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Circle No. 103 on Reader Inquiry Card

Perched on lava cliffs overlooking the Pacific Ocean sits the sprawling Kona Surf Resort Hotel in Hawaii. It's the determination of landscape supervisor Ray Berg that coaxes the lush landscape from the unyielding lava rock to produce one of the island's most beautiful landscapes.

# "Lavascape" Landscaping

by Maureen Hrehocik, managing editor



**R** ay Berg has a big "clay pot" to grow his landscaping in—an 11acre clay pot to be exact.

That's what the supervisor of the Kona Surf Resort Hotel in Kona. HI, likens having to coax plants to grow in almost solid lava rock. But, at the Kona Surf. Mother Nature hasn't left Berg with much of a choice.

He admits he likes the challenge in fact he says he thrives on finding different or unique ways of doing things. Landscaping the Kona Surf has supplied Berg with an almost limitless "laboratory" in which to experiment.

#### "Lavascape"

Ray Cain of Belt Collins Associates designed the landscaping for the 550room hotel which is perched on cliffs of lava rock on the Big Island of Hawaii.

Cain and Berg together chose the actual plant types.

"Our major problems in starting out with this project were salinity, the



Ray Berg checks his containerized stock.

wind, labor and a place to get the plants we wanted," says Cain. Even erosion stakes were hard to keep in place because of the wind when construction first began.

Cain had 5,000 tons of soil brought in as a base to start more eye-pleasing vegetation growing in and among the black lava rock. There were so many weed seeds in the soil that one worker's job in the three months prior to the hotel's opening was to pull Bougainvillea blooming among the black lava rock and well-manicured pathways add to the Kona Surf's tropical beauty.

weeds. Plants were shipped in from Oahu. Anywhere the rock showed any crevices, dirt was added, a plant and then stones to keep the plant from snapping off in the wind. And then plenty of water.

Remarkably, most of the plantings took. Today, it looks as if the plants are growing (and thriving) right out of the rocks. The brilliant purple, pink

## The backbone of landscaping in Hawaii is water.

and red bougainvillea and deep tropical greens against the black rocks create the kind of scenery the Hawaiian islands are famous for. For Berg, they create a low-maintenance landscape.

"The backbone of landscaping in Hawaii is water," says Cain. "It's very precious and is a major consideration in any landscape design here.

Salinity and wind are also problems that can't be solved; just worked around."

A particularly bad storm in January drove the ocean crashing in onto the cliffs on which the hotel is built with such force that the salt spray yellowed the palm fronds and the bermudagrass turf along the hotel's ocean walk.

"The elements are vicious here." says Berg, "but they're also forgiving. In a few weeks the grass will green-up again."

The normal 900 to 1,500 parts per million of sodium in the water can climb as high as 2,000 ppm.

"That's another reason why water

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is so important to us," explains Berg. "We have to leach the salt out of the soil by watering."

The storm also washed out a pond on the hotel grounds that Berg had just completed.

"It does get discouraging when you work long and hard on a project and it gets destroyed in a matter of hours," Berg says.

But, almost as quickly as Mother Nature can destroy things, she can give them back.

"It's surprising how fast plants establish here."

#### Plant types

The different types of plants that grow on the grounds of the Kona Surf could fill a book. A sampling includes: sea grapes, philodenrons, kiave, African tulip trees, poinciana trees, macadamia nuts, puma, papaya, breadfruit, tamarind, rheodiscolor, impaciens, cat's claw, frangiapane, mango, bananas, coffee trees, silver buttonwoods, dresina marginata, ginger, ti plants, variegated hibiscus, portulaca, bougainvillea and 35 different types of palm trees. Many of the plant types are the same as those that grow well on Florida's Gulf coast. In Hawaii, though, the plants become more lush.

Berg has been with the hotel since it opened 14 years ago. He lives on the hotel property in a house on the ocean. It's his own backyard that provides ample opportunity to experiment and improve on different plants. Some of them, like wedelia, he integrates into the hotel landscaping; others he grows for his own enjoyment. He changed the wedelia in one part of the hotel three times to get it just the

Whatever nature throws Berg's way, he's seemed to outsmart. What he can't outsmart, he replaces.

way he wanted it.

"You may not see it right away, but if you look hard enough you can see different ways of doing things," he says.

Where the original homesite stood on the hotel grounds, Berg created a patio area that's one of the more popular quiet spots for hotel guests. Another reason Berg experiments at home is that he can't always find what he wants at local nurseries. Nurseries in Hawaii are limited and most of the time can't deal with the volume or types of plants Berg needs.

#### Maintenance schedule

Berg has a crew of 10 year-round and as many as 14 during the summer months. Two of his crew are scheduled to care for the hotel's interior plantings. Because the Kona Surf is in the process of being sold, Berg's budget hasn't been increased.

Hotel guests and a healthy supply of mongoose give the bermudagrass a good workout, as does the sun. It's still the storms, though, that wreak the most havoc with the turf.

Berg maintains a daily maintenance schedule. Fertilizing is done three or four times a year with a 16-16-16 mixture after the bougainvillea blooms. Macadamia nut shells provide an indestructible mulch for beds and under trees.

"We only use them away from the hotel, though, because they tend to attract ants," explains Berg.

Whatever nature throws Berg's way, he's seemed to outsmart. What he can't outsmart, he replaces. **WT&T** 

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Circle No. 142 on Reader Inquiry Card 84 WEEDS TREES & TURF/APRIL 1985



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Circle No. 154 on Reader Inquiry Card

## SPORTS TURF

by Ron Hall, assistant editor

## Grass safer again

"It's almost as good as..."

young athletic trainer, put that phrase to the test in a recent study of grass and artificial turf football fields and discovered that "almost" isn't good enough. Not when it comes to the safety of athletes anyway.

"Artificial turf contributes an additional risk of injury," Comly, now working as a therapist at the Coatesville Veteran's Hospital near Philadelphia, writes in a comprehensive comparison of football injuries in two Eastern universities, Temple and West Chester. Temple plays on an artificial surface, West Chester on grass. Since there were 148 members on each of the two teams, Comly feels her comparison is valid.

She used data reported from the 1982 season to the National Athletic Injury/Illness Recording Service (NAIRS) at Penn State University in her 47-page study. NAIRS is a computerized surveillance system designed to help school policy makers make meaningful sports safety decisions. Team trainers of member schools supply weekly injury reports to NAIRS during the season.

Her findings?

There were more injuries on the synthetic surface than on grass, 110-50. The number of minor injuries was greater by a 72-27 margin on the artificial field, "significant" injuries by a 38-23 gap.

Proponents of synthetic turf point Carol Ann Comly, an ambitious to the intensive use their fields can support. They claim annual maintenance costs are lower, and artificial turf requires a less technically trained management team. These points are arguable.

> Grass fields have the benefits of being less expensive to build and less expensive to repair. In the long run, a quality grass athletic field is more economical than an artificial surface because of the need to periodically replace worn synthetic surfaces. Turf is also measurably cooler during warm-weather sporting events.

Comly, who has coached and officiated grade school field hockey, and lacrosse, writes the controversy is 'open to further investigation." Her open-minded approach is sensible. It might be that blanket condemnations of synthetic are short-sighted. Even in the turf industry. The use of synthetic grass can probably be justified in areas where the likelihood of establishing quality turf is questionable, perhaps even in conjunction with turf, such as along the sidelines of a turf football field.

The question of player safety, however, remains the first consideration.

The wonder is that field managers, particularly those with the grass-orsynthetic decisions, slide so easily to the debatable convenience of synthetic even in the face of studies like Ms. Comly's.



Look for Our Special Athletic Field Management Issue Coming in June



Country Manufacturing, Inc. P.O. Box 104 K-3 Fredericktown, Ohio 43019 (614) 694-9926



### New Rain Bird pop-up sprinklers are tough

Rain Bird Sprinkler Manufacturing Corp. introduces a line of tough new pop-up sprinklers. The case and cover of the Mini-Paw series sprinklers are molded of Cycolac brand ABS engineering thermoplastic, grade GSM, supplied by Borg-Warner Chemicals, Inc.



Rain Bird chose Cycolac grade GSM because of its rigidity and toughness.

The sprinklers will operate in a full circle, or can be adjusted to part circle operation from 20 to 240 degrees of arc. A "Seal-a-matic" option helps prevent wasted water and soil erosion due to low sprinkler head drainage. The units operate at water pressures from 25 to 50 psi, and can be spaced from 27 to 49 feet for optimum operation, Rain Bird says.

Circle No. 191 on Reader Inquiry Card

## Ranger is 21-inch commercial mower

Exmark Manufacturing is now marketing a 21-inch, self-propelled commercial mower. It features a compact rear-discharge design and is powered by a 4 hp Briggs & Stratton



regular or I/C engine.

The mower, the Ranger, comes with variable speed control and differential action, adjustable cutting height from 1/2 to 3 1/2 inches, and an ultra-high lift, tempered steel blade. Exmark says the simplicity of the Ranger's design allows minor repairs to be performed in the field by operators.

Circle No. 192 on Reader Inquiry Card

### American Trencher shows Bradco line

American Trencher Inc. announces an expanded line of Bradco attachment trenchers. These include 3-pt. hitch, skid steer, quick attach tractor, and solidly bolted on tractor models.

All models feature oil-bath-enclosed drives and seals to protect bearings. Several models also include dual pivot, paddle or ribbon augers, offset or center mounting, and chain guides. Options can be ordered to equip these trenchers for specific jobs.



Circle No. 193 on Reader Inquiry Card

### Shelf for pick-up puts tools in reach

Hacke Enterprises manufactures a shelf that can be installed in the bed of a pick-up and rolls out making tools and parts more accessible.

The Continental Shelf comes in six and eight foot length models and fits any width pick-up bed. It comes in kit form with steel side rails, track, rollers, and hardware. It requires few tools to custom install.



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## Palm Desert Greens Country Club is positive proof.

Maintaining one of the heaviest played executive golf courses in Southern California is a challenging job. An average of 290 rounds of golf a day puts tough demands on the turf, and on the irrigation system. That's why golf course superintendent Robert Stuczynski recently installed Weather-matic rotary pop-up sprinklers to upgrade the system at the Palm Desert Greens Country Club.

Stuczynski was won away from a brand he'd used for more than a decade by Weather-matic's high quality design and adjustable features. The exclusive adjustable

armspring allows fine-tuning while the sprinkler is on or off, and *stays* adjusted once set — a must for handling Palm Desert's exacting schedule of watering and fertilizing.

Weather-matic impact drive, rotary pop-up

sprinkler heads are available in rugged cast aluminum alloy and high impact plastic for your longrange or medium-range needs from golf courses, parks and athletic fields to commercial use. Designed for years of dependable service, they offer many outstanding features. Like the optional check valve. available on PK models to prevent backflow in low areas and damaging line surge. And only Weather-matic can help reduce your inventory with interchangeable parts for plastic and metal heads.

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and valves, you have a combination that can't be beat. Just ask Stuczynski. He's now finalizing a plan to changeover the entire Palm Desert system to Weather-matic. Because Weather-matic works. Write or call for all the details. 'Available in Spring 1985.

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New Gandy spreaders easy to disassemble

Gandy Company's new 24 and 42inch spreaders completely disassemble without special tools. All parts are replaceable. Both spreaders feature stainless steel bottom and slides, with bottoms snapping off for quick and easy cleaning.

The Model 24, a push handle model, has a positive slide shutoff activated by a handle crank and holds



about 80 lb. of material. The 42-inch Model 42 may be ordered with a tractor hitch or push handle and has a spreading plateto give positive shutoff when brought up against the hopper bottom. The Model 42, with a 225-lb. capacity, has optional fixed-rate bottoms for overseeding and top dressing. **Circle No. 198 on Reader Inquiry Card** 

### Turfmat offers seeding sodding alternative

Modern Turf Products, Inc., has introduced Turfmat, an alternative to sodding and seeding. Turfmat combines grass seed, starter fertilizer, and a fine straw mulch bonded with a water soluble adhesive.

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Circle No. 161

on Reader





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