—gasoline, motor oil, hydraulic fluid, brake fluid, and grease. They then attempted to treat the turf with calcined clay fines, activated charcoal, and detergent.

The detergent washing proved to be an effective treatment for turf with spilled hydraulic fluid, brake fluid, and motor oil. In two cases, they achieved complete recovery three to six weeks sooner than with other corrective procedures.

None of the corrective treatments were effective on either the gasoline or grease damaged turf. The bermudagrass recovered rapidly (three to four weeks) from gasoline spills without corrective procedures. It took more than 10 weeks to recover from grease spills.

**EQUIPMENT**

**Standard issued for chain saw safety**

Chain saw operators will benefit from new standards established for manufacturers that have been published by the American National Standard Institute.

The publication gives requirements for the design and construction of hand-held, gasoline powered chain saws. It includes requirements for throttle control systems, handles, pull-type starters, controls, fuel and oil tanks, exhaust systems, saws chains, bars, and guards.

Other requirements address chip discharge, sound levels, kickback, balance, and vibration. Test procedures, tables, and diagrams illustrating components and specifications are also provided.

Copies of American National Standard Safety Requirements for Gasoline Powered Chain Saws, ANSA B175.1-1979, are available from the Institute's Sales Department at $5.50 each.

Continues on page 48
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TEXTRON

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The climatic conditions of the Great Plains present a real challenge for growing woody ornamentals. The cold, long winter months along with a steady wind current with sudden changes in temperature makes winter hardiness an essential element for plants grown in this area. The usually low monthly rainfall and cold, long winter months along with a steady wind creates a challenge to the gardener during the growing season. Most of the soil in the area is alkaline which limits the plant choice further more. However, homeoweners continue to show an increased interest in home and public beautification with a desire for more low maintenance plants. Contemporary lifestyles and homes limit the homeowners' time for landscape maintenance; therefore, careful consideration must be made in selecting woody ornamentals to fit these needs. However, ornamental features on woody plants such as flower color, fruit color and size, foliage appearance, fall color and dwarf growth habit don't need to be sacrificed.

Evaluation research which yields a greater variety of plant material adaptable to rigorous climates has been conducted for many years at various state universities and arboreta in the Great Plains. At South Dakota State University research conducted by the Horticulture-Forestry Department over a period of time at several sites within South Dakota with varying climates has resulted in certain woody ornamentals which are more maintenance free and adaptable to this climate. The following discussion will deal with some of the more promising low maintenance plants that will grow in this area which were evaluated in our research.

Several shrubs from our research trials have emerged as outstanding small shrubs (generally maturing 4 feet or less) because of their growth habit and other good ornamental characteristics. Plants falling into this category include: Abeliovilum distichum (Korean Abelialeaf), Amorpha brachycarpa (Short-Podded Leadplant), Berberis koreana (Korean Barberry), Caragana pygmaea (Pygmy Peashrub), Diervilla lonicera (Dwarf Bush Honeysuckle) and 3 cultivars of Potentilla fruticosa.

Abeliovilum distichum (Korean Abelialeaf) is an early bloomer with its pleasantly scented flowers appearing in early to mid-April. The conspicuous, small white blossoms are borne in dense clusters along the previous year's wood before leaves appear. Korean Abelialeaf adapts to almost any well drained soil in full sun or light shade. It is a good companion shrub for the forsythias. It has been in our trials since 1967, and it has bloomed each spring. The leaves are darker green throughout the summer, turning a purplish fall color. The growth habit is a little more open than desired, but early white flowers announcing spring's arrival make it an adaptable plant for a rigorous climate.

Amorpha brachycarpa (Short-Podded Leadplant) grows erect to a height of three feet. Its dull gray-green pinnately compound leaves make it conspicuous among plants in a shrub border. Small purple-blue flowers borne in spikes ranging up to 10 inches long appear in June-July. The plant is quite adaptable to poor, dry, sandy soils and is easy to transplant, making it another adaptable low maintenance plant.

Berberis koreana (Korean Barberry) displays a deep red fall leaf color which makes it a winner. In addition, the fruit clusters — bright red, egg-shaped true berries — are effective in the fall and into winter. The Korean Barberry is classed as a small shrub growing 4 to 6 feet tall and slightly less in spread. Because of spines, usually simple, borne on its stems and its dense growth habit, it serves as an excellent barrier plant.

Yellow flowers appear in early to mid-May in drooping clusters which are quite showy. It is easy to transplant and tolerates most soils except permanently wet ones. It may be planted in full sun or light shade. Any pruning desired may be done at anytime. It has proven to be winter hardy and adaptable to more drought type conditions.

The rounded form of Caragana pygmaea (Pygmy Caragana) adds to its worth as a landscape plant. Although very fine textured, the Pygmy Caragana grows to 3 feet high. Its bright yellow pea-like flowers in late spring are the most desirable ornamental feature other than the gray-green foliage color. Recommended uses include shrub borders and hedges. This plant is quite adaptable to drought conditions and withstands wind and extremely cold temperatures. However, winter appearance isn't the most desirable ornamentally.

Diervilla lonicera (Dwarf Bush Honeysuckle) is a hardy shrub with a medium texture. It bears yellow flowers in July into August at the terminal ends of the branches but they are not conspicuous. It will grow in dry soil types and makes a good bank cover. The new growth is more red-bronze and has a more dwarf compact growth habit.

Potentilla fruticosa (Bush Cinquefoil) with its silky leaves and bright buttercup-yellow flowers is a compact hardy shrub ideal for foundation or border plantings. It adapts to more rigorous climatic conditions and produces its flowers throughout the growing season from June until frost.

Three cultivars that perform well in the midwest and plains regions include: 'Coronation Triumph,' 'Gold Drop,' and 'Jackmannii.'

'Coronation Triumph,' one of the larger cultivars, grows to a height of 3 to 4 feet. It has a dense, mounded growth habit with soft green foliage. Its large quantity of yellow flowers makes it a favorite.

Deep yellow flowers and very small leaves are characteristics of the cultivar 'Gold Drop.'

'Jackmannii' also is a larger plant growing 3 to 4 feet in height. Its foliage color is medium green. The bright yellow flowers are borne in profusion. These cultivars of Bush Cinquefoil transplant easily. They withstand cold temperatures and poorer soils. However, for best flower production they should be planted in full sun in fertile, well drained soil.

Rosa blanda (Meadow Rose) is distinguished since it is often unarmed and has red to purple-red bark. This bark coloration adds to the winter landscape. Flowers of the Meadow Rose are single and pink, typical of "wild" rose species, appearing in May and June.
Common Sea Buckthorn bears bright orange berries along its stems.

numerous red hip fruit prevail throughout the winter and add winter texture. It does sucker but is quite adaptable in poor growing conditions.

Shrubs falling into the more medium height category (4-8 feet tall) from our trials, which are more maintenance free and will withstand rigorous climates include: Caragana frutex 'Globosa' (Globe Caragana), Cornus sericea 'Isanti', Lonicera tatarica 'Valencia' (Valencia Honeysuckle), Philadelphus X lemoinei (Lemoine Mockorange), Sorbaria sorbifolia (Ural False Spiraea), Viburnum opulus 'Compactum' (Compact European Cranberrybush) and Syringa meyeri (Meyer Lilac).

Caragana frutex 'Globosa' (Globe Caragana) is a slow growing compact, non-suckering shrub. Its name designates the globe-shaped growth habit which is maintained to maturity. Very little, if any, pruning is necessary to maintain this shape. Flowers and fruit are not outstanding but its dark green foliage which holds late into the fall is a plus feature. Its growth rate and habit makes it an ideal hedge or foundation plant. Globe Caragana tolerates alkaline soil conditions and more drought type growing conditions.

The bright red winter bark color of Cornus sericea 'Isanti' (Isanti Dogwood) is an outstanding ornamental feature of this medium-sized, compact shrub. Small white flowers in flat clusters are generally produced in early summer followed by abundant white to blue-white berries.

Isanti Dogwood tolerates light shade but is best planted in sun, which brings out the full color of the stems in the winter. It grows in almost any soil and does well in wet places. This cultivar has been planted in our trials since 1970 and has maintained its dwarf-mounded growth habit.

Most honeysuckles are not maintenance free since they become quite large and open with age. Lonicera tatarica 'Valencia' is more compact in growth habit than most cultivars of Tatarian Honeysuckle. The foliage is bluish-green in summer and bears pink to white flowers in June. The fruits are numerous, orange, and persist into the winter. The fruits are a little later in developing than most honeysuckles but are high quality.

Philadelphus X lemoinei (Lemoine Mockorange) is a graceful shrub which bears sweet scented, showy, white flowers in late spring. Its erect shoots have exfoliating brown bark. It is adaptable to cold winters and blooms profusely each year. However, very low temperatures could cause some winter dieback.

Sorbaria sorbifolia (Ural False Spiraea) is valued for its large plumes of white flowers in late June into July when not many other woody plants are in blossom. It is one of the first shrubs to leaf out in the spring, and its

Continues on page 18

Short-podded leadplant is adaptable to poor, sandy soils and is easy to transplant.

Korean barberry displays red leaf color in the fall and bright red berries.
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Low Maintenance Shrubs

Pinnately compound, bright deep green foliage gives it a medium-textured appearance.

Ural False Spirea transplants readily. However, its suckering habit often makes restraint necessary. It can be used effectively in the shrub border, for massing or grouping, or for a bank cover. This medium-sized shrub prefers moist, well drained soil in full sun or light shade and is winter hardy.

Syringa meyeri (Meyer Lilac) is a well branched upright shrub with a mature height of 5 feet. Its dark green glossy foliage is attractive and long lasting. Flowers appear in late spring in dense upright clusters at the end of branches. They are violet-purple to light lavender in color and have no great fragrance.

Meyer Lilac requires well drained soil and makes an ideal plant for home use because of its moderate size, reliable yearly flowers, small foliage, and freedom from pests.

Viburnum opulus 'Compactum' (Compact European Cranberrybush Viburnum) has a dense growth habit with a mature height of 4 to 5 feet. The white blossoms give a pin-wheel effect because of an outer ring of sterile, showy flowers and an inner portion of fertile, inconspicuous flowers. The blooms appear in mid-May and are borne in flat clusters. The bright red berries make a brilliant show in the fall and winter. This cultivar is recommended for use in smaller areas where space is limited. This plant doesn't seem to be as infested with aphids as the species. It is effectively used in masses or as a specimen plant.

Two shrubs maturing greater than 8 feet in height which are adaptable and more maintenance free include the **Hippophae rhamnoides** (Common Sea Buckthorn) and **Viburnum lentago** (Nannyberry Viburnum).

**Hippophae rhamnoides** (Common Sea Buckthorn) is best used in masses and shrub borders in naturalistic settings. In March or April, inconspicuous yellowish flowers are borne on bare branches, but in the fall the female plants bear abundant bright orange berries along their stems. Birds dislike the fruit due to its acid nature so it remains on the shrub through the winter until early spring. Both male and female plants are necessary for fruit production. A ratio of 6 females to 1 male is usually sufficient for pollination.

Common Sea Buckthorn prefers full sun and well drained soil — actually performing better in sandy, infertile soil than in rich soil. It also withstands salt spray.

**Viburnum lentago** (Nannyberry Viburnum) is a vigorous large shrub or small tree that can be used effectively in a background or screen planting. Flat clusters of cream-white flowers appear in late May. The mature fruit is a bluish-black berry which persists into the winter, serving as food for birds. The glossy medium green foliage of summer turns to purplish red in autumn.

Nannyberry Viburnum is easily transplanted and adapts to various conditions in sun or shade. However, it can sucker.

These eighteen plants are examples of woody ornamental plants which have proven to be outstanding for our more rigorous climate over the years. Most of these plants are low maintenance along with offering numerous ornamental characteristics. These plants can enhance residences and at the same time leave homeowners more leisure time.
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SUPERINTENDENT STRIVES FOR CONSTANT, MODERATE TURF GROWTH

By Ed Ginn

As the casual visitor approaches Hilton Head Island and its plethora of golf courses, it takes a sharp eye to spot the miniature waterfall in the pecan grove that marks the unobtrusive entrance to Moss Creek Plantation — still clinging to the mainland.

In an official brochure, the line reads “Moss Creek... it’s not for everyone.” This is a reminder that, unlike its island neighbors competing for tourist attention, Moss Creek is a private residential community open only to property owners and their guests. There are a few exceptions, as when its distinctive Devil's Elbow South course is opened to host such events as the CPC Women's International tournament early each May.

The Devil's Elbow name comes from early Carolina history. It was the title of a Barony granted in 1663 to Sir John Colleton by England's King Charles II. Later the Barony was divided into six plantations that became important producers of rice, indigo, and the famous Sea Island cotton. One of those plantations was Bog Bluff which evolved into a cattle ranch and was renamed Moss Creek when it entered a new life in 1973. The concept then was that Moss Creek would be carefully designed for low density housing of a very fine order. Facilities were to be top drawer with a rigid rule of privacy.

During Hilton Head's “difficult times” in 1975, ownership passed from the original Moss Creek developers to Northwestern Mutual Life Insurance Company, but the new owners hewed to the original concept.

The first 18 holes, Devil's Elbow South, was started in January, 1974, and opened in March of 1975. It was designed by George and Tom Fazio, and is considered one of their finest accomplishments. Of moderate length, about 7,000 yards, it is a relatively tight course with a number of holes bordering the treacherous salt marsh. Number 15, with a green virtually surrounded by water at high tide, is probably the most scenic. Rated the toughest par 3 from the men's tee, a player must carefully assess the wind. Residents say that a short iron might carry more than the 190 yards from the championship tee on some days. On the next day (or the same afternoon) a driver might find you falling short.

A new 18, Devil's Elbow North, was started in September, 1978 and was opened in March, 1980. It is shorter (6,650 to 6,700 yards) than the South course, somewhat tighter, and with smaller greens. Turf was doing nicely until a seven week drought in late spring coupled with a depleted water supply caused some anxious moments. This occurred during the critical transition period as ryegrass was fading out and the permanent grasses were just reviving. There was some evidence of this in mid-July when I visited, but turf appeared to be healing quickly.

Gerry Beaman, golf course superintendent, has things well in hand at these splendid courses. Gerry came to Moss Creek early in 1974 and has lived with the layouts almost from the day the first fairway was carved out of the old plantation. A graduate of Clemson University (tiger paws greet you as you step into his office), Gerry was determined that the quality of the turf would match the high standards of the Moss Creek community.

Fairways were shaped with the naturally existing soil, but greens were constructed from imported materials. The soil mix is 80 per cent concrete sand and 20 per cent pine bark, blended to a depth of 18 inches. French tile provides sub-surface drainage. Greens were sprigged with Tifdwarf Bermudagrass, fairways with 419 Tifway Bermudagrass. Roughs and tees consist of 419 Bermudagrass, with a considerable amount of lovegrass in the roughs.

Overseeding in this part of the South is done in October to supply color throughout the cooler months. A 50-50 mixture of Derby perennial ryegrass and James-town chewings fescue is used on the greens. Fairways are overseeded with a 60-40 blend of annual and perennial ryegrass.

Lush, dark green grass may look great, but does not always signify the best playing surface. While Gerry