

Cost of Systems Operation

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Hose and Portable Sprinkler System

Manpower and equipment costs for moving hose and sprinklers are the highest of any of the four systems.

The replacement and repair costs are high. Hoses used with the movable sprinkler have a short life expectancy and the movable sprinklers are subject to handling damage as well as normal wear. Consequently, they have high maintenance costs.

Quick Coupler System

The cost of operation is a little lower than the hose and sprinkler system. However, maintenance costs might be slightly higher because of the large number of quick coupler valves that have to be replaced occasionally. Water supply costs and power costs are approximately the same.

In attempting to determine the labor cost in operating a sprinkling system it should be kept in mind that this is a job to be done at night. It has to be done on a "call" basis, depending upon weather conditions. A great deal of supervisory attention must be devoted to an "on call" labor force. They have to be paid a very good wage to be sure that they will be available when called. The cost of maintaining a good night watering crew is considerably higher than one might expect.

Semi-Automatic System

The costs of this type are generally within 90 per cent of the cost of a full

automatic, but this system requires almost as much labor as a conventional quick coupler. The only advantages are that the labor can be performed at a more convenient time and the actual running time of the heads can be set automatically. The cost of operation will be slightly lower than the quick coupler system because of lower labor costs. This will, in part, be offset by higher maintenance costs on a large number of sprinkler heads which are handled twice during each watering.

Full Automatic System

The cost of operation is, by far, the lowest. Labor is completely eliminated. Water supply costs and power costs are somewhat reduced through efficient use of water. Replacement and maintenance costs can be slightly higher because of the larger cost of the equipment involved. However, frequently it is found that replacement and maintenance costs are actually lower.

In an automatic system, even in the most arid climate, each sprinkler head will only be run 100-150 hours per year and will not be subject to handling damage. In a quick coupler system the sprinklers cost less, there are approximately one-tenth as many sprinklers, but each has to run 10 times as long. This, plus handling damage, means increased maintenance costs. Often the maintenance costs are higher than for the full automatic system.

COST OF SYSTEMS OPERATION—continued

It must be assumed that each type system is adequate. A system that can not deliver the required volume of water is inadequate and it will be inadequate whether it is a hose and sprinkler, a quick coupler, semi-automatic, or a full automatic. Conversion is possible only if the initial system has adequate capacity. If it doesn't, additional mains and pumps should be added before converting and calculating costs.

Superintendent's Responsibility

He will have greatly reduced his personnel problems with an automatic system. Recruiting, training, supervising of night watering crew would be eliminated. Maintenance responsibilities increase slightly.

The economic advantages are, of course, greater in an arid climate.

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