A NEW SHOW CLASS IN AN AGRICULTURAL SHOW

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SUMMARY

A new class involving the objective judging of animal performance was devised by the Methven Agricultural and Pastoral Association to overcome reliance on traditional showing methods. In the spring, steers from competitors are grazed together for about 135 days until the show in mid-March. Prizes are awarded for the greatest liveweight gain and gain of salable meat over the period. The competition has stimulated considerable interest and provides physical information on breed types which can be of value to local beef producers.

INTRODUCTION

AGRICULTURAL and Pastoral Associations in New Zealand and elsewhere have been criticized for the lack of objectivity in the judging of livestock and their almost complete reliance on traditional showing methods.

The introduction of initially "Chiller Beef", and subsequently "Export Beef" competitions sponsored by the New Zealand Meat Producers Board went some way to improving the situation. The Export Beef competitions do give exhibitors the opportunity of seeing their cattle judged on the hoof and then being displayed in carcass form after judging which involves a considerable degree of objective measurement (see Barton, 1968).

These competitions, however, provide no information about how these cattle were fed, their relative growth rates or, indeed, how profitable they were grown.

The Methven Agricultural and Pastoral Association recognized these deficiencies. With the aim of increasing the element of competition on a performance basis in the annual show and of providing some factual local data on the relative performance of various types of steers, the Association devised what is known as the "Export Beef Competition — Group Grazing Class".

ORGANIZATION OF THE CLASS

Entries are solicited for yearling steers of any breed or cross in good store condition to be grazed as one mob from early spring through to the show in mid-March. This corresponds to a period of high growth rate and fits in with common farming practice in the district where yearling steers are purchased in spring and sold for export the following autumn. It was felt that if the class began in the autumn with weaner steers the high grazing fees would deter exhibitors.

After arrival at the grazing property all steers are drenched, and sprayed for the control of parasites. They are allowed to settle down for a week before weighing which is continued at monthly intervals during the grazing period with the final weighing just before the show in mid-March. At the show, equal prizes are awarded for the four steers with the fastest liveweight gain per day over the grazing period.

After the show, the steers are killed and, on the basis of the carcass weight and fat thickness measurement used in the standard Export Beef Competition, for which these steers are eligible, the yield of salable meat from each carcass is estimated using the equation of Everitt and Evans (1970), *i.e.*

$$\text{Salable meat (kg)} = 0.675 \times \text{Carcass weight (kg)} - 0.69 \times \text{fat thickness (mm)} - 4.3$$

To estimate the salable meat gain (SMG) over the grazing period, a dressing-out percentage of 50 and zero fat thickness are assumed for all steers at the beginning of the period. On the basis of the estimated gain the salable meat the top ten carcasses are selected for boning out. Using the actual carcass yield, the weight of salable meat gain (SMG) is recalculated.

It was decided to award four equal prizes in both the LWG and SMG sections of the competition as it is recognized that the results cannot be completely accurate because of errors inherent

TABLE 1: PHYSICAL DETAILS OF THE GROUP GRAZING CLASS

	1972-3	*1973-4*	*1974-5*
No. in class	20	34	39
Average liveweight gain (kg/day)	0.90	0.88	0.83
Days on test	119	138	146
Average initial liveweight (kg)	343	332	334
Average dressing-out %	52.3	54.5	54.2
Average carcass weight (kg)	236	253	247

in weighing cattle from different sources and in the assumptions involved in calculating initial yield.

RESULTS

Table 1 gives physical details of the three competitions completed to date. From the first competition in 1972 numbers increased from 20 to 45 in the present year. This increase itself shows developing interest in the Class. Much of the interest is from the exotic cattle breeders and their societies. The length of the grazing period averages 135 days but has increased since 1972 because steers have been assembled progressively earlier in the spring (Table 1).

Liveweight gains (LWG), initial liveweights and carcass weights (CW) were similar for the three years. Weighing monthly was introduced to provide local information on differing growth patterns within the season.

There is not a very good correlation between steers winning one of the four prizes for LWG and those in the top four in the SMG section. For example, of the 12 steers (4 in 3 competitions) winning the LWG section, only 5 have been in the winning 12 for SMG (kg) and 5 for SMG ($). Of the 12 winning on SMG (kg) only 7 have done so on SMG ($).

This has highlighted that a high performance in any one productive trait is not sufficient to guarantee prizewinning. A high growth rate, dressing-out percentage, yield and carcass value (c/kg) are all important.

An illustration of how the results of this type of competition can be interpreted to provide useful information to local commercial beef producers has been prepared (Table 2). All steers (93) entered in the three competitions were allocated to one of four "breed type" groups, namely:

I Early maturing beef breeds — *e.g.*, Angus, Hereford, Shorthorn, Galloway.

II Crosses between the early maturing breeds — *e.g.*, Hereford × Angus and Hereford × Shorthorn.

III Crosses between the early and late maturing breeds — *e.g.*, Charolais × Angus and Limousin × Angus.

IV Crosses between the late maturing breeds — *e.g.*, Charolais × Friesian.

The ranking of the breed types for most of the characteristics is similar to that for other more precise trials conducted in New Zealand (Bass *et al.*, 1975).

TABLE 2: COMPARATIVE PERFORMANCE OF THE FOUR BREED TYPES IN THE GROUP GRAZING CLASS
(Average of 3 years)

	Breed Types			
	I[1]	*II*	*III*	*IV*
No. entered	32	23	25	8
Initial liveweight (kg)	319	336	350	354
Daily liveweight gain (kg):				
Average	0.87	0.85	0.92	1.14
Top third	1.00	0.94	1.09	1.36
Bottom third	0.75	0.67	0.72	1.10
Dressing-out %	53.3	53.9	54.6	54.1
Carcass weight (kg)	233	240	260	279
Export grades[2]:				
%Chiller	94	87	60	24
% FAQ	6	9	40	75
Fat thickness (mm)	6.6	6.9	4.3	2.9
Salable meat gain (kg):				
Average	50.5	49.2	56.0	64.0
Top third	56.5	54.0	67.4	70.2
Bottom third	38.5	40.7	44.6	57.7
Relative stocking rate[3]	100	98	92	88
Adjusted SMG (kg)[4]	50.5	48.2	51.2	56.3
Numbers winning:				
LWG	3	0	4	5
SMG (kg)	1	1	6	4
SMG ($)	2	1	6	3

[1] I = Early Maturing Breeds, II = Crosses between Early Maturing, III = Early × Late, IV = Late × Late.
[2] All carcasses were graded by an experienced grader to the standards laid down by the N.Z. Meat Producers Board.
[3] Relative stocking rate based on average liveweight over the grazing period.
[4] Salable meat gain adjusted for stocking rate.

The LWG and CW obtained here are greater in most cases than those reported elsewhere for steers of this age. This is probably a reflection on the fact that competitors contributed above-average steers, but also reflects the high performance achieved by top commercial beef producers in mid-Canterbury. There is a wide variation in performance within the breed types as can be seen from the performance of top and bottom third for LWG and SMG. While some of this must be genetic variation a large proportion is a result of previous levels of feeding. It was noted

that steers arriving at a liveweight well above the average for their breed type, and in good condition, will have a below-average growth rate. Group II as a whole suffered from this effect.

In the absence of any good evidence on the relative stocking rates of the various breed types, they have been compared on basis of their average liveweight over the grazing period. When SMG is adjusted for differences in the relative stocking rates, differences between breed types are reduced. For example, the 11% advantage of Group III over Group I in terms of SMG is reduced to 2% when adjusted for stocking rate and the 27% for Group IV reduced to 11%.

Since the value of the SMG for any breed type varies with changes in the schedule for the various export grades and carcass weight ranges, no attempt was made in this paper to make an economic analysis of the results. However, it is not difficult to see how any particular set of schedule prices could be applied to this information to calculate relative purchase prices for the different breed types or to compare the profitability of the groups.

CONCLUSIONS

Largely because the Methven A. & P. Association is fortunate to have facilities and conditions which permit the running of this competition, no great difficulties have been experienced. However, there is no reason why other associations, with a little initiative, could not devise similar commercial-type competitions.

There is no question that this new class has generated an interest among competitors, many of whom would not have competed in the traditional show classes. It is hoped that, in the future, group breeding schemes and breed societies will enter groups of steers. Two societies have already used the results of the competition for promotion purposes.

As a by-product, this type of competition can provide useful information for the local farming community, some of whom may be more willing to accept these results than those produced under strict research conditions. Naturally, as the information accumulates, it will be possible to carry out more detailed analyses.

We do not necessarily see this type of performance class displacing completely the traditional forms of showing but rather complementing them, and thus involving a greater number of competitors. With the experience gained in this particular show class we are confident that this type of class should expand.

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