

It is also quite probable that the method of incubation has something to do with the lime content of the chick and possibly with the vitality of the chick. The five chicks from the Continuous Hatcher were, with one exception, low in lime, and it was found that these chicks did not thrive well; while all the chicks from the Prairie State machine, in which there were lamp fumes, were high in lime and were strong and thrifty.

From what has been noted in the two preceding paragraphs, it is quite evident that, in order to get results which shall give a strictly fair and comparable basis on which to compare the merits of different methods of incubation, a series of eggs must be selected such that it is possible to have them appear in each incubator. It is also indicated, when the June and July hatch are compared, that it is quite necessary to select this series of eggs in as nearly the same season of the year as possible, or, in other words, that fresh eggs should be selected for setting.

The following table has been prepared to show the average lime content of the chicks from the different methods of incubation, the amount of carbon dioxide present, the percentage hatch, and the vitality of the chicks as indicated by the percentage number alive at the end of four weeks. In making up the average weight of lime in the chick all amounts below .1600 grams have been discarded; because all chicks containing less than that amount of lime were abnormally weak.

TABLE No. XXVIII. AVERAGE WEIGHT OF LIME IN CHICKS WITH DIFFERENT METHODS OF INCUBATION.

Method of Incubation.	Lime (CaO) content of chick, grams.	Carbon dioxide (CO ₂) in 10,000 parts, grams.	Per cent of hatch to fertile eggs.	Per cent chicks alive at end of four weeks cal. to fertile eggs.
<i>June Hatch.</i>				
Cyphers, dry .....	.1796	8.22	46.1	23.06
Peerless, dry, hot water machine.....	.1786	9.16	60.2	52.85
Continuous Hatcher. A little moisture.....	.1736	10.70	58.0	53.0
Hen	*.1966			
<i>July Hatch.</i>				
Model, buttermilk .....	.2047	10.0	65.3	53.00
Prairie State, lamp fumes, dry.....	.2056	58.21	43.5	36.5
Prairie State, dry.....	.1930	8.73	49.8	30.07
Prairie State, artificial CO ₂ and H ₂ O used as moisture .....	.1988	51.42	57.08	49.1
Prairie State, zenoleum and moisture.....	.2078	7.26	62.0	54.0
Hen	*.2106			
Average of hens set during whole season.....		31.93	66.0	55.1

*All eggs used for analyses.