

for 26 other persons. This advance of agricultural technology has brought the train of problems that usually accompany accelerating productivity. Some farmers lag behind others, depending on the quality of their land, mechanical equipment, educational levels, type of crop, and other factors. In a similar way, some countries lag behind others. But in most cases, surpluses have led to price supports to protect domestic agricultural incomes. The United States, because of rising productivity, faces the necessity of converting land from commercial agriculture to other uses.

Western agriculture is capital intensive, with most of the work performed by machines; in most of the rest of the world, human labor is the primary factor. The productivity of agriculture, the output per worker engaged, tends to increase geometrically with artificial energy inputs, in association with the use of improved seeds, chemical fertilizers, and weed and pest killers.

The West has less than a quarter of the world's cereal grain acreage, but possesses about three-quarters of the tractors and uses about 70 percent of all nitrogenous fertilizers.⁵ The results in terms of output per unit of rural population are remarkable: in the West, the per capita output amounts to 1.7 metric tons of cereal grains; in the Communist area, 0.39 metric ton; and the less developed area, 0.25 metric ton. (See appendix table A-10.)

The effect of the capital intensive agriculture of the West is more sharply in evidence if the outputs per unit of arable land are contrasted for the last 25 years. In the West, a 60 percent increase in cereal yield per acre occurred from the period 1935-39 to 1959; in the Sino-Soviet area, about 4 percent; in the less developed area, about 3 percent. (See appendix table A-9.) During the same period, the population increase in the West amounted to about 20 percent; in the Communist area, about 25 percent; in the less developed area, about 50 percent. (See appendix table A-1.)

The contrast is similarly sharp when the per capita production of cereal grains for the two periods is compared. In the West, the production per capita of the population was slightly over three times that in the less developed area.

It is unlikely that substantially increased food production can be accomplished outside the West merely by putting additional land under cultivation. During the past decade, this was partially successful, both in the Communist and less developed areas, and led to some increases in food production. There is, however, a limit to the arable land.

During the past decade the Communist and less developed areas, together possessing four-fifths of the population and three-quarters of the land surface of the earth, have pressed the trend for adding land to the cultivated area to a point that may be beyond the natural limit. In any case, production is not increasing as fast as population, and yields, except for the bad years, remain relatively constant.

Because of the chain reaction set up by the population eruption and Communist failures in the agricultural sector, food has now become one of the pivotal realities on the world scene. It is a matter upon which a unified Western policy is urgently required; it should receive close and continuing attention.

⁵ Ibid., pp. 98 and 101.