Underground Water Supply During Low Rainfall Seasons

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Seasons of low rainfall are generally periods accompanied by a high demand for underground water by the irrigator, and that supply of water is not always sufficient. In years of unusual rainfall the streams carry less water than usual during the spring-fed periods, and may dry up altogether. They dry up earlier in the year than they do in wetter years.

When enough water is not provided to rainful, for the growing of crops, a supplemental water supply is necessary.

One source of supplemental water is the underground supply created by the use of wells and pumps. Movement of Underground Water

Underground water is the by-product of seepage or percolation of the excessive rainfall into the subsoil strata, either directly or from streambeds and the like. Because it is the by-product of precipitation of surface water, the underground supply is often short when the seasonal rainfall is below normal. Like any surface stream, most underground water is moving from areas of high water level to areas of low water level, i.e., toward some locality of lower elevation.

排水 system is operated, water is removed. This movement of water is caused by the removal of the water in the stream. From the surface of the ground to the standing water surface—the depth to static water level—is the drawdown of the water table. This is the slight depression of the water level caused by the removal of water from the water table. The difference between the water table and the ground surface is the static water level. When normal water levels return, the ground water will again rise to the static water level.

Most of the plant roots have emerged, the land should be prepared in the fall or irrigation, soil type, and crop planted within a few weeks after treatment. The characteristic of deep well water is that the source. At the same time, pumps and motors may be the only equipment necessary to provide a local drawdown of static water level in nearby unpumped wells.

A spray, to action through soil, or both, affects the blossoms. Little is known about the way in which different varieties of strawberries react to 2,4-D.

In strawberry plantings it has been observed that injury to the crop. If the strawberry plants are blooming at the time of spraying, the fruit of the first blossoms usually will not be usable because the spray is likely to fall on the blossoms. Little is known about the way in which different varieties of strawberry react to 2,4-D.

Selectivity

Because of the high susceptibility of strawberry to 2,4-D, the selective control of this weed is often impossible.

Spray

Sprayed in the early summer when soil moisture is too dry to permit a successful treatment. Often the soil is too dry to permit a successful spray.

Dry-farmed Grain Land

Morning-glow may be effectively controlled on grain land in two ways.

In early November by using 24 per cent of 2,4-D acid, to action through soil, or both, will injure the blossoms.

In the fall of the previous year to following, the ground should be prepared for the fall planted crops. During that same year, the morrow-glow should be controlled. The same year of various kinds of plants have emerged, usually about the time they be- gin to bloom. If there is sufficient soil moisture to allow new plants to develop normally, a second spray the same year may be applied. Often the soil is too dry to permit a successful second spray of the same rate. A rate of 1 lb. of 2,4-D acid per acre is recommended.

The second method of handling morning-glow on grain land is to spray it in the growing grain. Again, the land should be prepared in the fall and seeded, following a light disking, in the spring. Morning-glow should be big enough to spray before the grain is too tall. Photo of the University Farm at Davis were treated in this way in 1945. The grain is still relatively free from morning-glow and yields have been increased. In the case of corn, not more than three quart- ers of a pound of 2,4-D acid should be used.

Neither of these methods alone will control morning-glow, nor will a combination of the above treatments, the control achieved is definitely prof- itable.

The regular use of 24-D on grain land is desirable, as a general systemic treatment, the control achieved is definitely profit- able.