

Experiment 2
Pellet Eating as an Operant

The purpose of this experiment is to test whether we can by appropriate reinforcement increase the consumption of pellet mash; in other words, whether it is possible for the eating of a particular substance, in this case mash, to become an operant, and whether by increasing the strength of this operant we may appreciably increase the mash intake.

For investigating this problem, two groups of four chickens were used. They were hatched June 29, from a mixed Wyandotte-White Rock strain. On August 11, at about 6 weeks, the chickens were weighed and two groups were matched for initial mean weight. Below are figures for the first two, or preparatory weeks.

Table 1
Mean Weights and Gains in Ounces for Experimental and Control Groups

	Group X Experimental		Group Y Control	
	Weight	Gain	Weight	Gain
Initial	10.00		10.00	
		6.00		6.25
End wk.1	16.00		16.25	
		4.75		5.25
End wk.2	20.75		21.50	

The groups were housed in adjacent cages with wire mesh flooring. They had been fed prior to August 11 on Larro broiler mash. On August 11 they were switched to Larro broiler pellets chick size and were fed on these exclusively for the first 10 days. On August 21 hen size broiler pellets were introduced and by August 30 they were being fed exclusively on the hen size pellets.

Table 2
Feed Consumption, August 11 through August 30

	Group X	Group Y
Pellets consumed	9 lbs. 2 oz.	9 lbs. 5 oz.
Oz. per bird	36.50	37.25
Oz. per bird per day	1.82	1.86

The experimental procedure was begun with Group X on August 27. On this and the following day, a small automatic feed hopper was installed in their cage. This hopper is specially constructed to deliver a small quantity of small-size scratch or growing grain into a wooden trough. A push-button actuates a solenoid which releases the grain from the upper part of the hopper into the trough. Each contact of the button releases on the average 0.74 grams of growing grain. This quantity of growing grain will be termed hereafter the reinforcement.