

Poultry.

Laying Results.

We clip the following from the English *Live Stock Journal*, which we trust will be read with interest by our fanciers:—

"We have received the following return of the laying of the various breeds of fowls on a large farm in the south of England. It will be seen that the return is for nine months (January to September), and though we should have been glad had it been for the whole year, it is sufficiently clear to indicate the laying values of the various breeds. Brahmas, however, suffer considerably, as they were used for sitting; and had the return been for a year they would have come out stronger. Andalusians are the highest in the scale, but they were all pullets. The Black Hamburgs are the next in order, and were all hens, one year old and upwards. The year before this they were the best, and the owner considers that if they had been a fair proportion of pullets, they would have been before the rest again. White Leghorns come third—three hens and two pullets; Minorcas fourth; Brown Leghorns fifth:—

	Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Average per Hen.
No. of Hens on each run.	178	282	283	276	170	200	194	163	211	70.6
Light Brahmas (used for sitting).	6	83	170	193	198	75	132	188	58	48.1
Dark Brahmas (used for sitting).	15	83	170	193	198	107	190	70	16	66
Colored Dorkings.	2	50	86	38	26	17	34	14	8	80.1
Silver-grey Dorkings.	2	50	86	38	26	17	34	14	8	80.1
Plymouth Rocks.	13	62	112	146	146	107	42	69	26	74.3
Black-red Game.	5	104	154	146	146	107	42	69	26	74.3
Minorcas.	38	90	85	101	99	185	160	154	153	120.3
Black Hamburgs.	31	119	227	233	209	182	164	18	9	127.2
White Leghorns.	59	120	190	104	91	111	81	33	5	87.4
Brown Leghorns.	39	69	136	67	63	65	53	43	10	71.1
Houdans.	25	63	68	63	63	65	53	43	10	71.1
Crevecoeurs.	7	23	33	33	33	17	15	15	10	29.1
La Fleche.	4	23	33	33	33	17	15	15	10	29.1
R. R. G. Bantams.	4	23	33	33	33	17	15	15	10	29.1
Turkey's hens (used for sitting).	142	215	412	337	287	297	218	262	213	132.1
Black Ducks.	24	45	70	74	56	48	19	10	27	88.1
Atishury Ducks.	3	23	18	46	48	19	10	27	27	22.1
Rouen Ducks.	3	23	18	46	48	19	10	27	27	22.1
Guinea Fowls.	3	23	18	46	48	19	10	27	27	22.1
Toulouse Geese.	86	134	54	54	54	12	12	12	12	12.1
Various Crop Eggs.	170	1700	2416	2513	2401	1741	1670	1303	388	...

170 hens have laid 15,234 eggs during the nine months named above.

TIMELY HINTS.—Keep weeding out all but the most promising chickens, and see that they have plenty of shade, cool water and regular feeding. Don't keep birds which have nothing but beauty to recommend them, unless you prefer ornament to use. Some of the older birds will soon be moulting; if they attempt to sit don't prevent them, as this will hasten the process. Remove the cock as soon as the new plumage appears. If the eggs are to be preserved in winter, they may be preserved in salt. Observe cleanliness, and don't let the food turn sour.

The Dairy.

Ripened and Sour Cream.

BY JOHN GOULD.

At one of the Farmers' Institutes which are held in fifty of the eighty counties of the State of Ohio, each winter, the question was asked the writer, to "explain the difference between 'ripe' and 'sour' cream, and wherein the product differed?"

This is a question that is being asked almost universally, and while many may not fully grasp all the minutiae of the chemical changes involved, yet some things can be premised and an insight gained. The briefest answer to the question would be that by bringing the cream all under the corroding influences of the free oxygen of the air, the element or elements that go to produce carbonic acid gas are liberated, and their place occupied by the oxygen. Then this changing of carbonic acid gas for oxygen would liberate a fraction of the moisture of the cream, and this is the change we call ripening, as distinguished from souring, as produced by the development of the gas within the cream.

The usual plan of souring cream so that the lactic acid development is pronounced, is to produce a disintegration or breaking up of the elements that compose the cream and giving them different characteristics than which they originally possessed, and at the expense of the quality of the goods, though to some tastes the sharper flavor of the acid cream is preferred; but this last is not the point we wish here to consider.

If all oils and fats composing the compound known as butter, were acted upon alike, and in exact proportions, the souring of cream would not be attended with the damaging effects that now exist; but, according to Prof. Voecker, the ferment of souring breaks up the fats and gives the acids that are evolved each a distinct odor, and when the strongest—butyric acid—predominates, the butter becomes worthless as a table luxury and known as rancid.

In contrast to the carbonic acid development of sourness and the condition produced by "ripening" cream by subjecting it to the oxygen of the air by exposure, there is no "breaking up" of the parts or bringing out distinct odors by the action of acid, but on the contrary, the natural flavors are heightened, and the most volatile of the flavoring oils that gives new milk a "raw" flavor, is entirely removed. These facts may be considered as conclusive, as new milk put through the centrifugal machine as soon as possible, and the butter made from this cream immediately, has the characteristics of the finest ripened cream butter. There is also a certain gain in butter product over the sour cream, which, while we have no conclusive proof, it is fair to presume that the increase does not all come from the greater amounts of butter fats extracted from the cream, but in part from securing all the butter fats in the cream for the butter, and in not having them neutralized by the action of acid.

It is not necessary for a person to be a profound chemist to make good butter. Observation and experience in a general way are quite as practical for the average dairyman. By watching the tendencies of the market, the methods of the best makers, and above all, cause and effect in the dairy, one can soon find

out whether the butter made from cream "ripened" by frequent stirring to air it, and the butter from very sour cream, is most productive in pounds of butter for gallons of cream, and whether the consumer is as well pleased with the one as with the other. By instituting inquiries and experiments, varying the usual practices of a generation with some of the newer innovations of the present day, the best methods may be soon arrived at, and when recognized, they can always be profitably adopted by the dairyman, being modified or enlarged upon as the occasion or circumstances warrant.

In making "ripened" cream butter one is liable to fail at last in the final working of the butter. By maintaining even temperature throughout the operation, and thorough expulsion of the caseine at the time of freeing the butter of the butter-milk, is the only escape. Handle the cream as "learnedly" as one may, the butter may at last be ruined by traces of the butter-milk charged with caseine remaining, for airing the cream has not neutralized the caseine, and a chemical change will come to this element, however small the quantity, if left behind, and the lactic acid ferment of this element will assert itself, and communicating itself to the fats, performs the same destructive "breaking up" that was detected in the excessive souring of the cream. Then the only plan to avoid this last "calamity," is to wash out the granulated butter with washings of weak brine, as salt has an affinity for some of the elements existing in butter—not pure butter fats, but as the compound, and water has the power to dissolve and absorb caseine, as well as the milk sugar, so that with washing and drainage, and a final salting of the butter when the butter granules are abundant in moisture, there is an almost absolute certainty in the removal of all substances which prove injurious to butter. Let the cream be sweet, ripened, or sour, the removal of the butter-milk with washings of brine is one of the most important things that can be introduced into butter-making, and is a step that anyone can take with manifest improvement in the character of the goods, let the handling of the cream be what it may.

In the States the custom is now almost universal among the factories to churn the cream in the ripened state, and wash out the butter, and it is observed that dairymen everywhere in private dairies are adopting similar methods, and with an improvement in the butter that cannot be gainsaid.

The cows will now be seeking shady places, and in their anxiety to find them they will slack off in milk. If you have no shade trees in the pasture it would actually pay to erect a temporary frame structure.

Oleo, must go. New Jersey has followed New York in passing a law prohibiting the manufacture and sale of oleomargarine. The constitutionality of this law has been sustained by the Supreme Court of Missouri.

The breeder deserves more encouragement than the importer. The object of the former is to improve the productive power of his herd; the object of the latter is usually to make booms and money.