Method of Irrigation Water Distribution

The method used to distribute or apply irrigation water varies from one area to another. The four primary methods of applying irrigation water are: Furrows and ditches, flooding, sprinklers, and subirrigation. Of the four, furrows and ditches are used most extensively, particularly in the Western States. However, in the Eastern States, the sprinkler method predominates.

Of the 40.5 million acres irrigated on farms with sales of $2,500 and over, furrow and ditch irrigation was used on 19.0 million acres (46.9 percent). Flooding was used on 11.4 million acres (28.0 percent), sprinklers on 9.9 million acres (24.5 percent), and subirrigation on 0.8 million acres (2.0 percent). The sum of the acreage irrigated by each method exceeds the total acres irrigated because on some farms more than one method was used to irrigate the same acreage. Most farms applied irrigation water by only one method. Of the total acreage irrigated, 28.1 million acres (69.4 percent) were on farms reporting a single method. Of the acreage irrigated by a single method, 13.6 million acres (48.5 percent) were irrigated by furrows and ditches; 7.9 million acres (28.0 percent) by flooding, 6.2 million acres (22.1 percent) by sprinklers, and 0.4 million acres (1.4 percent) by subirrigation.

The methods used to apply irrigation water also have a definite effect on the quantity of water applied per acre (table 4). Water use was highest on farms utilizing flood irrigation. These farms reported an average of 2.22 acre-feet of water applied per acre. At the U.S. level, self-propelled sprinkler systems showed the lowest water use with averages of 1.37 acre-feet per acre.

Crop Production on Irrigated and Nonirrigated Land

Since crop production is one of the leading indicators of the effects of irrigation, data are provided for average yield for selected crops harvested from irrigated and nonirrigated land. Table 17 presents data for farms reporting, acres harvested of selected crops, and the average yield per acre for irrigated and nonirrigated land. The selected crops were tabulated as wholly irrigated, nonirrigated, and partly irrigated. The crop was classified "wholly irrigated" if the farm reported all acres harvested of the specified crop as being irrigated. Likewise, a

Table 4. Average Acre-Feet of Water Applied by Areas and Method of Application: 1974

Farms With Sales of $2,500 and Over

	United States	17 Western States and Louisiana	30 Eastern States, Alaska, and Hawaii
Furrows and ditches	2.07	2.14	1.09
Flooding	2.22	2.31	1.52
Sprinklers:			
Self-propelled	1.37	1.58	.70
Other sprinklers	1.67	1.83	.80
Subirrigation	1.63	2.12	1.29