

IRRIGATION.

Except in two instances our shafts show a thickness of from 12 to 15 feet of sediments deposited from the waters of irrigation over the surface of the delta. An effect of the artificial distribution of water has been to cover the delta with a system of a few broad terraces on which the inclination is more gentle than that of the underlying surface of the natural sediments. Generally speaking, the differences of thickness of irrigation sediments, shown in the ranging from 12 to 15 feet, are due to the relative positions of the shafts on these terraces.

We have seen in discussing the record of shaft B that its 12 feet of irrigation material did not begin until 7 feet of natural sediments had grown over the pottery peculiarly characteristic of the upper (iron) culture of the South Kurgan. Now, according to the deduced ratio of rates of growth of natural



Fig. 17.—A Field Prepared for Cotton Planting in Fergana. (Photograph by Emil Steinert.)

sediments and culture-strata, viz, 1 to 2.5, these 7 feet represent, as we have seen the time-equivalent of 17.5 feet of culture-strata, which would include not only all of the uppermost or pure iron-culture strata represented at the South Kurgan but at least 13 feet more that have disappeared under the action of time and weather. Therefore, this irrigation material was not deposited until after the abandonment of the South Kurgan.

The city of Anau was started on natural sediments, while 15 feet of growth of irrigation sediments stands in its immediate neighborhood on a level with its base. It is, therefore, evident that this growth is not older than the founding of the city or later.