

listed for each activity. For example, it was estimated that the activity of cutting mole drains could be done at a rate of 4 acres per hour. This means, of course, that it takes .25 hours to cut one acre. Therefore, for this activity .25 hours of equipment time (the 6-inch mole), 0.25 hours of tractor time (the crawler), and .25 hours of labor are shown per acre. The total hours for each activity is obtained by multiplying the input hours per acre by the total number of acres subjected to the activity under consideration.

Equipment Requirements

Having completed the table of major operations and the input requirements for each, an itemization of equipment and equipment costs was developed (Table 4). The new cost, new cost less salvage value, and hours of annual usage were estimated for each piece of equipment. All equipment is assumed to have an expected life of 10 years, and a salvage value of 10 percent of new cost. The annual hours of usage is computed by summing the total hours of each activity shown earlier in Table 3. Information previously established now permits the development of total cost on a per hour basis. Total cost per hour is the sum of total fixed cost per hour and total variable cost per hour. After these costs are established, the total number of hours of usage may be multiplied by the total cost per hour to obtain the total annual cost for owning and operating each piece of equipment.

Fixed Costs

First, the development of total fixed cost per hour will be considered. It consists of four components — annual tax per hour, annual insurance per hour, annual depreciation per hour, and annual interest per hour.

For annual taxes on equipment, the cost figures in Table 4 reflect the rates charged in Palm Beach County in the Lake Okeechobee area. To arrive at the annual charge, 50 percent of the new cost is multiplied by the applicable tax rate, in this case .023162. This annual tax charge can be divided by the annual hours of usage to arrive at the tax per hour.

The data on costs for insurance on equipment reflect approximate rates charged in the Palm Beach County area. Such charges are \$1.00 per \$100 of value. Therefore, assuming the average investment in a machine, allowing a 10 percent salvage value, is 55 percent of its initial cost, the annual charge for insurance would be \$100 x .55, or \$.55 per \$100 of value of its initial cost. Thus, .0055 times the new cost of the machinery item gives the annual cost of insurance. The annual cost of insurance per hour is then derived by dividing the annual cost by annual hours of usage.

Since straight-line depreciation is assumed, annual depreciation is simply the new cost less salvage value, divided by the expected life of