Though hen A has produced a daughter giving 280 eggs, this bird is not nearly as valuable a breeder as hen B, the production of whose pullets is far more consistent. The results suggest that hen B is more homozygous or pure for the genetical factors affecting egg production than hen A. Though the pullet-year records of both hens may have been high and similar, it is not the egg-production record of the breeder which counts, but the average production of her daughters.

The recording of families has been described because the family method of selecting breeding birds is a sound way in which to breed for increased egg production. That it involves work, time, and patience is obvious. Maintaining a reasonable egg average in a flock by efficient management and careful selection of breeders by observation and handling is comparatively easy. The real test of a breeder comes when he endeavours to raise the standard of production to a high average level.

## Characteristics to be Recorded

Before considering possible breeding programmes applying the principles and practices described it is necessary to decide what desirable characteristics of breeding stock and its progeny are to be recorded. The more important characteristics are hatchability, rearability, egg production, and adult mortality.

## Hatchability

The collection of data about hatchability presents little difficulty but involves time and conscientiousness in recording. If it is desired to record only the general results of a pen or a number of pens of breeding hens mated to a single male in each case, it is necessary only to mark each egg laid with the pen number. Such eggs are then recorded at each stage of incubation as infertile, dead germs, dead in shell, or finally chicks hatched. If results from individual breeding females are required, the breeding birds must be trap nested and each bird's leg band number and pen recorded. A form for summarising results from individual females is illustrated. A similar type of form is necessary for recording the results of each hatch, but only numbers and not percentages need be recorded for each hatch.

The final hatching results are expressed on the forms illustrated as "Percentage of fertile eggs" and also as "Percentage of all eggs set." The former is the figure usually quoted, but the latter is of value because it gives a figure which truly represents the result—how many chicks have been obtained for every 100 eggs set.

## Rearability

Data about rearability cannot be collected unless every chick hatched is toe-punched to indicate the pen (or even individual bird if desired) from which the chick came. The toe punch of a chick which dies is recorded in a book or on a sheet. Sixteen combinations of toe punches which may be used are shown on the next page; this number can be doubled if one back toe is removed, and doubled again for

## RECORDING CHARACTERISTICS OF POULTRY

man !			%	%	%		Percentage:	
Dam No:	Hatched:	Eggs Set:	Infer- tile:	Dead Germ:	Dead in Shell:	Chicks:	Fertile Eggs Set:	Total Eggs Set:
410	1946	40	5	3	5	34	89.4	85.0
412		50	10	5	20	32	71.1	64.0
					-			
								-
							1	

Strain: Victorian Male No: 105 (1946)
Pen No: 10 Breed: White Leghorn

Tatch	Date Set:	Eggs	Infer	tile	Dead	Dead	Chicks	Percer	Tota
No.		Set:	No.	%	Germs No:	in Shell:	No:	Eggs Set:	Eggs Set:
1	2.7.49	50	5	10	1	3	41	91.1	82.0
		-	-			-			
			-			-	-	-	-
				-			-	1	
		1							1
-			1	-	-		-		-
~	June 1	1	m	-	m	M		1	~
~					~~	w		2	5
~					~~	~		1	55
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TOTAL						~~			55