in the bottom of the gully. Before the fall of the same year the gully had been filled with eroded soil practically to the top of the brush. (Fig. 76.)

In the fall the edges of the gully were plowed in and sufficient soil was scraped into the gully to permit crossing with tractors and terracing implements. The land was then terraced and, with some additional work between terraces consisting of plowing in the sharp edges of the banks, it was possible to cross the gully at any place with farm

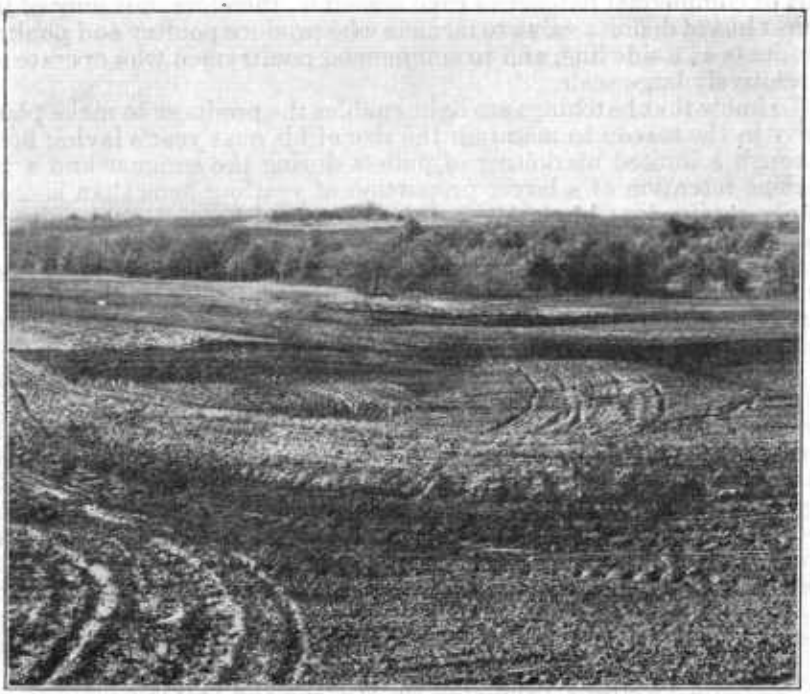

FIGURE 77.—View taken at same location as views in Figures 75 and 76 after land was terraced. Note disappearance of gully, all land being available for farming purposes

machinery. Figure 77 is a view taken in the same location as those in Figures 75 and 76 from which it is apparent that the gully has entirely disappeared and the former sharp edges have given way to smooth curves which can be readily crossed with farm machinery. All of the waste land formerly occupied by the gully is reclaimed for cultivable purposes.

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HATCHERY Reports, Issued Monthly, Aid Poultrymen to Regulate Production

Chicks hatched in the spring become either a part of the summer's supply of broilers or fryers or of the laying flocks that furnish the egg supply of the following season. A crop of baby chicks smaller than usual, therefore, is indicative of a smaller supply of young poultry for the summer markets, a reduction in the number of pullets

available for laying purposes the following fall, and a correspondingly lighter egg production for the next winter, spring, and summer than is usual in those seasons. Such a situation normally results in a higher level of prices for both eggs and poultry. On the other hand, a comparatively heavy hatch points to a substantial increase in the summer supplies of marketable young stock and a marked expansion of laying flocks the next fall. Such a situation may lead to a sharp decline in the prices for eggs and poultry. Information as to the size of the output of commercial hatcheries each season is, therefore, not only of interest but of definite value to farmers who produce poultry and poultry products as a side line, and to commercial poultrymen who operate on a relatively large scale.

To know that hatchings are light enables the producer to make plans early in the season to maintain the size of his next year's laying flock through a limited marketing of pullets during the summer and a judicious retention of a larger proportion of yearling hens than is ordinarily retained. Conversely, a heavy seasonal hatch would point to the desirability of a more liberal marketing of young stock and a stricter culling of old stock at the beginning of the next laying season. Such a program, if intelligently followed, would tend to modify to a large extent the extremes of the periodic cycles of production to which the poultry industry in the past has been subjected.

For the purpose of furnishing poultry producers with an index on the probable size of the season's chick crop, the Bureau of Agricultural Economics has for the past two years issued a hatchery report monthly during the main hatching season. This report contains information submitted by commercial hatcheries with incubating capacity of 10,000 eggs and over. Schedules sent to such firms each month request the total egg capacity of the hatchery on first of month, total number of chicken eggs set during month, and total number of salable chicks hatched during month. In order that proper comparisons may be made it is essential that reports be made not only for the current month under survey but also for the same month of the previous year.

Returns Tabulated By Regions and States

The returns are tabulated for the monthly hatchery report, (1) according to the principal geographic regions, and (2) according to States. While the poultry industry is conducted on a commercial scale to a greater or less degree in all States, the areas that furnish the principal proportion of the market supplies of eggs and poultry are rather definitely defined. General information on the changes occurring by areas is of interest and value to those concerned with the marketing of poultry and poultry products. Information on the changes by States is of particular benefit to hatcherymen and to the various State officials working with the poultry industry within the respective States. With facts on current changes before them they are in a much better position to measure the results of their efforts and to modify their programs if such a modification seems necessary.

In a short comment, written in popular style, the statistical data presented in the report are analyzed, and the most significant of the indicated changes pointed out and discussed.

The first year's results of the hatchery report indicate that it has excellent possibilities for roughly measuring early in the season the prospective supply of eggs and poultry. A summary of the 1929 reports

at the close of the season showed a seasonal increase of 13.5 per cent in total incubating capacity, 29 per cent in the number of eggs set, and 31 per cent in the number of salable chicks hatched, over the same period in 1928. Such changes pointed to an increase in the supply of both eggs and poultry for the 1929–30 season. That this is what happened is borne out by the fact that receipts of fresh-killed dressed poultry at the four principal egg and poultry markets—New York, Boston, Philadelphia, and Chicago—for the last three months of 1929 and the first three months of 1930 were approximately 28,000,000 pounds, or 12 per cent, heavier than the receipts for the preceding comparable period. The receipts of eggs at the same markets for the period from January 1 to May 15, 1930, were larger by around 540,000 cases, or 8 per cent, than the receipts for the same period of 1929. The heavy supplies of both poultry and eggs for the 1929–30 season caused prices for both commodities to drop substantially under the prices for the corresponding period of the preceding year. These developments were fully indicated by the reports of commercial hatchery output during the midsummer of 1929.

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HAYSTACKS' Content Is Measurable More Closely by New Rules

Requests for rules for computing the quantity of hay in stacks are frequently received by the Department of Agriculture from producers, stock feeders, and others, particularly in the Pacific and Intermountain States, who are interested in the marketing of hay for which actual weights can not be obtained because of distance from suitable scales, or for other reasons. In such cases it is necessary to have some means of estimating the weight of the hay. This usually is done by measuring certain dimensions of the stack and then computing the volume by one of several rules in common use. This volume is then divided by the accepted number of cubic feet required for a ton for the particular kind of hay in question. The result is the accepted number of tons in the stack, and settlement is made on this basis.

Rectangular Stacks

Recent studies show that the rules for determining volume of rectangular stacks in common use at present are not very accurate. In all the rules or formulas for computing the volume of rectangular stacks O equals the distance from the ground at one side of the stack over the stack to the ground at the other side, W equals the width of the stack at the ground, and L equals the average length of the stack. These measurements are taken in feet. The Frye-Bruhn rule or rule of two, $\frac{(O-W)W}{2}L$, which is commonly used, gave in some cases studied only 70 per cent of the actual volume of the stack and in other cases as high as 105 per cent of the actual volume. On an average this rule gave 86 per cent of the actual volume. The quartermaster or so-called Government rule, $\left(\frac{O-W}{4}\right)^2 L$, another rule in