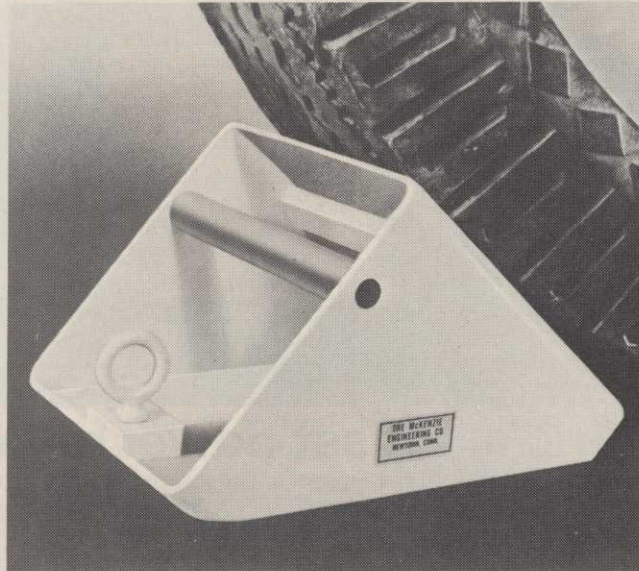




HEAVY DUTY MOWER, Goodall Division, Louisville, Ky.

Goodall's heavy-duty 36-inch self-propelled mower propels itself, turns itself. Power steering levers at the operators fingertips allows you to engage or disengage either or both for quick turning. Extra large 13x5-inch puncture proof tires on steel traction wheels set in and behind cutting unit enables you to trim with both sides. Cutting unit has twin blades, height of cut adjustable from 1 to 4½ inches. Five forward ground speeds. Adjustable front guard, hinged chute, guard-leaf mulcher plate, brakes, six-quart fuel tank on handle, 8 hp Briggs & Stratton engine. For more details, circle (712) on the reply card.



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LIFT TRUCK, Asplundh Chipper Co., Jenkintown, Pa.

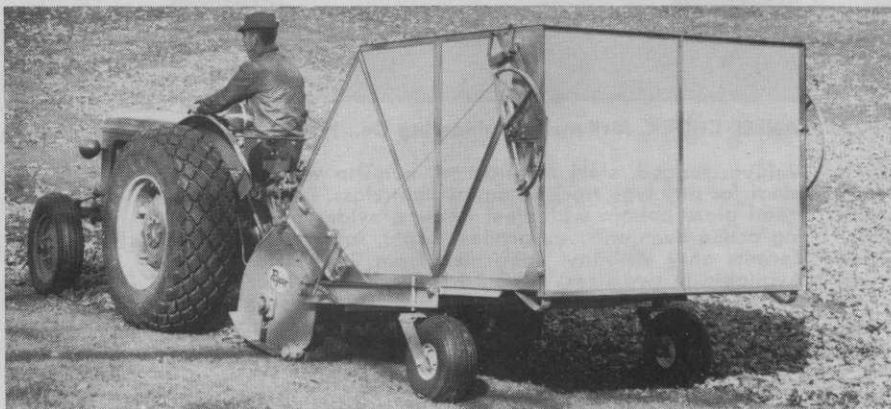
The LA model is a non-over center device. Ground to bottom of basket heights are 40, 45, and 50 ft. Capacities in any position range from 925 lbs. on the LA-40 to 725 lbs. on the LA-50. All models are available with single or double, fixed or swivel baskets. For more details, circle (718) on the reply card.



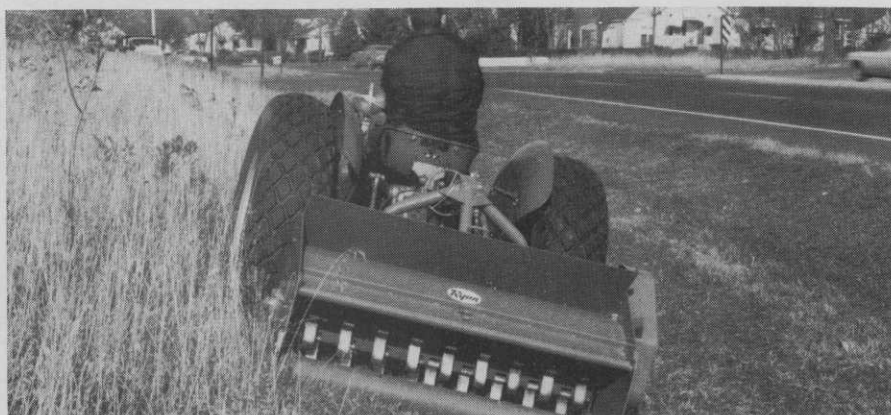
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Key speakers at the 23rd California Weed Conference were, from the left, Dr. Emil Mrak, chancellor emeritus, University of California at Davis; Extension Specialist Bill Harvey of UC; and Dr. Julius Johnson of Dow Chemical Co., Midland, Mich. .

California Weed Conference

A NATIONAL

RESTRICTIONS on the herbicide 2,4,5-T and how to avoid similar government "mistakes" occupied the 800 weed control specialists who attended the 23rd annual California Weed Conference in Sacramento.

The conference heard a proposal for a national laboratory to test and register pesticides, a call for greater professionalism among pesticide applicators, and advice on pesticide safety.

"There is no doubt whatsoever we are living in an era of chaos resulting from consumerism, lack of understanding and education, political expediency and the unfortunate, misinterpreted, misstated and misemphasized information through the public communications media," stated Dr. Emil Mrak, keynote speaker and chairman of the federal Pesticide Advisory Committee and formerly chairman of the federal Commission on Pesticides and Their Relationship to Environmental Health.

"Strange as it may seem, though we have the most abundant and diverse food supply in the world, we have in our nation the greatest number of food worriers the world has ever known, yet our longevity has gone up and there is no evidence of any harm (with two relatively minor exceptions) to the human organism caused by food toxicants," Dr. Mrak said. "On the other hand, there is a great deal of evidence that tobacco causes harm and we go along merrily permitting its sale and use."

Mrak said in his opinion the real need is for government to publish pesticide safety protocols which manufacturers and the public can understand and rely upon. Though his remarks dealt with food produc-



fare Facility at Pine Bluffs, Ark., which is being closed by Presidential directive. "This is a real possibility if industry will help," he asserted. There might, as well, be a national center for reliable information established, under some prominent chairman and composed of scientists and others of impeccable reputation, to publish facts and dispel misinformation on questions such as pesticide poisonings, he said.

Dr. Julius E. Johnson, director of research for the Dow Chemical Co. and a member of the Mrak commission, supported the need for government protocols for pesticide testing, but he stressed industry should have a voice in how the protocols are drawn. Protocols should be flexible enough to allow individual judgment and they should include provisions for deliberate changes, he said.

Dr. Johnson also recommended government certification of industrial, commercial, university and government laboratories to standardize the adequacy of their personnel, procedures, equipment and facilities and to install public confidence in their findings. Then, he said only toxicological data from certified laboratories should be admitted in support of new chemical products. Second suppliers of pesticides, who enter the market after original patents expire, could be allowed then to purchase certified data, Dr. Johnson said, cutting the second supplier's "unfair competitive advantage over the company which has borne the original cost of development.

"Then it would be possible to lay the registration and the tolerance petitions open for inspection and to encourage publication," he said. "Openness of the data at this point would relieve many objections. Today neither the qualified investigator nor the public have access to the facts if they want them, hence the public is suspicious. Moreover the experiment stations, expected to help support the use of a product, do not have access to certain registration information. Experiment stations and extension specialists need confidence in the validity of the back-up information. Moreover, the public official charged with registration and tolerance proceedings is under pressure because the present policy forbids him from making certain information available without the consent of the petitioner. The whole situation promotes public distrust because the supporting facts are not out in the open."

Apologizing to competent pesticide applicators, Dr. Johnson said "one of



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PESTICIDE LAB

tion, they held obvious relevance to all pesticide and herbicide users present because a panic decision to protect a food supply can have severe implications for all weed and pest control.

"To my knowledge there has been little if any work done to determine the relation between dosage of chemical additives or pesticides in foods to their effect on the organism," he said. "The customary procedure has been to feed extremely massive doses to animals, in some cases amounting to thousands of times, in fact, many thousands of times, that which might be ingested by humans in food on a weight per weight basis.

"Furthermore, the chemical might be force fed or injected as was done with 2,4,5-T rather than taken into the body in food as the human would ordinarily do. Ordinarily the chemical is fed in a pure state and not as it may occur in food.

"I believe, therefore, what is so direly needed in connection with the testing of foods and the establishment of standards for safety is the development of protocols to test for safety," Mrak said. "We do not have general outlines for procedures for testing for safety, and until they are developed I am afraid we will experience one crisis after another relating to the safety of our foods. Today, industry just does not know what is expected of it, how to proceed, where to go for information or what to do."

Developing suitable protocols is no simple job, though, Mrak said. He predicted years of testing with animals will be required.

For this job, he proposed establishment of a national laboratory, perhaps at the Army Biological War-

the weakest links in the chain is in the diagnosis of pest problems and application of pesticides." These critical tasks often are done by unskilled, poorly paid and non-professional craftsmen, he said.

He suggested some pesticides should be classified for professional use only and restricted from use by anyone but a professionally licensed applicator. Training for such applicators would be provided in agricultural schools, he said.

"The grower would then pay for results and the whole process would be less poundage oriented and more result oriented," he said.

Extension Specialist Bill Harvey of the University of California at Davis offered still more information about herbicides and the environment, concluding "there is no real threat to the environment from the use of herbicides, other than the direct changes in vegetation which we expect from the applications we are making."

Harvey, who is known as "Mr. Weed" for his long association in the field and with the conference, said herbicides have relatively short persistence in the environment under most conditions, and few herbicides are toxic to man or animals.

Problems arise from drift, volatility, leaching and surface movement of herbicides, all of which are well known and usually can be guarded against, he said. "The one we have the most trouble with is drift," he said. "But remember, any herbicide in the environment is far more apt to be a hazard to other plant species than it is to any animal species."

"We need herbicides to change the environment so we can have more food, more fiber, a better place to live and be free of poison oak and some of these other annoying weeds," he concluded.

New officers of the California Weed Conference Executive Committee for 1971 are: President—Dell O. Clark, State Department of Agriculture, Sacramento; vice-president—Bryant Washburn, Washburn Agricultural Service, Davis; secretary—Howard Rhoads, California State Polytechnic College, San Luis Obispo; business manager-treasurer—Warren V. Johnson, State Department of Water Resources, Sacramento; directors—Dave Bayer, University of California, Davis, and Paul Houghton, Southern Pacific Transportation Co., Oakland.

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SOMETHING KEPT EATING the Eurasian watermilfoil that federal aquatic weed scientists at Gainesville, Fla., were trying to grow for laboratory observation. So destructive was the pest that they decided to switch attention from the plant to the pest. They learned that 25 larvae of the moth of the genus *Parapoynx* could destroy milfoil in a 15-gal. aquarium in three days. The insect is described as the almost unique member of the insect kingdom, whose larvae have gills and are entirely aquatic. Discovery of the Florida species, *P. allionealis*, has prompted entomologists of the Agricultural Research Service to conduct field trials to evaluate the practical usefulness of the insect as a biological control of milfoil.

* * *

WE WOULD LIKE TO GIVE CREDIT to the person for this report but don't know who he is. It seems a grounds manager was per-

plexed over why his stadium's new artificial turf was turning brown. Upon close inspection, he discovered it was being eaten by artificial chinch bugs.

* * *

NO STICKY WICKET, said head groundsman Jim Fairbrother after a Toro Greensmaster had made its debut on Britain's foremost cricket field last season. Several national teams commented on the condition of Lords Cricket Ground. Highest acclaim came from South African cricket star Eddie Barlow. And when a South African player gives a compliment, Fairbrother said, you know you have a winner.

* * *

ISRAEL DOES FIND TIME for things other than matching swords with the Arabs. Israeli scientists will study a parasite of scale insect pests under a USDA P.L. 480 grant. Entomologists at the Hebrew University of Jerusalem, will collect, identify, and catalog species of the wasp, *Microterys*. The wasp parasitizes scale insects, pests of woody plants, such as cultivated fruits, ornamental trees, and shrubs. Objective of the research is to produce a taxonomic

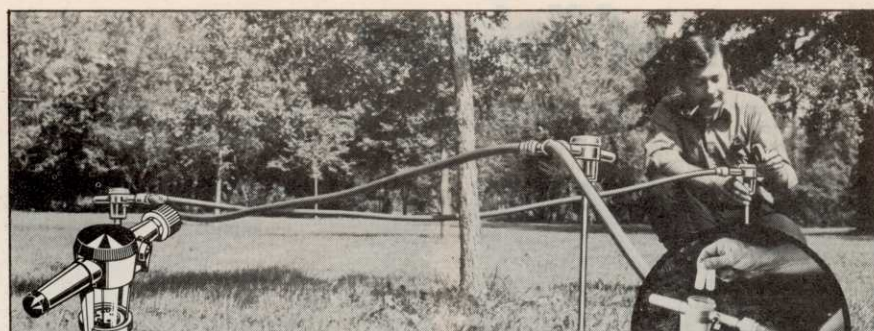
revision of *Microterys* occurring in Israel.

* * *

CERTAIN STONE AND QUARRY products have been added to the gypsy moth quarantine list. It means that ground or pulverized stone and quarry products must be inspected and certified to be free of moths or egg masses. Previous articles listed are trees and shrubs or their parts grown in a greenhouse; boughs or cuttings with stems no greater than a half-inch in diameter; parts of trees and shrubs that have been dried, pressed, waxed, laquered, varnished, or surface treated; processed or kiln-dried lumber; manufactured wood products; shavings, sawdust, wood flour, excelsior, and cedar bedding.

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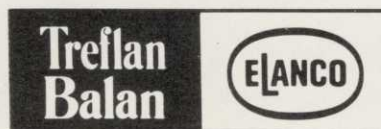
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