

# ASPHALT PARKING LOTS —HOTHOUSE FOR WEEDS

WEEDS are perhaps the greatest cause of asphalt parking lot breakdown, according to a pair of California parking lot specialists. Despite several inches of asphalt, and soil preparation which includes blading and compaction, weed seeds can germinate and extend an upward force of 1700 pounds per square foot, quickly breaking through the asphalt.

Asphalt works like a hothouse, says Jerry Krizman of California Weed Control — Industrial. "It's moist and warm underneath. Weeds thrive and soon exert enough pressure to break through the blacktop.

"And once a hole gets into asphalt," Krizman emphasizes, "you can bet that it's going to get larger."

That's why parking lot maintenance costs can be substantially reduced by the use of a pre-emergence herbicide applied just before the asphalt is laid. In fact, more and more contractors and municipalities are requiring this as part of their specifications.

"Use of a soil sterilant or pre-emergence herbicide is an insurance policy against premature asphalt breakdown," adds Leland May, also a partner in the custom application firm. "For example, in Ontario and many other California cities, all city streets must have a soil sterilant treatment. That's the trend today."

Typical specifications state: ". . . Prior to placing any surfacing material the subgrade shall be completely sterilized by application of an approved weed killer applied in accordance with directions and recommendations . . ."

For the past 12 months Krizman and May have been participating in an experimental herbicide program with CIBA-GEIGY Corporation. They have used Pramitol 25E, a liquid concentrate pre-emergence herbicide on more than a dozen parking lots with excellent results.

The tests are being conducted to provide Geigy and prospective users with additional information on the effects of the herbicide under asphalt prior to marketing the product for use in such asphalt applications. Pramitol is presently widely used as a pre-emergence herbicide for other industrial and non-crop uses.

As a subcontractor, California Weed Control must guarantee its work for at least 12 months and sometimes 24 months. To date, they have had no failures with Pramitol and as long as proper application procedures are followed, they do not expect any.

In past years, California Weed Control has used granular Polybor-



California parking lot specialists Jerry Krizman, left, and Leland May.



A typical parking lot is bladed to remove existing weed growth and compacted for better surface — prior to application of herbicide and asphalt. Pramitol 25E is applied on the  $\frac{1}{3}$ -acre parking lot below in less than an hour, with difficult areas sprayed by hand.







An hour after herbicide was applied to the parking lot, an asphalt crew went to work. The herbicide used is designed to cling to soil particles and not leach out from under asphalt. As a pre-emergence it is used to kill weeds before they are large enough to damage asphalt.

Chlorate herbicide at 800 lbs, per acre in 800 gal. of water. Although it gives results comparable to Pramitol, the excessive bulk of the herbicide, high volume of water and constant agitation necessary make it undesirable.

The large amount of Polybor-Chlorate requires greater warehousing facilities and greater handling time, both resulting in higher labor costs. Since Polybor-Chlorate also requires a much greater volume of water, in the arid Southwest this means bigger equipment to haul the water. This is especially time-consuming when the work site is far removed from headquarters.

Pramitol 25E has been used at 20 gal. per acre in 100 gal. of water. When especially hard-to-kill weeds are encountered or a two-year weed control guarantee is required, the rate may be increased to 30 gal. per acre. At these rates, the costs of Pramitol per acre is about the same as Polybor-Chlorate, but the overhead and labor involved are much reduced with Pramitol.

California Weed Control's most

recent job involved a one-third acre parking lot in a retail development in Riverside, Calif. The adjacent vacant lot was covered with deep-rooted, hard-to-kill weeds which could have presented control problems in the new parking lot.

The lot had previously been bladed to remove any existing weed growth and then compacted for a better surface. Using a specially rigged spray truck, the herbicide was applied about an hour before the lot was asphalted.

Seven gallons of Pramitol 25E was applied in 150 gallons of water with only minimum agitation required. The entire application — including hand spraying of hard-to-reach corner areas—was accomplished in less than 45 minutes.

To achieve the same results with Polybor-Chlorate on a one-third acre lot with such problem weeds would have required at least 300 lbs. of herbicide in 300 gal. of water. This would have also required additional tank agitation.

Yeager Construction Co. of River-

side applied a 2¾-in. asphalt layer and compacted it to 2½-in. Since the herbicide is applied shortly before the asphalt, there is little chance of Pramitol leaching away from the area of application.

Pramitol is a triazine herbicide which is held tightly by soil particles. As weed seeds germinate the chemical is absorbed by plant roots, interfering with the growth process and killing the weeds before they develop sufficient size and strength to penetrate the asphalt.

The spray was applied in early morning while the air was still. The tank pressure was low — about 40 psi. — and the resulting coarse spray presented little problem of wind-carried drift. Herbicides should only be applied on days of little or no wind to avoid spray drift to non-target areas.

Application of Pramitol 25E can also be combined with standard and special cutback asphalts if mix temperatures do not exceed 170°F. Combining the operations can save time, labor and equipment costs.