

The Classic **Apex** '73

Here is a gleaming, functional IRON club so timeless in concept that I believe it is destined to become a classic!

A clean, no nonsense IRON head design has been combined with the renowned APEX shafts to give you a better, more rewarding golf game.

These fine golfing instruments offer improved visual alignment of the blade, plus great "feel" in hand-crafted forged heads. A larger blade impact area with a lower center of gravity helps get the ball airborne quickly.

I invite you to place one of these superb IRONS behind a ball and try it. I am sure you will experience a new sense of confidence with my new Classic APEX '73's.

Sincerely,

Ben Hogan



2912 West Pafford Street, Fort Worth, Texas 76110
Available only at your golf professional shop.

For more information circle number 147 on card

and now...

AN ELECTRIC AUTO



Exactly. We call it the "CAROCHE Runabout." It could be the answer to mounting automobile costs and pollution. Oh, it won't do 120. But it will go about 26 m.p.h. around town or on the secondary roads for which it was designed. And you can run it up to 53 miles before recharging its batteries.

Cost? Less than \$2,000. **Upkeep?** Minimal. For instance, if you ran the CAROCHE Runabout 25 miles per day, you could figure going approximately 20,000 miles on a set of batteries. Your total electric bill during this period would be about \$108.40. You can figure your gasoline-powered auto will cost you five times as much, for gasoline alone.

We Also Make a Golf Car. It's called CAROCHE, too. The years of development which put it ahead of its time enabled us to pioneer in the electric auto field. Its salient features: lightweight, but sturdy, aluminum frame, fiberglass body, hydraulic wheel brakes (plus a mechanical braking system on both rear wheels), supplementary bag racks (enabling it to carry either three or four bags) and the improved safety and stability of 4 wheels.

Write us for a demonstration. On the CAROCHE Golf Car, that is. It is, in itself, our best salesman and the finest advertisement we could write. We invite you to call or write us for a demonstration, wring out a CAROCHE on your own course and sell yourself. CAROCHE—the golf car which led to the development of the first practical electric auto...

Caroche

What a golf car should be.

P.O. Box 897 Augusta, Ga. 30903
(404) 798-8687



We'd like a CAROCHE demonstration.

NAME _____

CLUB _____

ADDRESS _____

CITY _____ COUNTY _____

STATE _____ ZIP _____

Limited Number of Distributorships Available... Write for Details

Neither rain, nor sleet, nor snow...



can keep the Otis from its appointed rounds.

Oh those avid golfers! When they get it in their blood to play a round or two, the last thing you want to do is tell them they're going to have to walk.

The Otis makes sure no one has to walk. Our rugged car combines an all-weather Cyclocac® body with 36 volts of hushed power and a virtually noise-free hypoid drive.

Automotive-type steering and four-wheel, wide-track stability will carry your golfers in secure comfort all day long. And when it's time to stop, our new drum-type braking system will ease the car to a controlled halt.

The Otis abounds with creature comforts. Like

individually adjustable vinyl seats with built-in storage pockets, on-deck refreshment holders, an accessory storage well, and an instrument panel that provides instant fingertip access to all controls.

Sound like quite a car? It should be, after all we pioneered the development of electric golf cars over 20 years ago. Write or call for our brochure containing all the details today. Incidentally, snow tires are an extra cost option.

Otis Town and Turf Otis Material Handling
A Division of Otis Elevator Company

P.O. Box 8600, Stockton, California 95204 · (209) 948-2751

Photographed at the Edgewood Tahoe Golf Course adjacent to the Sahara Tahoe Hotel

SUPERINTENDENTS...

met rising labor costs by keeping the lid on turf material and maintenance equipment purchases

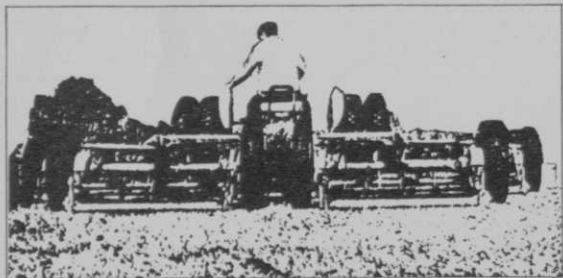
Superintendents adhered to tight budgets for turf materials in 1972. Total expenditures for chemicals, fertilizers and grass seed dropped slightly from \$63.5 million in 1971 to \$63.3 million. However, they were less successful in holding the line on spending for major course improvements, which amounted to \$106.9 million—almost 29 per cent over the 1971 figure.

Costs for maintenance crews also put a strain on economy-minded clubs. Expenditures for golf course labor jumped almost 12 per cent.

Superintendents themselves made some gains in salary levels. There was a significant decrease in the number of superintendents reporting salaries from \$5,000 to \$10,000. But on the upper end of the salary scale, more than 29 per cent indicated salaries of \$12,001 to \$15,000 as compared to less than 22 per cent in 1971, and 15.5 per cent reported salaries from \$15,001 to \$20,000, versus less than 11 per cent in 1971.

As with turf materials, superintendents held the line on maintenance equipment expenditures. Again in 1972, equipment purchases appeared to be for purposes of replacement rather than build up. The over-all value of maintenance equipment increased a little more than 2 per cent to \$569.8 million.

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Notes: 1972 national grand totals in this golf course superintendent study are based on the total number of golf facilities in the United States, regulation and non-regulation courses combined. Because the amount of materials and equipment needed by a superintendent is primarily influenced by the size of the course that he and his staff maintain, figures in this study are broken down by the common size categories: 9 holes, 18 holes or more and non-regulation (par-three, executive, etc.). However, in two cases—superintendents' salaries and types of irrigation systems where type of course has a primary bearing—figures are given by course classification.

In some cases averages for 1971 and 1972 are the same, but national projections are different. This is indicative of the growth in the number of golf facilities.

Figures in the millions have been rounded to the nearest hundred thousand dollars; figures in the thousands have been rounded to the nearest hundred dollars, and figures in the hundreds have been rounded to the nearest ten dollars. Therefore, rounded national totals, when added, may not precisely agree with national grand totals because they are the sums of unrounded figures.

SUPERINTENDENTS' TABLES AND GRAPHS

Turf materials		Superintendents' salaries	
Average expenditures	35	All course types	39
National expenditures	35	Each course type	40,41
National grand totals	37	Value of equipment to date	
Golf course improvements		Average	39
Average and national expenditures	38	National grand totals	40,41
National grand totals	38	Irrigation systems	
Golf course labor		Course size and course type	42
Average and national totals	38	Over-all response	42
National grand totals	38		

AVERAGE EXPENDITURES FOR TURF MATERIALS

Size of facility	Fertilizers	Fungicides	Grass seed	Soil amendments	Herbicides	Insecticides
9-hole						
1970	\$1,100	\$600	\$280	\$260	\$240	\$150
1971	\$1,100	\$530	\$400	\$390	\$460	\$330
1972	\$1,400	\$610	\$310	\$120	\$170	\$180
Budget 1973	\$1,700	\$710	\$410	\$150	\$220	\$220
18-hole or more						
1970	\$4,200	\$2,100	\$1,300	\$880	\$950	\$550
1971	\$4,200	\$1,900	\$1,200	\$840	\$860	\$660
1972	\$3,900	\$2,800	\$1,100	\$610	\$660	\$500
Budget 1973	\$4,200	\$2,800	\$1,100	\$700	\$840	\$580
Non-regulation						
1970	\$1,200	\$430	\$260	\$360	\$210	\$250
1971	\$1,400	\$430	\$340	\$450	\$660	\$350
1972	\$2,200	\$710	\$270	\$300	\$270	\$180
Budget 1973	\$2,400	\$810	\$330	\$320	\$320	\$200

NATIONAL EXPENDITURES FOR TURF MATERIALS

Size of facility	Fertilizers	Fungicides	Grass seed	Soil amendments	Herbicides	Insecticides
9-hole						
1970	\$5.2 million	\$2.8 million	\$1.3 million	\$1.2 million	\$1.1 million	\$709,200
1971	\$5.2 million	\$2.5 million	\$1.9 million	\$1.8 million	\$2.2 million	\$1.6 million
1972	\$6.5 million	\$2.9 million	\$1.5 million	\$579,600	\$821,900	\$850,400
Budget 1973	\$8.1 million	\$3.4 million	\$1.9 million	\$693,600	\$1.0 million	\$1.1 million
18-hole or more						
1970	\$18.6 million	\$9.5 million	\$5.8 million	\$3.9 million	\$4.2 million	\$2.5 million
1971	\$19.1 million	\$8.8 million	\$5.5 million	\$3.8 million	\$3.9 million	\$3 million
1972	\$18.6 million	\$13.5 million	\$5.1 million	\$2.9 million	\$3.1 million	\$2.4 million
Budget 1973	\$20.1 million	\$13.4 million	\$5.3 million	\$3.3 million	\$4.0 million	\$2.7 million
Non-regulation						
1970	\$1.3 million	\$466,300	\$280,000	\$383,000	\$220,800	\$263,900
1971	\$1.6 million	\$470,800	\$377,400	\$499,500	\$732,600	\$388,500
1972	\$2.6 million	\$843,200	\$315,500	\$360,500	\$316,700	\$207,600
Budget 1973	\$2.9 million	\$958,300	\$390,200	\$380,700	\$378,300	\$234,800

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ROSEMAN INTRODUCES

NEW 7-Gang Hydraulic Power Driven Reel Mower

*Beginning
a New Era in
Turf Mowing!*



The Roseman 7 unit Hydra-Gang Mower utilizes the tractor power take-off system to power the cutting reels and the tractor hydraulic system to provide hydraulic lift for each mower unit. The Hydra-Gang mounts on Ford 2000 and 3000 All Purpose model tractors.

Drive power for reels taken directly from the tractor engine eliminates need for excessive draw bar pull and minimum weight for traction. Hills and banks can be mowed easily regardless of soft or wet turf conditions. Individual mower units follow ground contour with unlimited flexibility without scalping. Cutting height is gauged by ground reference to provide even cut over undulations.

30" per unit. Cutting swath varies for 3, 4, 5 and 6 mowers with maximum of 15' for 7 gang.

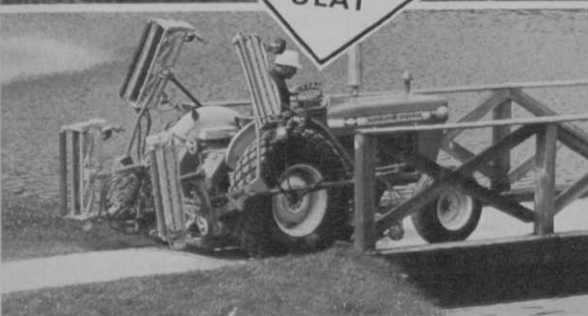
Mowing time is greatly reduced with a minimum of repair maintenance. All hydraulic components are manufactured to ASAE standards. The complete mower and linkage assembly can be removed from the tractor permitting general use of the 3-point utility features of the tractor.

ROSEMAN MOWER
CORP.

Nation-Wide Sales and Service

2300 CHESTNUT • GLENVIEW, ILLINOIS 60025

For more information circle number 142 on card

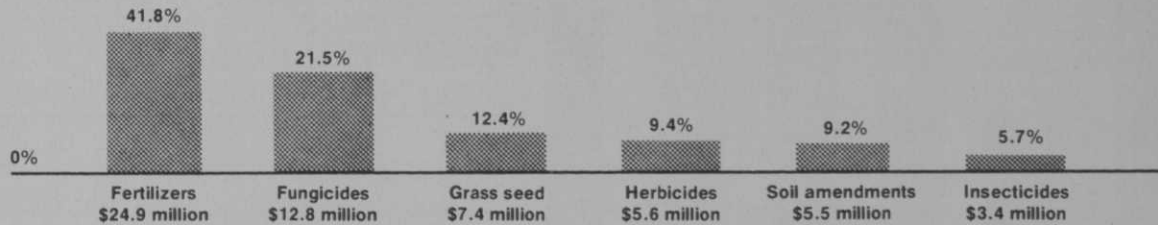


From operators position all mowers are quickly raised to 8' transport width.

100%

EXPENDITURES FOR TURF MATERIALS 1970 NATIONAL GRAND TOTALS

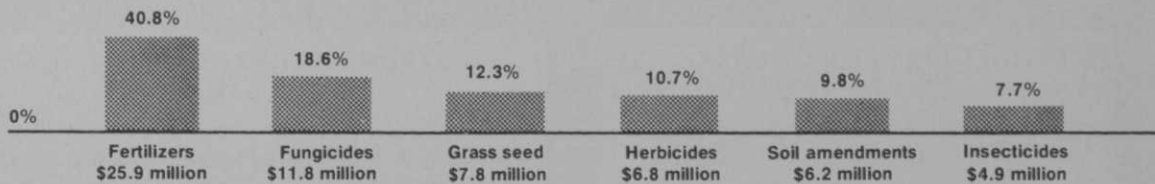
100% = \$59.6 million
Down 10.9% from 1969 total of \$66.9 million



100%

EXPENDITURES FOR TURF MATERIALS 1971 NATIONAL GRAND TOTALS

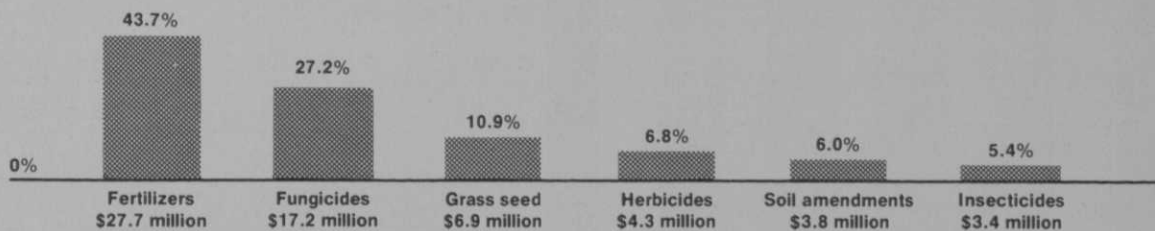
100% = \$63.5 million
Up 6.5% from 1970 total of \$59.6 million



100%

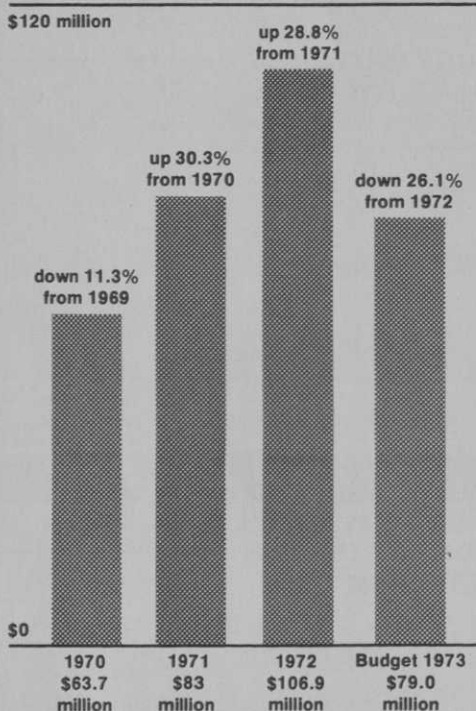
EXPENDITURES FOR TURF MATERIALS 1972 NATIONAL GRAND TOTALS

100% = \$63.3 million
Down .31% from 1971 total of \$63.5 million



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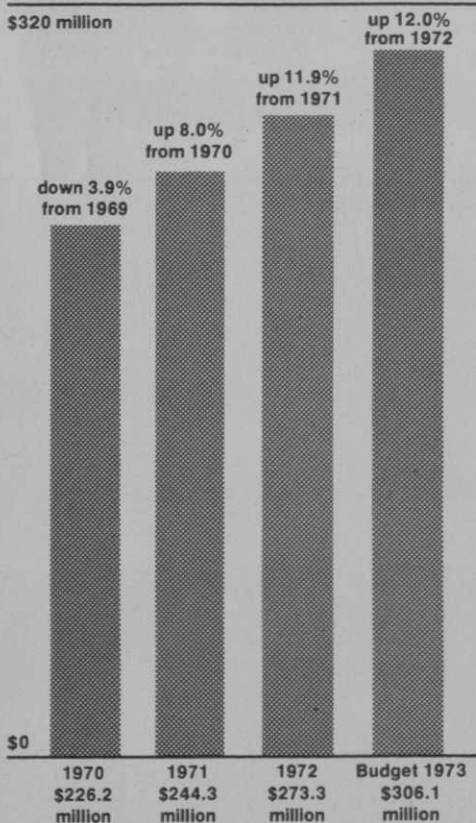
EXPENDITURES FOR GOLF COURSE IMPROVEMENTS NATIONAL GRAND TOTALS



EXPENDITURES FOR GOLF COURSE IMPROVEMENTS

Course size	Average per facility	National totals
9-hole		
1970	\$ 3,900	\$18.3 million
1971	\$ 3,300	\$15.5 million
1972	\$ 4,000	\$19.0 million
Budget 1973	\$ 3,200	\$15.2 million
18-hole or more		
1970	\$ 9,500	\$42.3 million
1971	\$14,100	\$64.0 million
1972	\$18,000	\$85.3 million
Budget 1973	\$11,700	\$55.7 million
Non-regulation		
1970	\$ 2,900	\$ 3.1 million
1971	\$ 3,100	\$ 3.4 million
1972	\$ 2,200	\$ 2.6 million
Budget 1973	\$ 6,800	\$ 8.1 million

EXPENDITURES FOR GOLF COURSE LABOR* NATIONAL GRAND TOTALS

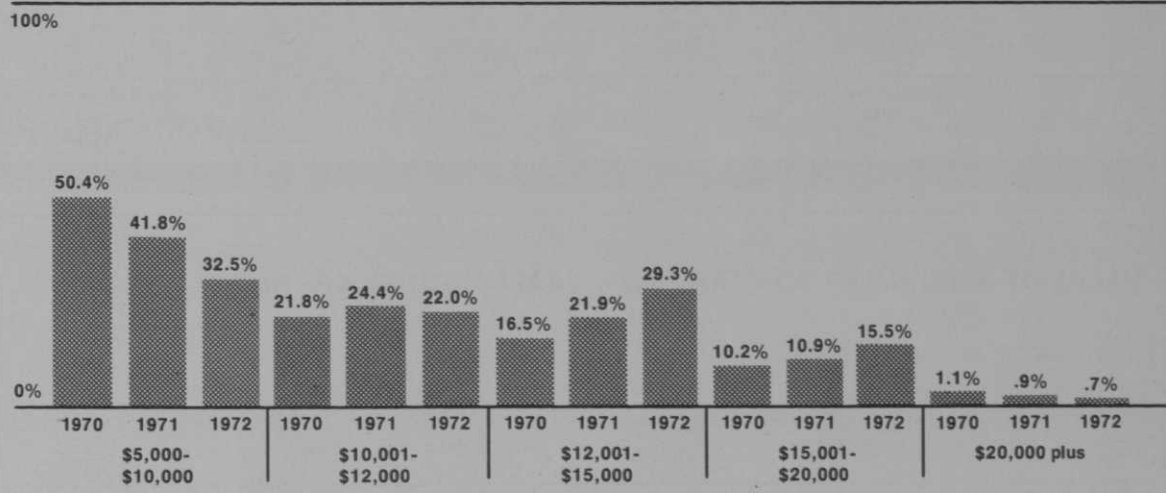


EXPENDITURES FOR GOLF COURSE LABOR*

Course size	Average per facility	National totals
9-hole		
1970	\$ 8,600	\$ 40.0 million
1971	\$ 9,500	\$ 44.9 million
1972	\$11,900	\$ 56.6 million
Budget 1973	\$13,500	\$ 64.1 million
18-hole or more		
1970	\$39,300	\$174.6 million
1971	\$40,500	\$184.3 million
1972	\$42,900	\$203.8 million
Budget 1973	\$47,600	\$225.9 million
Non-regulation		
1970	\$10,800	\$ 11.6 million
1971	\$13,600	\$ 15.1 million
1972	\$10,900	\$ 12.9 million
Budget 1973	\$13,500	\$ 16.1 million

* Exclusive of superintendents' salaries

SUPERINTENDENTS' SALARIES
(per cent of response, all course types combined)



AVERAGE VALUE OF EQUIPMENT TO DATE

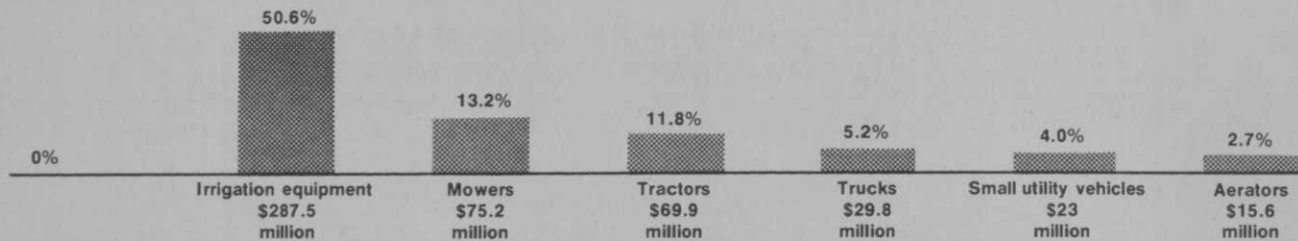
	9-hole			18-hole or more			Non-regulation		
	1970	1971	1972	1970	1971	1972	1970	1971	1972
Irrigation equipment	\$9,300	\$7,700	\$9,800	\$52,100	\$41,700	\$41,500	\$11,800	\$13,000	\$5,400
Tractors	\$4,200	\$3,900	\$4,800	\$10,400	\$11,100	\$12,800	\$3,800	\$5,200	\$5,200
Mowers	\$4,300	\$4,900	\$5,100	\$11,800	\$12,900	\$13,200	\$2,600	\$6,100	\$8,100
Trucks	\$1,700	\$1,600	\$1,300	\$4,600	\$4,500	\$5,200	\$1,200	\$6,200	\$1,400
Small utility vehicles	\$1,300	\$1,200	\$830	\$3,500	\$3,800	\$3,700	\$1,000	\$1,900	\$1,600
Sprayers	\$820	\$690	\$800	\$1,800	\$1,900	\$2,000	\$590	\$1,100	\$860
Aerators	\$890	\$1,100	\$990	\$2,200	\$2,400	\$2,400	\$1,400	\$1,600	\$980
Shredders	\$400	\$620	\$220	\$990	\$940	\$640	\$400	—*	\$80
Spreaders	\$390	\$450	\$380	\$800	\$930	\$970	\$330	\$380	\$360
Spikers	\$530	\$530	\$350	\$850	\$700	\$830	\$350	\$1,000	\$410
Trailers	\$250	\$260	\$220	\$530	\$530	\$1,000	\$150	\$350	\$160
Other equipment	\$2,500	\$1,700	\$880	\$5,500	\$6,200	\$3,800	\$500	\$700	\$940

* No response in this category

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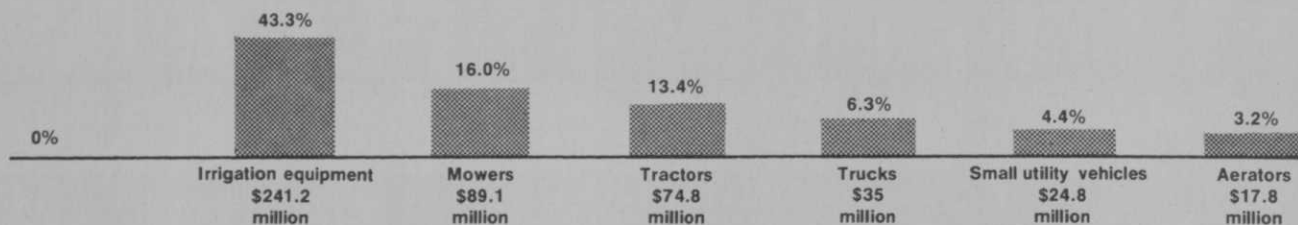
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VALUE OF EQUIPMENT TO YEAR END 1970 NATIONAL GRAND TOTALS



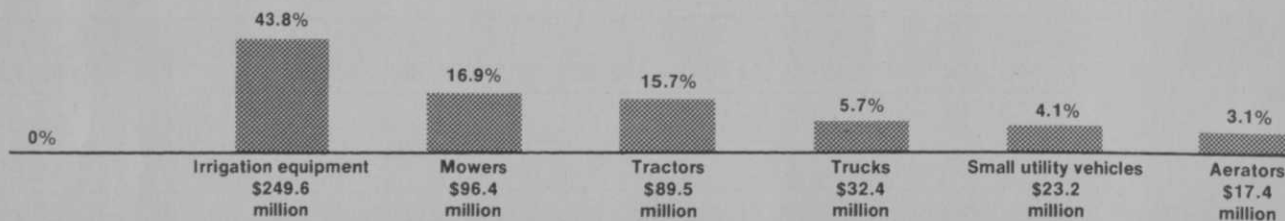
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VALUE OF EQUIPMENT TO YEAR END 1971 NATIONAL GRAND TOTALS



100%

VALUE OF EQUIPMENT TO YEAR END 1972 NATIONAL GRAND TOTALS



ANNUAL SUPERINTENDENTS' SALARIES (per cent of responses in each course type)

Salary ranges	Private			Semi-private			
	1970	1971	1972	1970	1971	1972	1970
\$5,000-\$7,500	20.5%	14.6%	4.9%	26.4%	20.6%	23.4%	9.1%
\$7,501-\$10,000	23.2%	14.0%	13.2%	36.1%	42.2%	29.6%	9.1%
\$10,001-\$12,000	18.5%	25.6%	22.2%	26.4%	22.5%	27.2%	36.3%
\$12,001-\$15,000	21.2%	26.8%	31.9%	8.3%	12.7%	19.8%	18.2%
\$15,001-\$17,500	13.3%	15.2%	19.4%	0%	0%	0%	27.3%
\$17,501-\$20,000	2.0%	3.0%	6.9%	1.4%	1.0%	0%	0%
\$20,000 plus	1.3%	.6%	1.4%	1.4%	1.0%	0%	0%