

for more. He will continue his studies, taking full advantage of popular expositions of scientific results to be found in the agricultural press.

Among actual results in respect of improvements in farm practice, one is impressed by the changes in laying down rotation pasture, the reduced use of perennial ryegrass and the increased intelligent use of cocksfoot and wild white clover. The influence of 40 years' teaching at the Kilmarnock Dairy School is indubitable, and in connection therewith we may say that Mr. Campbell does not hesitate to put down concrete figures as representing the enormous monetary value to the South-West of Scotland of that teaching. The great advance in profitable poultry keeping is equally marked, figures being given which show increases in numbers of all kinds of poultry kept, and in actual egg production per hen. Equally striking are the results in respect of milk production per cow due to the work of the Scottish Milk Record Association, working in alliance with dairy school and college instruction. Nevertheless there is yet much land to be possessed, as, so far, only 17 per cent of the milch cows in the purely dairying districts are as yet under the supervision of the Association.

We have said enough to indicate the discriminating nature of Mr. Campbell's report "After 35 years" and we speak for its full text an attentive hearing when it appears.

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Co-operative Marketing.

(Continued from March issue)

(2) One result of small holdings is that financing cannot be properly organised and has to be effected locally, making it at once costly and wasteful. In his evidence before the Agricultural commission Dr. Mann stated that in Khandesh the cotton growers were not dependent on money-lenders. If that is so, that is probably the only instance of financial independence of cultivators. In some outlying areas, things are very bad indeed. It has been reported by an experienced Bengal official that cardamom sold in Darjeeling at Rs. 60 to 90 a maund in 1925, whereas the cultivators obtained on an average Rs. 30, sometimes as low as Rs. 12, because they had obtained advances from the ring of Marwaries, who control the trade. This is not an exception but the rule for the system of financing is exceedingly complex, as described in the

appendix to the report of the Babington Smith Currency Committee. A rough idea may be obtained from a study of the process at present obtaining in Assam. The big *mahajan* gets his money from his Calcutta firm or bankers at 6 to 9 per cent. He charges 12 to 15 per cent from the smaller *mahajan* who in his turn levies anything from 18 to 30 per cent on local traders. By the time finance filters down to the actual cultivators, the interest rate is anywhere between 24 and 60.

Unnecessary middleman:—The small unit and the impecuniosity of the cultivator necessitate the employment of a larger number of middlemen. It is true that for the marketing of food crops and low valued crops, there are fewer intermediaries than for commercial crops and high valued crops. But even in the case of the former, there are far too many, especially if the producing areas are at a distance from the markets. Perishable commodities like potatoes should change as few hands as possible. But at Poona there are at least 5 *adatyas* or brokers representing sellers through whom potatoes must pass before they reach, not the actual buyer, but another intermediary, a representative of the buyer called a *dala*. In the case of paddy in Bengal, it is collected by a village *faria* (small dealer) from the ryot and sold through *paikar* (wholesale dealer) to a *bepari* who is either a dealer on his own account or merely a commission agent financed by another middleman higher up the chain. A *bepari* cannot sell the dhan or unhusked paddy directly to the mills but must carry it to an *aratdar* (godown keeper) who levies not only his usual charges but also commission. From him the paddy goes to a *dalal* (broker) who charges Rs. 3 per 100 maunds on an average and finally to mills.

4. *Their malpractices*:—These different classes of persons not only take middlemen's profits without performing any commensurate economic service, but they frequently practice rogueries of the worst description. In the report of the Mango Marketing Committee published recently by the Bombay government, a vivid description is given of secret buying without the knowledge of the producer. The *dalal* (buyer's broker) will not deal directly with the seller but only with an *adatyas* (seller's broker) and bargains are struck secretly by manipulation under cloth. Even in an organised cotton market like Amraoti, a government officer on special duty recently found out from the books of different *adatyas* that the price paid to cultivators was often lower than the price obtained from buyers.

5. *Chaotic measures of weight.*—Apart from this, there are malpractices on account of different measures of weight in use for different purposes. In the *gur* (unrefined Indian sugar) market in Poona, the producer has to deliver 256 lbs. per *palla* but the middleman sells at 240 lbs. per *palla*. In the case of tobacco, the *adatyā* buys at 300 lbs. per *palla* and sells at 280 lbs per *palla*. Besides there is almost a bewildering diversity in measures of weight in different places and even in the small place for different commodities. To give only one instance in Jalpaiguri (Bengal) the local weight is 93 tolas but Habigunge tobacco, for which it is a great centre is dealt in on the basis of 80 tolas. Illiteracy on the part of the ryot is as much responsible for this state of affairs as is the action or rather the inaction on the part of the government. As early as October, 1913, the Government of India appointed a committee to go into the matter and in their resolution dated January 3, 1922, declared themselves in favour adopting throughout India the system of weights at present in vogue on railways. But nothing further has been done.

6. *Corrupt weighing.*—The weighman (called *Koyal* in Bengal) is an employee of the buyer and frequently manipulates scales to the detriment of the seller. The evil is well-known in Bengal and loudly calls out for reform. Even in the case of organised cotton markets, Rao Bahadur K. V. Rahama of the Berar Co-operative Institute is constrained to plead for platform scales in place of the present beam scales as a check to the knavery of the weighman. In fact, the justification for the existence of the Cotton Sale Society at Pachora (the only surviving society in Khandesh, and that even not a co-operative body in spite of vigorous propaganda) is simply that it secures fair weighing.

7. *Arbitrary deductions.*—At the time of weighing, various arbitrary deductions are made, some of which are enumerated below :—

(e) *VRITTI*, a customary allowance for Hindu religious and charitable purposes. The name differs in different parts of India but the practice obtains elsewhere.

(b) *DHALTA*, allowance for drying.

(c) *MUTHI KABARI*, “handful” for staff.

(d) *KHARCHA* (also called *jhara bojat*), allowance for bagging and stacking.

(e) NEWAJ, deduction for mosques and Muhammadan charities.

(f) KOYALI, weighman's allowance.

(g) HAMALI, postage charges.

8. *Adulteration*.—Absence of grading lowers considerably the price of the produce. This is insisted upon in the Report of the Mango Marketing Committee referred to above. But in the case of export crops, grading is far more necessary. Unfortunately however, unscrupulous dealers seize every opportunity for making unjust profits. Very soon after the introduction of 4F American cotton in the Punjab, it was discovered that the *deshi* and 4F could be mixed without buyers being able to detect it. This could not be done at the *kapas* stage (cotton with seeds on) by cultivators, for the seeds were different. It was the middlemen, who were responsible for this adulteration. Similarly, in the old days when the basis for red wheat in the Punjab was 7 per cent barley and 3 per cent dirt, dealers used to mix up barley and dirt with consignments of wheat which were above this standard.

9. *Lack of warehousing and transport facilities*.—Warehousing and transport are very inadequately developed. If a cultivator lives away from a market, he is in a very difficult position indeed. He has to send his produce in the time-honoured bullock-cart over bad roads at considerable expense. If he cannot obtain a fair price, he can neither store his produce in the distant market, nor can he bring it back to his village. It is for this reason that small itinerant dealers like *farins* can carry on trade under such unfair conditions. Apart from this, railway transport is inadequate. There is a chronic shortage of waggons during the crop-moving seasons, precisely when they are most urgently required. Freight is also very costly, as will appear from the following table compiled by Rao Bahadur P. C. Patil :—

Railway system.	Freight for carrying one ton of wheat through 200 miles.
United States ..	Rs. 7.56
Madras and Southern Maharatta Railway ...	„ 10.32
Great Indian Peninsula Ry. ...	„ 11.07

Different marketing methods:—There is no uniformity in marketing methods, rendering an All-India Act for regulating markets and licensing middlemen impossible. There are on the one hand, several remote areas where barter is still in vogue, e.g., in the outlying parts of Assam and the Agency and hill tracts of Madras. There are on the other hand several highly organised markets where futures alone are dealt in even by cultivators, e.g., in Nandyal cotton market in Madras.

Swat the middleman:—How are these difficulties to be removed? Wherein lies the remedy. It is clearly impossible to follow a supine policy of *laissez faire* when the buyers and sellers are of such unequal economic strength. If the ryot can be properly organised and made independent of middlemen with their numerous malpractices most of the evils enumerated above will be removed. A systematic attempt "to swat the middleman" is therefore clearly called for. To quote the words of a report issued by the State of Massachusetts, too long a line of commission men, produce merchants, jobbers, bucksters, retailers and what not simply passing goods from hand to hand like a bucket brigade at a fire is not only inefficient and wasteful but is very costly. In these days a hydrant and a line of hose are wanted."

Co-operation:—As soon as the question of eliminating middlemen crops up co-operation is suggested as the remedy. But it is forgotten that cooperation is a worldwide movement which has assumed different forms in different countries in conformity with their history and their social and economic circumstances. Co-operative marketing being a kind of agricultural co-operation has almost endless diversity. There can be no artificial uniformity in respect of anything connected with agriculture, for that must obviously be a reflex of the people and the soil. A study of the system prevailing in foreign countries will however be helpful, if it is possible to deduce certain general principles and correlate them with circumstances prevailing in India.

(From Indian Journal of Economics—January 1928.)

(To be continued.)

What is Efficiency?

At the present time a great efficiency movement is sweeping the industries. The attention of employers in general is directed toward that one goal as to how to produce the maximum production at the minimum expense. The term speed or speeding up, has become a by-word, coined by the so-called efficiency experts, many of whom have been drafted from the rank and file of impractical men. Asked to investigate factory conditions, they file a report with the employers who have been induced to employ them, making a recommendation that in their judgment the only way to increase their output without additional expense is to drive their men, speed them up, make a machine out of them, and when worked out replace them. There is nothing scientific in such a recommendation. Every successful scientific invention of the past has had a tendency to reduce the physical labour, and to encourage the individual to think and work *with his head rather than with his hands*. It is not the aim of scientific management to induce men to act as nearly like a machine as possible. True, a foreman will prove his efficiency by the measured quality and quantity of his output, but it must come through systematic planning and education of the individual. *Men must be led and not driven*. Instead of working un-willingly for their employer they must work in co-operation with the management. Mistakes, instead of having to be corrected, must be avoided. So the first thing that must interest is the careful selection of the man that is going to have full charge of any given department. He must first of all be an expert in his line of work. *Nothing is so detrimental as to have a man fall into a position by luck, without having the necessary qualification*. A foreman must be looked up to by the men under him, as one that has had a little more experience than they have had, for it will not take long for the men to find out if such is not the case, and when they do, he will not be able to exercise the proper control over them, and will eventually destroy the efficiency of his department.

The greatest efficiency can be obtained only when the men are happy, satisfied, and contented with their surroundings. Since it is hard to find any two men that will do the same amount of work in a given time discretion must be exercised by the foreman in the placing of his men where they can be used to the best

advantage, with his work always planned in advance, so that they may know they always have a job ahead of them.

Richard M. Van Gaasbeek, in "American Industries."
(Journal of Agric. Victoria, 10th Feb. 1916).

The examination system.

A NEW SPIRIT WANTED.

In the following article contributed to "The Times Educational Supplement" a correspondent discusses the disadvantages from the point of view of testing true culture of holding examinations at the end of every stage of education. Though his remarks are primarily applicable to British conditions they convey some instructive lessons to us in India also.

The increase in the number of post primary schools and the probable raising of the statutory leaving age to 15 make it expedient to consider whether or not a special leaving examination should be instituted for all schools under State control. The Hadow Committee while acknowledging that the majority of their witnesses were opposed to the establishment of a final examination for post primary schools, yet said in their report that they were of opinion that it would be desirable to make available a special examination of a type suitable for pupils leaving such schools.

Here at the outset we have a difference of opinion among experts on the subject in hand. The two main reasons given by those in favour of leaving examinations are :—

(a) That they set up standards for pupils and teachers alike, and since they mark the end of a course of study pupils are more likely to remain at school until the course is completed than they would be were the completion not marked in an obvious way.

(b) The certificates awarded are of value both to those who go on to further education at the universities and colleges and to those who seek employment in factories and in offices.

These are the reasons in favour of leaving examinations. Against them are the objections that they "tend to cramp the individuality of the schools, bring about a loss of freshness and elasticity, and tend to overpressure; the value of the work done in the school, moreover, is apt to be estimated by the number of certificates obtained." At first sight this last objection may not appear to be serious, but if the work of a school is so judged there