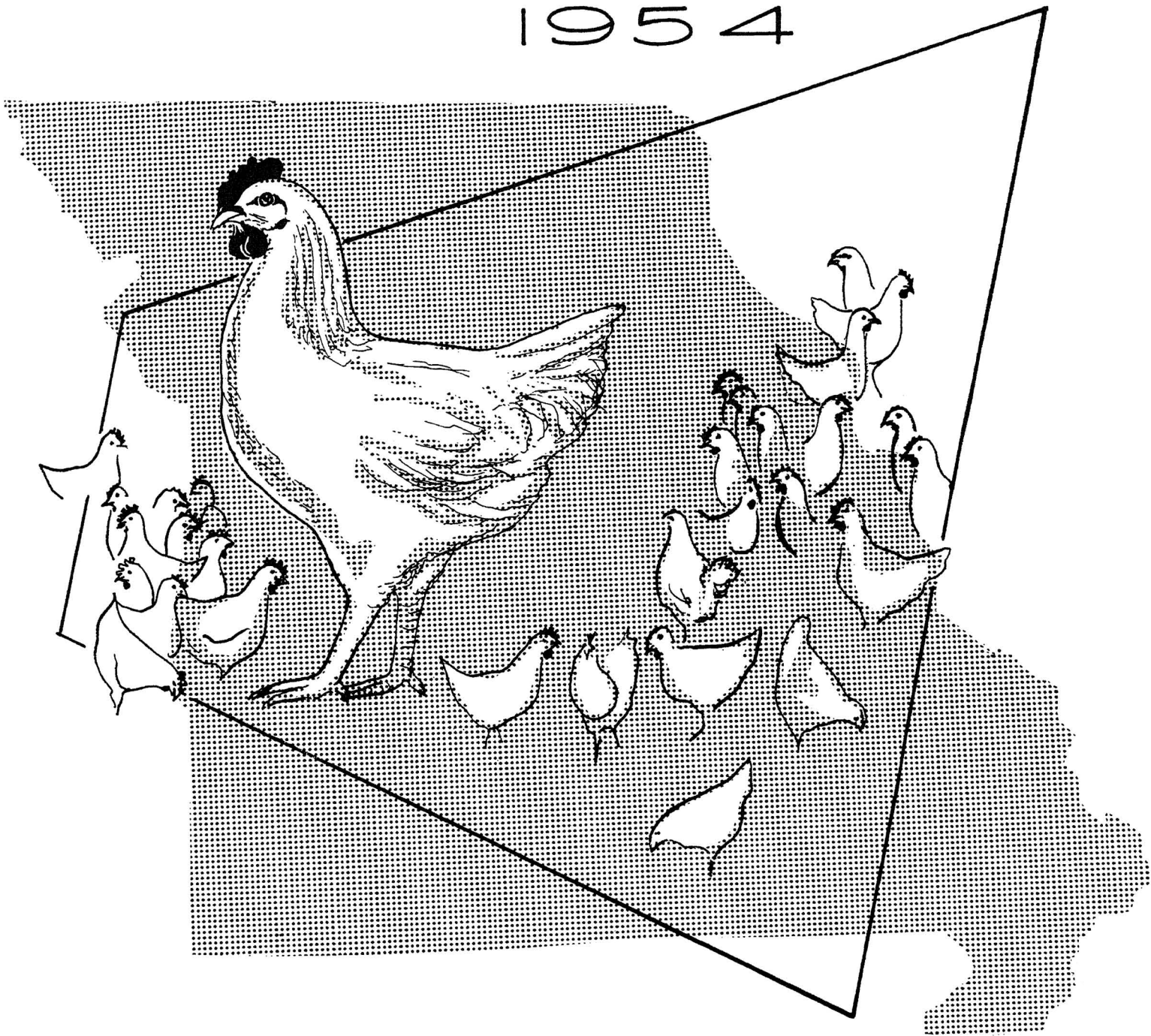


MISSOURI BROILER TEST 1954



UNIVERSITY OF MISSOURI COLLEGE OF AGRICULTURE
AGRICULTURAL EXPERIMENT STATION

BULLETIN 639

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MISSOURI BROILER TEST

This test was started in response to a request of Missouri poultry breeders and hatcherymen. The University brooding facilities were used with chicks being hatched on August 3, 1954.

An entry consisted of 240 eggs selected at random by a disinterested party from 3 days collection. The eggs were incubated at the University and 51 males and 51 females sexed when hatched were entered in the test after being vaccinated for Newcastle and Bronchitis. At the end of the first week, the birds were reduced to 100 per entry. Mortality does not include deaths during first week, unless over two birds, or accidental deaths after the first week.

Individual gas brooders were used for each entry and slightly over one square foot of floor space was allowed per bird. The feed formula was recommended by a committee of the Midwest Feed Manufacturers' Association and given in a crumbled form.

For data on dressing, a sample of the 12 birds nearest the average weight of their sex in each pen was taken to a processing plant. The variation in numbers, as shown in Table 3 is due to incomplete data on some individuals.

Data on age and feed efficiency at three pounds were determined by assuming a uniform linear rate of change from 9 to 10 weeks and making a corresponding adjustment.

This was a test and not a contest so the data are presented without attempting to pick an overall winner.

TABLE 1--MEASUREMENTS ON HATCHABILITY AND LIVE BODY WEIGHTS, WITH THEIR MEASURES OF VARIATION, AT 9 WEEKS OF AGE

Pen No.	Breeder and Address	Parents' Breed		Per Cent Hatch (240 Eggs Set)		No. Birds Weighed	Males			Uni- form- ity
		Male	Female	All Eggs Set	Not Clear at Transfer		Avg. Wt. lbs.	Sta. Dev.	Coef. Var.	
1.	Missouri Valley Hatchery Marshall, Missouri	White Rock	White Rock	67.5	85.3	45	3.02	.35	11.7	49
2.	C. E. Newcomer Potosi, Missouri	Delaware	New Hampshire	76.7	91.5	41	2.94	.27	9.2	71
3.	Colonial Poultry Farms Pleasant Hill, Missouri	White Rock	White Rock	63.3	83.5	48	3.19	.33	10.5	69
4.	Edwards Hatchery Springfield, Missouri	White Rock	White Rock	81.2	87.1	41	3.30	.28	8.4	73
5.	Midwest Poultry Farm Marshall, Missouri	Cornish	New Hampshire	54.2	76.5	44	3.26	.28	8.7	75
6.	Central Hatchery Jefferson City, Missouri	Vantress White	White Rock	72.9	92.6	44	3.42	.34	10.0	66
7.	Alva Laughlin Stella, Missouri	White Rock	White Rock	82.1	90.0	48	2.92	.38	12.9	54
8.	Central Hatchery Jefferson City, Missouri	Vantress Red	New Hampshire	61.2	90.2	39	3.44	.23	6.6	90
9.	Central Hatchery Jefferson City, Missouri	Vantress White	New Hampshire	77.9	89.9	47	3.35	.25	7.5	79
10.	Bagby Poultry Farm Sedalia, Missouri	New Hampshire	New Hampshire	69.6	85.2	49	3.18	.33	10.3	65
11.	Central Hatchery Jefferson City, Missouri	White Rock	White Rock	79.2	91.3	44	2.94	.37	12.4	66
12.	C. E. Newcomer Potosi, Missouri	New Hampshire	New Hampshire	64.2	84.2	46	2.98	.29	9.7	74

Pen No.	Females						Males and Females				
	No. Birds Weighed	Avg. Wt. lbs.	Sta. Dev.	Coef. Var.	Uni- form- ity	Rel- ative Sex Wt.	No. Birds Weighed	Avg. Wt. lbs.	Sta. Dev.	Coef. Var.	Uni- form- ity
1.	54	2.23	.26	11.7	63	72.8	99	2.62	.50	19.0	65
2.	58	2.30	.27	11.6	74	77.8	99	2.62	.41	15.8	81
3.	49	2.53	.31	12.2	61	78.6	97	2.86	.46	16.0	76
4.	53	2.62	.24	9.0	79	78.2	94	2.96	.42	14.3	85
5.	53	2.62	.23	8.9	75	78.5	97	2.94	.41	13.9	85
6.	56	2.78	.23	8.3	77	80.2	100	3.10	.43	13.9	84
7.	48	2.30	.27	12.0	73	78.3	96	2.61	.45	17.4	74
8.	58	2.75	.23	8.4	71	78.7	97	3.10	.41	13.3	89
9.	52	2.59	.26	10.0	71	76.8	99	2.97	.45	15.3	79
10.	50	2.44	.28	11.6	60	76.2	99	2.81	.48	17.1	77
11.	55	2.23	.29	13.0	56	75.8	99	2.58	.48	18.6	68
12.	53	2.34	.27	11.4	68	78.2	99	2.66	.42	16.0	80

* Percent of birds within 10% of the average weight of that sex.

** Percent of birds within 20% of the average weight of that pen.

*** Female weight as percent of male weight.

TABLE 2--LIVE BODY WEIGHTS, WITH THEIR MEASURES OF VARIATION, AT 10 WEEKS OF AGE, MORTALITY, FEED CONVERSION, AND AGE AT 3 POUNDS BODY WEIGHT.

Pen No.	Male					Female				
	No. Birds Weighed	Avg. Wt. lbs.	Sta. Dev.	Coef. Var.	Uni-* form-ity	No. Birds Weighed	Avg. Wt. lbs.	Sta. Dev.	Coef. Var.	Uni-* form-ity
1.	45	3.56	.39	11.0	55	54	2.59	.27	10.4	63
2.	41	3.41	.31	9.1	71	58	2.65	.29	11.1	81
3.	48	3.69	.37	10.2	71	49	2.90	.35	12.1	61
4.	41	3.83	.28	7.4	78	53	3.00	.25	8.4	79
5.	44	3.59	.36	9.9	64	52	2.82	.27	9.7	71
6.	44	3.79	.40	10.5	64	55	3.04	.28	9.1	73
7.	48	3.46	.37	10.8	71	48	2.71	.29	10.7	71
8.	38	4.09	.26	6.3	89	58	3.22	.26	8.0	83
9.	47	3.86	.28	7.2	85	52	2.96	.28	9.6	71
10.	49	3.78	.37	9.9	69	49	2.88	.27	9.5	77
11.	44	3.47	.41	11.8	70	55	2.63	.30	11.4	67
12.	45	3.50	.28	8.0	78	53	2.74	.28	10.1	79

Pen No.	Males and Females						Per Cent Mortality to 10 Weeks				Feed Conversion Based on farm weight			Age at 3 lbs. **** days
	No. Birds Weighed	Avg. Wt. lbs.	Sta. Dev.	Coef. Var.	Uni-** form-ity	Rel-*** Sex Wt.	0-1	1-9	9-10	0-10	9 wk.	10 wk.	3 lb.****	
							wk.	wk.	wk.	wk.				
1.	99	3.08	.58	19.0	65	72.8	100	99	100	99	2.28	2.39	2.37	69
2.	99	3.03	.48	15.8	85	77.8	100	99	100	99	2.61	2.71	2.70	69
3.	97	3.30	.54	16.3	75	78.6	100	97	100	97	2.34	2.47	2.38	65
4.	94	3.41	.49	14.5	86	78.2	100	94	100	94	2.30	2.44	2.31	64
5.	96	3.21	.50	15.5	78	78.5	100	98	99	97	2.35	2.57	2.39	65
6.	99	3.41	.50	14.7	81	80.2	100	99	99	99	2.21	2.46	2.14	61
7.	96	3.08	.50	16.3	76	78.3	98	99	100	97	2.37	2.44	2.43	69
8.	96	3.66	.50	13.6	88	78.7	99	98	99	96	2.38	2.50	2.36	62
9.	99	3.41	.53	15.5	80	76.8	100	99	100	99	2.35	2.47	2.36	63
10.	98	3.33	.56	16.8	76	76.2	100	100	100	99	2.41	2.52	2.44	66
11.	99	3.05	.55	18.0	72	75.8	100	99	100	99	2.38	2.46	2.45	69
12.	98	3.12	.47	15.0	81	78.2	100	99	99	98	2.44	2.58	2.52	68

* Percent of birds within 10% of the average weight of that sex.
 ** Percent of birds within 20% of the average weight of that pen.
 *** Female weight as percent of male weight.
 **** Based on a linear relation between measurement at 9 and 10 weeks of age.

TABLE 3--FEATHERING, SHANK COLOR, AND DRESSED GRADE OF SAMPLE BIRDS OF EACH SEX NEAREST THE AVERAGE WEIGHT OF THEIR SEX IN THE PEN.

Pen No.	Feather Score		Shank Color	No. Birds	Grade A %	No. Dup	Grade B for reasons shown			Grade C for reasons shown			Rejects
	Alive	Dressed					Flesh- ing	Fin- ish	Feath- ering	Flesh- ing	Fin- ish	Feath- ering	
1.	4.33	4.96	3.42	23	87				3				0
2.	4.12	4.79	3.83	23	65		5		3				0
3.	4.50	4.95	3.79	21	76				5				0
4.	4.71	4.96	3.88	24	92				2				0
5.	3.13	3.57	4.52	23	4	5	2	7	14			4	0
6.	4.79	4.96	4.54	24	71		1	5			1		0
7.	4.71	5.00	3.54	22	91			2					0
8.	3.23	4.14	4.50	22	59	2		3	8				0
9.	4.42	4.69	4.00	23	70			6	1				0
10.	3.62	4.09	4.62	23	61	2	2	5	4				0
11.	4.83	5.00	3.79	22	73		2	4					0
12.	3.67	4.41	4.75	21	71		3	1	2				0