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WORK INJURIES IN
CALIFORNIA AGRICULTURE
1966

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Trend of Work Injuries

The number of on-the-job injuries to agricultural workers continued to decline in 1966. California farmers and firms providing agricultural services recorded 15,325 lost-time employee injuries, down from 15,843 in 1965 and 16,022 in 1964.

Agriculture was one of the three major industry divisions that registered a lower work injury rate in 1966 than in the previous year, and the rate on farms dropped more than in either construction or government, the other major industries with declining rates. The agricultural job injury rate fell by 4 percent---from 68.3 disabling injuries per 1,000 workers in 1965 to 65.6 in 1966.

Although the injury rate reduction in agriculture in recent years indicates progress, it is still twice as high as the rate for all industries taken together. Looked at another way, agricultural injuries represented almost 8 percent of all lost-time job injuries recorded in California during 1966, although less than 4 percent of all employees worked on farms.

There has been an upward trend of injuries involving mechanical harvesters and pickers, reflecting the increased mechanization of the harvest. When farm machines are used in large numbers, the specter of serious injury is always present. The table below compares the trend of mechanical harvesting equipment injuries with all lost-time agricultural injuries during the past 10 years:

| Year | Lost-time agricultural work injuries | |
|-------------------------|--------------------------------------|---|
| | Total | Involving harvesting machinery ^a |
| 1956 | 16,672 | 221 |
| 1957 | 16,165 | 231 |
| 1958 | 15,841 | 243 |
| 1959 | 17,363 | 214 |
| 1960 | 17,121 | 219 |
| 1961 | 16,724 | 237 |
| 1962 | 16,104 | 253 |
| 1963 | 16,474 | 226 |
| 1964 | 16,022 | 255 |
| 1965 | 15,843 | 285 |
| 1966 | 15,325 | 318 |
| Percent change, 1956-66 | -8.1% | 43.9% |

^aIncludes harvesters, combines, diggers and pickers.

Statistics are not available on the number of farm employees working on or in proximity to harvesting equipment. It seems very likely, however, that the number has risen much more than the 44 percent rise over the past decade in accidents involving harvesting equipment. As one indication of this, the number of tomato harvesters used at the season's peak in California increased to 609 in 1966 from 272 in 1965, according to agricultural experts. Sixty-six percent of the acreage in tomatoes was machine harvested in 1966, up from 25 percent in the

a large crew of field hands during the peak of the harvest. Adequate supervision can prevent accidents.

Although it is somewhat early to tell, it appears that the introduction of mechanical pickers has resulted in a reduction in the number of agricultural accidents involving strain or overexertion. In the past when large numbers of Braceros were brought in to work in the fields, each year hundreds of farm hands suffered strain or overexertion in lifting containers or in stooping for long periods of time. The major push toward mechanization of the harvest has occurred since 1964 when accidents involving strain or overexertion disabled 3,458 farm hands. By 1966, the number of lost-time injuries involving strain or overexertion declined to 3,060, a drop of 11½ percent. In vegetable farming, where the introduction of harvesting equipment has been rapid, the number of injuries caused by strain or overexertion fell 43 percent in the two years between 1964 and 1966.

Another factor that has tended to reduce farm injuries in recent years has been the safety programs instituted to create greater awareness by farmers of the need to encourage safety among their workers in the face of contraction in the available agricultural work force. Several County Farm Bureaus have embarked on programs encouraging members to provide improved "follow-up" on the medical care received by injured workers. Even with minor injuries, farmers have been urged to immediately arrange for the injured worker to be taken to the employer's own physician for treatment, instead of leaving to the worker the responsibility for seeing a physician. It is believed in many cases this has prevented minor injuries from later developing into disabling injuries.

Environmental hazards on the farm continued as an area of concern in 1966. Increased mechanization of agriculture has been accompanied by increased utilization of toxic substances to control crop damage by pests. In 1964, contact with insecticides, sprays, defoliant, and fumigants disabled 188 farm workers. In 1966, disabilities resulting from contact with such economic poisons had risen to 254 although fewer persons were at work.

Work Fatalities

On-the-job accidents claimed the lives of 88 California agricultural workers during 1966. Seventy-two of those killed worked on farms, and 16 worked for agricultural service establishments. In 1965 there were 73 agricultural deaths in California.

Vehicle accidents

Accidents involving trucks, automobiles, or farm labor buses killed 34 workers. Twenty-one deaths occurred in truck accidents, eleven involved automobiles, and two resulted from accidents involving buses transporting farm workers.

Two fatal accidents illustrative of vehicular mishaps involving farm workers are described below:

A farm laborer was hoeing weeds around a cook house near where a 2½-ton truck was parked, while the driver picked up lunches for the field workers. The laborer stepped behind the truck to sharpen his hoe. A high wind was blowing, and the laborer apparently did not hear the truck driver return to the truck and start it. The worker was knocked down by the backing vehicle and run over. He died two weeks later after suffering severe crushing injuries.

A cantaloupe picker stepped between the trailers of a large truck to get a drink of water from a can on the rear of the front trailer. The driver of the truck moved the vehicle forward without warning, and the picker was crushed to death under the wheels of the rear trailer. The drinking water should not have been placed where the workers had to walk between vehicles and could not be seen by the driver.

sounded his horn to warn the operator, but the tractor kept pulling until it tipped over backward. The tractor driver was crushed to death by the steering wheel. The tractor was not equipped with seat belts or roll bars.

A farm laborer was loading a tractor onto a flat-bed trailer parked on level ground parallel to a nearby irrigation ditch. Two metal rails about a foot wide and nine feet long sloped from the ground to the back of the trailer about 46 inches high. The cat rocked when it reached the point where the rails met the trailer, and the worker hit the left brake. The tractor turned slightly when it settled back. The driver started over the break point again, and the cat rolled off to the right. The worker jumped or was thrown to the opposite bank of the ditch, but the tractor rolled completely over and crushed him to death.

A tractor driver was pulling a hay rake through a field of baled alfalfa. He looked backward to check on the location of the rake, and the left front wheel struck a bale. The wheel jerked and the driver was thrown to the right. He threw out his hands and was caught by the fenderless right rear wheel. He was pulled under the wheel and crushed to death. Seat belts probably would have saved his life.

Two tractors pulling cotton stalk cutters in a field collided as the drivers attempted to pass. One driver was knocked from his seat into the moving cutter blades and was killed instantly. The tractor had no seat belts.

A tractor driver was pulling a disc across a field with a large tractor on the first pass after lunch. He apparently went to sleep and fell under the disc. A motorist passing by a quarter of a mile away saw him fall, ran across the field, and stopped the tractor. Seat belts would have prevented this death.

Farm machinery accidents

Seven workers were killed in accidents involving farm machinery.

A tractor driver dismounted to remove trash that had accumulated on the drums of a cotton stripper he was pulling. He failed to shut off the motor, and the metal teeth on the drums caught his clothing and pulled him into the machinery. He died of a broken neck.

A tractor driver towing a weed killer mulcher stopped the tractor when he noticed that the mulch bar was not operating properly. Without disengaging the power take-off, he stepped to the rear over the rotating mulch bar drive shaft. A projecting 1-inch bolt on the shaft caught the loose trouser leg of his coveralls, and he was wound around the shaft before the engine finally stalled. He died a week later of internal injuries. A sign posted on the tractor warned operators to disengage the power take-off before dismounting from the seat.

A farm equipment operator stopped a hay swather to oil the crimper drive chains, a job which is done while the chains are in motion. When he reached around the left front wheel with the oil can in his hand, the sleeve of his heavy coat caught on a grease fitting on the rotating header power take-off shaft. As his sleeve wrapped around the shaft, the worker was pulled into the narrow space between the header and the wheel. His chest was crushed and he suffocated. The shaft should have been guarded and equipped with remote oil cups and lines.

Falls

Five farm workers died in falls during 1966. Two workers were killed in falls from elevations, two fell from horses, and one died in a fall on the same level.

A cherry picker fell as he descended an 18-foot ladder when the fifth step from the bottom slipped out of its connecting bracket. The worker sustained rib fractures and punctured lungs and died two days later. Although the ladder was new, the employer had noticed that the support rod was missing from the fifth step and had replaced

lines.

An 18-year old farm worker balanced a 25-foot length of irrigation pipe on end, and the pipe contacted an overhead high-voltage line. He was electrocuted.

Cave-ins

Three agricultural workers were buried when ditches or piles of material collapsed on them.

A 19-year old feed lot employee was moving silage from a large stack to the feed lot with a tractor-mounted front end loader. He took all the feed from near the bottom of the stack, and after about eight trips, the stack was dangerously undercut. For some reason, the worker parked beside the stack and dismounted, walking between the loader and the stack six to eight feet away. While he was returning to the tractor with his back to the silage, the top of the stack slid off and buried him. He was found suffocated under a pile of feed that filled the space between the stack and the tractor to the level of the tractor seat.

Other farm fatalities

A ranch foreman, cleaning up a corral and moving dirt with a front end loader, drove under the roofed area of a shed. His head was crushed between a low roof member and the supporting tractor arm behind his seat.

A dairy milker was butted by a Jersey bull and died four days later. He had been warned to stay out of the bull pasture. The bulls were normally handled by another milker who had little trouble with them.

A laborer was driving a manure spreader through a vineyard when the frame of the vehicle suddenly broke on both sides. This allowed the manure hopper to come forward and crush the driver against the steering column. The vehicle was a converted jeep-type vehicle with a welded frame. Only about an inch of weld supported the weight of the vehicle on each side, and the welded area was corroded.

An apricot picker was killed when he fell from the front of a fork lift where he was riding and was crushed under the wheels. The fork lift was a converted tractor, and the worker was sitting on a metal counterbalance mounted on the front. Passengers should have been prohibited from riding the vehicle, as no adequate seating was provided.

Farm Transportation Accidents

During 1966, 206 farm workers sustained lost-time injuries while being transported to or from the fields in trucks or labor buses, compared with 188 in 1965. Three of the injuries in 1966 were fatal, and 7 in 1965. The types of accidents and kinds of vehicles involved in the 206 injuries reported in 1966 are shown in tables 9 and 10.

considerable year-to-year fluctuation in the number of farm workers hurt while being transported to or from the fields, depending largely upon whether or not a few catastrophic accidents occurred. The largest number of injuries in any year (387) was recorded in 1957; the lowest number (134) in 1960.

Although the 90 separate accidents recorded in 1966 was slightly more than the 87 in 1965, it was well below the 111 farm transportation accidents registered in 1964.

An important reason for the decline in the number of farm transportation accidents from 1964 levels was the expiration of Public Law 78 in December 1964, which sharply reduced the need to provide transportation for Braceros. In 1964 when a great many Braceros were at work on California farms, 212 laborers were disabled in 34 separate labor bus accidents. In 1965, 73 farm workers were disabled in 18 bus mishaps; and in 1966, 99 workers were hurt in 14 bus accidents---48 of the injuries occurring in a single accident.

While 1966 could be considered as safer than average in terms of farm transportation mishaps for the preceding 14 years, there are still a substantial number of workers hurt in accidents involving trucks or buses used to carry them to the fields.

Accidents in which vehicles overturned or collided with other moving vehicles accounted for more than 60 percent of the farm transportation injuries in 1966, although "overturning" accidents or collisions accounted for only 25 percent of the accidents recorded.

Methods recommended for eliminating farm transportation injuries are much the same as those for cutting the toll of all vehicle mishaps: upgrading of driver qualifications and promotion of safe driving habits; improved vehicle design; improved highway engineering; and increased emphasis on inspection of vehicles for mechanical defects. The importance of all of these factors is magnified in areas of transportation--such as farm transportation---where the safety of many passengers depends on the qualifications of a single driver or the condition of a single vehicle.

Some of the more serious accidents in 1966

A single bus accident accounted for nearly a fourth of all the injuries reported. When a tire blew out on a bus carrying a large number of farm workers, the bus rolled into a ravine. The bus driver's wife, being transported along with others to work in the fields, was killed, and 47 other farm hands were disabled, many of them seriously.

Another accident injured 10 farm laborers and a labor contractor who was driving them from Salinas to Los Banos in a pickup truck with a canopy over the back. At three o'clock in the morning, while descending a steep grade at a high rate of speed, the pickup suddenly came upon a large truck across both lanes completing a U-turn through an approved opening in the divider strip. The pickup's brakes failed, and it veered to the right, bounced

FARM TRANSPORTATION ACCIDENTS 1952-66

| Year | Number of accidents | Number of workers injured | |
|------|---------------------|---------------------------|-------|
| | | Total | Fatal |
| 1952 | 140 | 317 | 13 |
| 1953 | 151 | 369 | 28 |
| 1954 | 111 | 165 | 4 |
| 1955 | 109 | 175 | 17 |
| 1956 | 116 | 351 | 7 |
| 1957 | 129 | 387 | 10 |
| 1958 | 118 | 275 | 18 |
| 1959 | 109 | 337 | 8 |
| 1960 | 83 | 134 | 4 |
| 1961 | 114 | 177 | 3 |
| 1962 | 50 | 192 | 13 |
| 1963 | 84 | 253 | 34 |
| 1964 | 111 | 348 | 3 |
| 1965 | 87 | 188 | 7 |
| 1966 | 90 | 206 | 3 |

on record. There were 659 lost-time injuries to hired farm workers under 18, including 171 to workers under 16-- both figures were all-time highs.

The rise in injuries to youthful workers undoubtedly reflects the intensified recruitment of teenagers following the expiration of Public Law 78 which sharply cut back Bracero labor.

The trend in the number of work injuries to paid young farm workers in recent years is shown below. The proportion of injuries suffered by agricultural employees under 18 years old has risen in each of the last four years.

| Year | Lost-time agricultural work injuries | | | | Injuries to workers under 18 as percent of total |
|------|--------------------------------------|----------------------|-------------|----------------|--|
| | All hired farm workers | Total under 18 years | 16-17 years | Under 16 years | |
| 1956 | 16,672 | 409 | 367 | 132 | 3.0 |
| 1957 | 16,165 | 512 | 385 | 127 | 3.2 |
| 1958 | 15,841 | 434 | 342 | 92 | 2.7 |
| 1959 | 17,883 | 565 | 448 | 117 | 3.2 |
| 1960 | 17,121 | 539 | 422 | 117 | 3.1 |
| 1961 | 16,724 | 426 | 343 | 83 | 2.5 |
| 1962 | 16,104 | 395 | 327 | 68 | 2.5 |
| 1963 | 16,474 | 431 | 341 | 90 | 2.6 |
| 1964 | 16,022 | 537 | 454 | 103 | 3.5 |
| 1965 | 15,843 | 616 | 484 | 132 | 3.9 |
| 1966 | 15,325 | 653 | 496 | 157 | 4.3 |

Nearly two-thirds of the youngsters injured in 1966 were working on fruit and tree-nut farms or field crop farms when they were hurt.

Vehicles, usually trailers, tractors, or trucks were responsible for more injuries to young farm workers than any other single agency, accounting for 134, or one-fifth of the lost-time injuries recorded. In many instances youthful employees were struck by trailers or other conveyances being moved through the orchards or fields where they were at work.

Hand tool accidents resulted in lost-time injury to 90 minors, including 41 severely hurt while using knives. Other young farm employees were hurt while using clippers, shears, pitchforks, hoes, and saws.

Falls from ladders, fruit trees, and other working surfaces were frequent, accounting for 58 lost-time injuries to workers under 18.

Three California farm workers under 18 were killed in job-connected accidents during 1966. Two 15-year old fruit pickers died in separate highway accidents, and a 17-year old suffocated while working in a storage bin when a pile of hominy caved in on him.

| <u>Industry</u> | <u>Disabling injuries per 1,000 workers---1966^b</u> |
|--|--|
| <u>All industries combined</u> | 31.6 |
| Construction | 74.6 |
| Mineral extraction | 67.8 |
| AGRICULTURE | 65.6 ← |
| Transportation, communication, utilities | 39.6 |
| Manufacturing | 36.6 |
| State and local government | 29.8 |
| Trade | 27.2 |
| Service | 16.6 |
| Finance, insurance, real estate | 8.7 |

TABLE 2---TREND OF DISABLING WORK INJURIES^a PER 1,000 AGRICULTURAL WORKERS
CALIFORNIA, 1950-66

| <u>Year</u> | <u>Number</u> | <u>Disabling work injuries per 1,000^b agricultural workers</u> |
|-------------|---------------|---|
| 1950 | 13,877 | 57.9 |
| 1951 | 14,744 | 60.9 |
| 1952 | 14,786 | 60.7 |
| 1953 | 14,188 | 56.5 |
| 1954 | 14,830 | 58.3 |
| 1955 | 16,170 | 61.4 |
| 1956 | 16,672 | 63.1 |
| 1957 | 16,165 | 62.0 |
| 1958 | 15,841 | 61.6 |
| 1959 | 17,883 | 68.9 |
| 1960 | 17,121 | 68.2 |
| 1961 | 16,724 | 67.1 |
| 1962 | 16,104 | 65.1 |
| 1963 | 16,474 | 67.9 |
| 1964 | 16,022 | 66.0 |
| 1965 | 15,843 | 68.3 |
| 1966 | 15,325 | 65.6 |

^aDisability causing absence from work for a full day or shift beyond the day of the injury.

^bRates are preliminary. Based on employment estimates subject to change.

| <u>Type of farm</u> | <u>1963</u> | <u>1964</u> | <u>1965</u> | <u>1966</u> |
|------------------------------|-------------|-------------|-------------|-------------|
| Total | 16,474 | 16,022 | 15,843 | 15,325 |
| Field crop and general farms | 4,752 | 4,637 | 4,335 | 4,323 |
| Fruit and tree-nut farms | 5,364 | 5,415 | 5,288 | 4,974 |
| Vegetable farms | 1,906 | 1,388 | 1,505 | 1,245 |
| Dairy and livestock farms | 1,871 | 1,901 | 1,926 | 1,803 |
| Poultry farms | 381 | 361 | 452 | 542 |
| Nurseries and greenhouses | 544 | 613 | 668 | 669 |
| Agricultural services | 1,656 | 1,707 | 1,669 | 1,769 |

TABLE 4--TREND OF DISABLING WORK INJURIES^a IN CALIFORNIA
AGRICULTURAL SERVICES, BY TYPE OF SERVICE, 1963-66

| <u>Type of service</u> | <u>1963</u> | <u>1964</u> | <u>1965</u> | <u>1966</u> |
|------------------------------|-------------|-------------|-------------|-------------|
| Total | 1,656 | 1,707 | 1,669 | 1,769 |
| Cotton ginning | 155 | 178 | 142 | 136 |
| Cotton compressing | 42 | 32 | 43 | 38 |
| Animal husbandry services | 483 | 368 | 375 | 391 |
| Spraying and pest control | 161 | 179 | 196 | 231 |
| Other horticultural services | 477 | 514 | 526 | 617 |
| Other agricultural services | 338 | 436 | 387 | 356 |

^aDisability causing absence from work for a full day or shift beyond the day of the injury.

TABLE 5--DISABLING WORK INJURIES IN CALIFORNIA AGRICULTURE, 1966
AGENCY INVOLVED BY TYPE OF FARM

| Type involved | Total | Field crop and general farms | Fruit and tree-nut farms | Vegetable farms | Dairy and livestock farms | Poultry farms | Nurseries and greenhouses |
|---------------------|---------------|------------------------------|--------------------------|-----------------|---------------------------|---------------|---------------------------|
| | <u>15,325</u> | <u>4,323</u> | <u>4,974</u> | <u>1,245</u> | <u>1,803</u> | <u>542</u> | <u>669</u> |
| | 2,327 | 1,068 | 477 | 174 | 160 | 107 | 77 |
| | <u>1,017</u> | <u>591</u> | <u>206</u> | <u>59</u> | <u>53</u> | <u>21</u> | <u>15</u> |
| | 556 | 222 | 108 | 61 | 55 | 10 | 23 |
| | 110 | 50 | 22 | 1 | 8 | 6 | 3 |
| | 70 | 26 | 24 | 3 | 4 | - | 5 |
| | 54 | 25 | 6 | 21 | - | - | - |
| oller, oiler, | | | | | | | |
| eder | 50 | 27 | 6 | 1 | 5 | 1 | 2 |
| ter scooter | 15 | 8 | 5 | - | 1 | - | - |
| icles | 55 | 3 | 6 | - | 1 | 33 | 2 |
| | 234 | 95 | 58 | 20 | 16 | 10 | 5 |
| and truck, other | | | | | | | |
| oot operated | 135 | 15 | 34 | 6 | 14 | 26 | 16 |
| | 18 | 1 | - | - | - | - | - |
| | 5 | 1 | 1 | - | 2 | - | - |
| | 8 | 4 | 1 | 2 | 1 | - | - |
| not specified | | | | | | | |
| | | | | | | | |
| rs, n.e.c. | 1,959 | 514 | 539 | 166 | 300 | 90 | 125 |
| icle--bed, back | <u>1,066</u> | <u>300</u> | <u>330</u> | <u>115</u> | <u>134</u> | <u>36</u> | <u>59</u> |
| | 314 | 110 | 61 | 21 | 56 | 11 | 20 |
| | 182 | 31 | 31 | 10 | 45 | 20 | 118 |
| her vertical | | | | | | | |
| urface | 111 | 1 | 72 | 4 | 4 | 1 | 1 |
| step, fender of | 58 | 21 | 9 | 9 | 4 | 2 | 4 |
| y motor vehicle | 54 | 12 | 16 | 3 | 4 | 5 | 6 |
| elevated platform, | 38 | 9 | 6 | 1 | 12 | 3 | 1 |
| | 19 | 6 | 1 | 1 | 2 | 3 | 0 |
| | 14 | 2 | 2 | - | 1 | 5 | 1 |
| | 75 | 14 | 6 | 2 | 31 | 3 | 5 |
| | 23 | 8 | 4 | - | 6 | - | 2 |
| ng surfaces, n.e.c. | | | | | | | |
| urfaces | 5 | - | 1 | - | 1 | 1 | 2 |
| se--type not | | | | | | | |
| | | | | | | | |
| | 1,685 | 474 | 605 | 197 | 105 | 49 | 82 |
| | <u>365</u> | <u>11</u> | <u>318</u> | <u>3</u> | <u>8</u> | <u>2</u> | <u>10</u> |
| | 278 | 13 | 88 | 140 | 5 | 9 | 15 |
| | 146 | 76 | 29 | 4 | 5 | 8 | 9 |
| | 97 | 43 | 19 | 6 | 6 | 8 | 7 |
| | 85 | 54 | 11 | - | 5 | 1 | 1 |
| | 71 | 15 | 25 | - | 3 | - | 3 |

| | | | | | | | | |
|--|--|--|--|---|--|--|---|---------|
| Saw Grinder | 57 52 49 45 44 39 30 25 24 19 17 17 11 137 40 | 32 5 31 12 29 14 12 7 4 1 12 8 15 13 5 41 21 | 8 6 3 4 3 10 2 11 10 19 2 3 - - 1 25 8 | 14 4 7 1 3 - 1 - 2 - 1 1 10 2 | 1 21 5 19 2 2 3 5 - - 1 1 1 1 10 1 | 1 10 | 1 1 1 1 2 2 - - - 2 - - 1 9 2 | 1 10 |
| tillage equipment | 1,351 291 281 130 87 51 44 32 27 27 22 19 17 17 15 14 14 255 8 | 670 155 210 50 31 33 18 18 1 13 - 12 5 - 1 11 5 5 104 3 | 162 26 35 8 28 3 11 - - 3 - 2 - 1 1 1 1 45 2 | 150 74 7 1 1 13 5 1 11 - - 9 1 1 1 25 - | 76 1 6 7 2 - 6 8 1 - - 2 2 17 1 - 2 20 1 | 29 3 4 5 4 4 1 1 - - - 4 1 1 1 5 - | 29 | 29 |
| chopper, n.e.c. five wheel not specified | 1,320 684 173 172 64 62 52 26 15 14 11 11 78 38 | 227 52 54 47 16 5 8 10 4 5 5 3 7 5 | 426 304 37 2 5 23 23 4 2 4 1 - 22 9 | 237 180 29 - 10 5 1 4 1 - 4 1 2 | 128 8 13 72 4 9 1 - 2 1 - 13 5 | 90 19 12 5 22 6 6 2 2 - 1 - 5 10 | 90 | 90 |
| pe not specified | 1,313 | 60 | 1,182 | 7 | 19 | 19 | 10 | 10 |

TABLE 5--DISABLING WORK INJURIES IN CALIFORNIA AGRICULTURE, 1966
AGENCY INVOLVED BY TYPE OF FARM--Continued

| Agency involved | Total | Field crop and general farms | Fruit and tree-nut farms | Vegetable farms | Dairy and livestock farms | Poultry farms | Nursery and greenhouses |
|----------------------|-------|------------------------------|--------------------------|-----------------|---------------------------|---------------|-------------------------|
| | 1,138 | 81 | 121 | 6 | 709 | 18 | 9 |
| | 511 | 3 | 2 | 1 | 472 | 1 | 1 |
| | 324 | 24 | 111 | 5 | 217 | 3 | 9 |
| | 201 | 48 | 5 | 1 | 7 | 11 | 1 |
| animals | 42 | 1 | 1 | 1 | 5 | 3 | 1 |
| | 16 | 1 | 1 | 1 | 8 | 1 | 1 |
| | 36 | 4 | 3 | 1 | 1 | 1 | 1 |
| | 8 | | | | | | |
| | 227 | 241 | 311 | 100 | 41 | 20 | 52 |
| injurious substances | 40 | 30 | 1 | 1 | 1 | 1 | 1 |
| other petroleum | 25 | 15 | 4 | 1 | 1 | 1 | 2 |
| | 12 | 2 | 8 | 1 | 1 | 1 | 1 |
| | 11 | 4 | 3 | 1 | 1 | 1 | 2 |
| | 10 | 1 | 1 | 1 | 1 | 1 | 8 |
| | 25 | 9 | 3 | 2 | 1 | 3 | 1 |
| not specified | 14 | 3 | 3 | 1 | 1 | 1 | 1 |
| pesticides | 178 | 24 | 79 | 11 | 10 | 2 | 14 |
| (herbicides, etc.) | 77 | 7 | 46 | 2 | 2 | 1 | 1 |
| insecticides | 177 | 53 | 43 | 20 | 1 | 5 | 9 |
| | 119 | 4 | 64 | 46 | 2 | 1 | 2 |
| | 57 | 14 | 26 | 10 | 3 | 1 | 1 |
| fungicides and | 54 | 28 | 6 | 1 | 2 | 3 | 4 |
| | 28 | 10 | 5 | 1 | 6 | 2 | 2 |
| | 16 | 10 | 2 | 2 | 1 | 1 | 1 |
| pesticides--type not | 59 | 17 | 10 | 3 | 11 | 5 | 5 |
| | 25 | 10 | 8 | 1 | 4 | 1 | 1 |
| herbicides | 623 | 78 | 298 | 11 | 22 | 14 | 33 |
| | 304 | 8 | 270 | 2 | 19 | 14 | 8 |
| | 163 | 50 | 59 | 9 | 2 | 1 | 17 |
| | 106 | 7 | 67 | 1 | 1 | 1 | 11 |
| | 37 | 8 | 20 | 1 | 1 | 1 | 1 |
| | 13 | 5 | 2 | 1 | 1 | 1 | 2 |
| herbicides, brush | 2,465 | 847 | 684 | 187 | 216 | 120 | 143 |
| pesticides | 321 | 236 | 27 | 11 | 17 | 3 | 9 |
| herbicides, brush | 272 | 15 | 201 | 9 | 3 | 1 | 24 |
| pesticides | 205 | 21 | 94 | 32 | 19 | 15 | 10 |
| herbicides, brush | 196 | 52 | 32 | 35 | 10 | 17 | 9 |

| | | | | | | | | |
|----------------------|-----|----|----|----|----|----|----|----|
| Continued) | 183 | 70 | 65 | 18 | 4 | 8 | 8 | 12 |
| ces, unassigned | 120 | 79 | 8 | 8 | 9 | 2 | 2 | 1 |
| stock parts | 75 | 27 | 19 | 5 | 7 | 4 | 4 | 1 |
| conditions | 71 | 20 | 14 | 2 | 23 | 5 | 2 | 2 |
| structurally changed | 68 | 18 | 4 | 2 | 24 | 4 | 2 | 2 |
| mover | 62 | 34 | 6 | 2 | 8 | 3 | 1 | 1 |
| excavation | 52 | 30 | 10 | 2 | 3 | 4 | 2 | 2 |
| rope | 48 | 23 | 7 | 2 | 5 | 1 | 1 | 2 |
| | 46 | 21 | 10 | 2 | 11 | 1 | 2 | 2 |
| | 45 | 10 | 13 | 2 | 1 | 2 | 2 | 1 |
| | 39 | 5 | 19 | 1 | 1 | 2 | 2 | 1 |
| | 38 | 14 | 7 | 1 | 3 | 2 | 1 | 1 |
| | | 15 | 6 | | 3 | 1 | | |
| strains | 35 | 9 | 12 | 3 | 3 | 3 | 3 | 1 |
| (collapse, heart | 34 | 5 | 8 | 4 | 3 | 5 | 5 | 6 |
| etc.) | 33 | 12 | 7 | 1 | 3 | 5 | 5 | 3 |
| flat | 25 | 4 | 2 | 2 | 3 | 5 | 3 | 2 |
| stove, heater, etc. | 24 | 3 | 7 | 1 | 5 | 5 | 3 | 2 |
| ect, n.e.c. | 23 | 11 | 7 | 1 | 5 | 2 | 2 | 2 |
| staple, tack | 21 | 7 | 4 | 2 | 5 | 5 | 4 | 2 |
| man injured | 19 | 6 | 2 | 1 | 5 | 4 | 4 | 2 |
| sure vessel | 16 | 5 | 3 | 1 | 4 | 4 | 4 | 1 |
| lery | 14 | 5 | 3 | 1 | 4 | 4 | 4 | 1 |
| at | 13 | 2 | 9 | 1 | 6 | 6 | 6 | 3 |
| | 12 | 1 | 1 | 1 | 9 | 9 | 9 | 1 |
| | 11 | 2 | 1 | 1 | 1 | 1 | 1 | 1 |
| g block, tile | 10 | 4 | 2 | 1 | 1 | 1 | 1 | 1 |
| , n.e.c. | 10 | 1 | 2 | 1 | 1 | 1 | 1 | 1 |
| ted | 275 | 80 | 68 | 32 | 33 | 17 | 17 | 16 |
| | 216 | 63 | 52 | 13 | 27 | 11 | 11 | 12 |

where classified.

TABLE 6--DISABLING WORK INJURIES IN CALIFORNIA AGRICULTURE, 1966
ACCIDENT TYPE BY TYPE OF FARM

| Accident type | Total | Field crop and general farms | Fruit and tree-nut farms | Vegetable farms | Dairy and livestock farms | Poultry farms | Horticulture and greenhouses |
|-------------------------|--------|------------------------------|--------------------------|-----------------|---------------------------|---------------|------------------------------|
| Working against holding | 15,225 | 4,222 | 4,974 | 1,245 | 1,803 | 942 | 669 |
| Working against holding | 3,784 | 924 | 997 | 221 | 754 | 163 | 178 |
| Working against holding | 82 | 38 | 20 | 3 | 6 | 3 | 3 |
| Working against holding | 719 | 143 | 232 | 141 | 50 | 29 | 42 |
| Working against holding | 760 | 295 | 198 | 44 | 60 | 31 | 49 |
| Working against holding | 45 | 14 | 12 | 5 | 3 | 3 | 2 |
| Working against holding | 444 | 131 | 125 | 42 | 43 | 11 | 18 |
| Working against holding | 142 | 34 | 24 | 3 | 36 | 18 | 12 |
| Working against holding | 231 | 33 | 112 | 7 | 27 | 14 | 21 |
| Working against holding | 514 | 138 | 160 | 49 | 48 | 31 | 30 |
| Working against holding | 81 | 22 | 31 | 8 | 2 | 4 | 3 |
| Working against holding | 4 | 2 | - | - | 1 | - | - |
| Working against holding | 4 | 1 | 3 | - | 1 | - | - |
| Working against holding | 5 | - | - | 1 | 1 | 2 | - |
| Working against holding | 753 | 73 | 80 | 18 | 477 | 17 | 7 |
| Working against holding | 889 | 262 | 130 | 117 | 77 | 29 | 29 |
| Working against holding | 188 | 82 | 36 | 18 | 16 | 8 | 4 |
| Working against holding | 19 | 9 | 5 | 3 | - | - | 1 |
| Working against holding | 285 | 168 | 40 | 61 | 19 | 10 | 14 |
| Working against holding | 149 | 59 | 31 | 32 | 7 | 16 | 5 |
| Working against holding | 128 | 45 | 18 | 5 | 35 | 5 | 5 |
| Working against holding | 3,795 | 843 | 1,629 | 224 | 484 | 93 | 138 |
| Working against holding | 656 | 160 | 172 | 89 | 110 | 32 | 55 |
| Working against holding | 521 | 149 | 204 | 53 | 54 | 13 | 23 |
| Working against holding | 1,706 | 243 | 1,107 | 35 | 123 | 31 | 47 |
| Working against holding | 37 | 16 | 7 | - | 5 | 1 | - |
| Working against holding | 69 | 39 | 16 | 7 | 1 | - | 1 |
| Working against holding | 537 | 223 | 121 | 39 | 50 | 16 | 14 |
| Working against holding | 218 | 13 | 1 | 1 | 149 | - | - |
| Working against holding | 1 | - | 1 | - | - | - | - |
| Working against holding | 1,262 | 577 | 298 | 100 | 85 | 52 | 40 |
| Working against holding | 186 | 59 | 79 | 19 | 7 | 6 | 4 |
| Working against holding | 76 | 27 | 18 | 4 | 5 | 11 | 3 |
| Working against holding | 198 | 94 | 24 | 8 | 12 | 9 | 12 |
| Working against holding | 34 | 13 | 3 | 3 | 4 | 4 | 2 |
| Working against holding | 181 | 79 | 24 | 24 | 12 | 3 | 5 |
| Working against holding | 203 | 89 | 53 | 19 | 19 | 6 | 6 |

| | | | | | | | |
|---|--|--------------------------------------|--------------------------------------|------------------------------------|------------------------------------|----------------------------------|----------------------------------|
| ting load or object falling die | 24 | 9 | 11 | 1 | 3 | 7 | 1 |
| eviction in operating vehicle or object within vehicle laded | 129 131 130 | 80 74 53 | 21 18 47 | 3 11 8 | 6 9 8 | 3 3 3 | 2 4 2 |
| eviction (except heart) or lowering or falling or carrying oil or machine stated | 2,060 1,565 194 114 383 804 | 983 545 70 24 129 215 | 847 394 25 48 134 246 | 320 188 10 19 28 75 | 272 123 25 5 17 105 | 131 58 12 3 10 48 | 165 91 20 9 19 26 |
| perature extremes atmosphere or environment atmosphere or environment substance | 197 66 12 119 | 93 22 8 63 | 32 20 - 12 | 13 5 - 8 | 18 4 2 12 | 8 2 1 5 | 14 6 1 7 |
| lations, caustic, toxic substances | 773 195 567 | 176 42 133 | 266 65 198 | 82 8 72 2 | 40 8 31 | 16 2 13 | 47 11 36 |
| with toxic or noxious substances | 6 2 3 | 1 - - | 2 - 1 | - - - | - - 1 | - - 1 | - - - |
| static current with normally energized parts overhead lines through equipment | 23 4 8 | 10 - 6 | 4 1 1 | - - - | 2 - - | - - - | 1 - - |
| parts not normally energized not caused by arc or short circuit al accidents | 7 7 1 | 1 3 - | 1 1 - | - - - | 1 1 - | - - - | 1 - - |
| blocks, etc. rock by flying objects fighting or firing | 46 3 15 3 4 21 | 25 2 7 3 2 11 | 5 1 1 - 1 2 | 1 - - - - 1 | 3 - - - - 3 | 2 - 2 - - - | 4 - 2 - - 2 |
| combustible material container | 255 | 54 | 117 | 5 | 12 | 5 | 9 |
| bites, stings | 998 | 220 | 579 | 47 | 22 | 25 | 95 |
| in eye | 50 17 9 24 | 14 3 - 11 | 12 3 - 10 | 3 2 - 1 | 3 2 - 1 | 3 2 - 1 | 2 2 - - |
| reported | 163 | 41 | 57 | 12 | 21 | 5 | 7 |

where classified.

TABLE 7--DISABLING WORK INJURIES IN CALIFORNIA AGRICULTURE, 1966
COUNTY BY TYPE OF FARM

| Total | Field crop and general farms | Fruit and tree-nut farms | Vegetable farms | Dairy and live-stock farms | Poultry farms | Nurseries and greenhouses | Ag. |
|--------|------------------------------|--------------------------|-----------------|----------------------------|---------------|---------------------------|-----|
| 15,325 | 4,323 | 4,974 | 1,245 | 1,602 | 542 | 669 | |
| 150 | 14 | 10 | 18 | 10 | 11 | 58 | |
| 1 | - | - | - | - | - | - | |
| 11 | 2 | 1 | - | 7 | - | - | |
| 243 | 97 | 100 | 4 | 15 | 3 | 6 | |
| 9 | 3 | 3 | - | 2 | - | 1 | |
| 125 | 83 | 22 | 4 | 9 | - | - | |
| 193 | 40 | 48 | 20 | 33 | - | 30 | |
| 19 | 2 | - | - | 10 | - | 7 | |
| 25 | 3 | 13 | - | 3 | 1 | 1 | |
| 1,490 | 616 | 535 | 55 | 101 | 26 | 6 | |
| 105 | 43 | 30 | 3 | 19 | - | 2 | |
| 50 | 9 | 1 | - | 17 | 1 | 6 | |
| 418 | 182 | 24 | 69 | 35 | - | 4 | |
| 5 | - | - | - | 5 | - | - | |
| 1,037 | 476 | 255 | 31 | 103 | 12 | 19 | |
| 359 | 228 | 31 | 2 | 51 | 1 | 3 | |
| 59 | 22 | 32 | - | 2 | - | - | |
| 19 | 6 | - | - | 11 | - | 2 | |
| 607 | 55 | 51 | 18 | 120 | 23 | 117 | |
| 303 | 113 | 67 | 6 | 80 | 6 | 4 | |
| 38 | 2 | - | - | 19 | 1 | 2 | |
| 7 | - | - | - | 3 | 2 | - | |
| 63 | 19 | 31 | - | 7 | 2 | 1 | |
| 477 | 145 | 131 | 22 | 101 | 37 | 11 | |
| 59 | 23 | - | 3 | 23 | - | - | |
| 1 | - | - | - | 1 | - | - | |
| 649 | 185 | 83 | 265 | 33 | 7 | 18 | |
| 63 | 12 | 27 | - | 11 | 3 | 2 | |
| 1 | - | - | - | 1 | - | - | |
| 377 | 63 | 120 | 26 | 40 | 12 | 55 | |
| 67 | 14 | 24 | - | 10 | 9 | 6 | |
| 5 | 2 | - | - | 3 | - | - | |
| 1,024 | 219 | 432 | 40 | 115 | 66 | 30 | |
| 276 | 101 | 63 | 25 | 36 | 5 | 12 | |

| | | | | | | |
|-------|-----|-----|-----|-----|----|----|
| 102 | 17 | 37 | 14 | 19 | 5 | 4 |
| 463 | 62 | 223 | 5 | 75 | 50 | 18 |
| 452 | 75 | 120 | 53 | 57 | 45 | 39 |
| 33 | 4 | 2 | 3 | 7 | 1 | 3 |
| 645 | 216 | 177 | 138 | 58 | 16 | 6 |
| 162 | 41 | 18 | 45 | 29 | 18 | 2 |
| 106 | 8 | 2 | 6 | 4 | - | 26 |
| 343 | 65 | 130 | 28 | 40 | 5 | 25 |
| 373 | 65 | 150 | 31 | 28 | 6 | 46 |
| 192 | 34 | 45 | 59 | 4 | 9 | 25 |
| 52 | 14 | 5 | - | 16 | - | 12 |
| 3 | 1 | 1 | - | 1 | - | - |
| 65 | 27 | - | 11 | 20 | - | 1 |
| 175 | 70 | 41 | 20 | 17 | 4 | 3 |
| 262 | 46 | 90 | 1 | 89 | 18 | 5 |
| 668 | 114 | 315 | 30 | 82 | 81 | 14 |
| 246 | 101 | 102 | 20 | 8 | 1 | 7 |
| 69 | 16 | 28 | - | 16 | 2 | 7 |
| 1 | - | - | - | - | - | 7 |
| 1,434 | 277 | 822 | 19 | 141 | 23 | - |
| 11 | 1 | 4 | - | 2 | 3 | 1 |
| 757 | 103 | 426 | 96 | 31 | 25 | 20 |
| 250 | 143 | 42 | 52 | 6 | - | 2 |
| 111 | 26 | 59 | 1 | 13 | 1 | - |
| 20 | 11 | 1 | 2 | 3 | 1 | - |
| 1 | - | - | - | 1 | - | - |

TABLE 8--DISABLING WORK INJURIES IN CALIFORNIA AGRICULTURE, 1966
NATURE OF INJURY BY PART OF BODY AFFECTED

| Injury | Total | Eyes | Head, face, neck | Back and spine | Trunk | Arms | Hands | Fingers | Legs | Feet | Toes | Body n.e.c. |
|-----------------|--------|-------|------------------------|----------------------|-------|-------|-------|---------|-------|-------|------|----------------|
| dislocations, | 15,225 | 1,146 | 892 | 2,183 | 1,527 | 1,362 | 1,225 | 1,460 | 1,706 | 1,560 | 229 | 631 |
| s, punctures, | 4,869 | - | 95 | 2,569 | 557 | 390 | 183 | 33 | 387 | 574 | 7 | 14 |
| usions | 2,721 | 21 | 325 | 19 | 40 | 186 | 532 | 812 | 387 | 290 | 56 | 20 |
| | 1,420 | 2 | 107 | 94 | 255 | 172 | 79 | 64 | 349 | 215 | 31 | 44 |
| | 1,289 | - | 55 | 44 | 250 | 178 | 136 | 157 | 163 | 213 | 84 | 8 |
| e.c. | 1,057 | 1,057 | - | - | - | - | - | - | - | - | - | - |
| ases | 831 | 7 | 57 | 15 | 72 | 110 | 75 | 12 | 38 | 21 | - | 493 |
| s | 532 | - | 1 | 7 | 12 | 16 | 52 | 192 | 42 | 114 | 38 | 53 |
| s of, paralysis | 293 | 57 | 40 | - | 10 | 55 | 51 | 5 | 20 | 23 | 1 | 27 |
| | 134 | 2 | - | - | - | 2 | 2 | 123 | 1 | - | 4 | - |
| | 150 | - | 76 | - | 47 | 1 | 1 | - | 1 | - | - | 24 |
| not reported | 2,029 | - | 129 | 440 | 284 | 255 | 109 | 62 | 318 | 150 | 8 | 30 |

where classified.

| <u>Accident type</u> | <u>Disabling work injuries</u> | | |
|--|--------------------------------|--------------|------------|
| | <u>Total</u> | <u>Truck</u> | <u>Bus</u> |
| Total | 206 | 107 | 99 |
| Collision with other moving vehicle | 39 | 13 | 26 |
| Collision with fixed object | 9 | 9 | - |
| Overturning, running off road | 87 | 23 | 64 |
| Fall from moving vehicle | 17 | 17 | - |
| Rough ride due to bump or sudden stop | 25 | 20 | 5 |
| Injured while getting on or off vehicle | 10 | 8 | 2 |
| Struck by or striking against vehicle part or object within vehicle | 4 | 3 | 1 |
| Door closed on hand, finger, etc. | 6 | 5 | 1 |
| Other accident type | 4 | 4 | - |
| Accident type not reported | 5 | 5 | - |

^aDisability causing absence from work for a full day or shift beyond the day of the injury.

TABLE 10--NUMBER OF SEPARATE FARM TRANSPORTATION ACCIDENTS
Accident Type and Kind of Vehicle, California, 1966

| <u>Accident type</u> | <u>Total</u> | <u>Truck</u> | <u>Bus</u> |
|--|--------------|--------------|------------|
| Total | 90 | 76 | 14 |
| Collision with other moving vehicle | 12 | 10 | 2 |
| Collision with fixed object | 6 | 6 | - |
| Overturning, running off road | 11 | 8 | 3 |
| Fall from moving vehicle | 17 | 17 | - |
| Rough ride due to bump or sudden stop | 19 | 14 | 5 |
| Injured while getting on or off vehicle | 10 | 8 | 2 |
| Struck by or striking against vehicle part or object within vehicle | 4 | 3 | 1 |
| Door closed on hand, finger, etc. | 6 | 5 | 1 |
| Other accident type | 3 | 3 | - |
| Accident type not reported | 2 | 2 | - |