

On looking over the above table it will be seen that the average lime content of chicks got by different methods of incubation was lower in June than in July, but in both months the chicks from the hen show the largest amount. There is apparently no connection between the amount of lime absorbed by the chick and the amount of carbon dioxide surrounding the egg during incubation. It has been found that large amounts of carbon dioxide are given off from the egg itself during incubation, and it is very probable that the gas from this source would have a greater dissolving effect upon the carbonate of the shell than that in the surrounding atmosphere. This would be true, because it is acting in the presence of liquid moisture.

While we do not wish to draw any definite conclusion on the comparatively small amount of work which has as yet been done, still we think it worthy of note that there appears to be some relation between the lime content of the chick and its vitality, as indicated by the per cent. of chicks alive at the end of four weeks. Where lamp fumes were used there is an apparent exception to this, as the percentage vitality is low. This may be explained, however, by the fact that wherever this method of incubation has been used the percentage hatch is low; but, at the same time, these chicks are always strong and vigorous. It may also be noted that the Continuous Hatcher gave chicks low in lime, and of a high vitality, yet, while a large percentage of these chicks lived through the four weeks' period, they did not prove to be thrifty, thus further bearing out our previous tentative statement, that there is a marked relationship between lime content and vitality.

We are not prepared, with the insufficient data which we have at hand, to give the above hypothesis with reference to the relationship between lime content and vitality as a definite conclusion, nor to state what conditions in incubation will cause the maximum absorption of lime; but we feel that the point is worthy of further study.