(*f*) The control of temperature of cheese-curing rooms is very important. A temperature of from 55° to 60° F. is needed to promote ripening; but when temperatures rise above 65° F. openness is accentuated, especially if the cheese is slightly sweet or somewhat high in moisture content. High temperatures also give rise to excessive shrinkage. Many curing-rooms are not sufficiently insulated to prevent an excessive rise of temperature in summer. Attention also should be devoted to the control of humidity of curing-rooms. It must be realized that the curing of cheese is just as important as the making of it.

(*g*) Lack of maturity has been proven to be one of the causes of slit openness. This defect may be present in a green cheese, and, as the cheese ripens, it may either entirely disappear or become markedly less. Thus the ripening of cheese to a mild degree of maturity before it is offered for sale is one immediate and simple measure for mitigating openness. This measure is not applicable to excessively moist cheese. The maturing of cheese also has the decided advantage that it prevents cut surfaces exposed to the atmosphere for a few days from cracking and developing the yellow horny appearance characteristic of immature cheese.

Attention to the foregoing considerations will assist factories in controlling openness of texture to a considerable extent. It has been shown that neither the pasteurization nor the test of milk affect openness of texture, although they have other influences. It has also been shown that types of presses and hoops have no distinct influence. However, the keeping of cheeses in the press for three days, if accompanied by the daily easing of the cheeses in their hoops, is a decided advantage, and can be recommended when this is practicable—for example, when a factory is not working to full capacity.

Methods of improving the State of Maturity of Export Cheese.

A series of experiments were undertaken to provide straightforward practical methods of improving the state of ripeness of export cheese on its arrival in the United Kingdom. When these experiments were carried out there were no regulations in force in regard to the heating of curing-rooms. Taking as standard a cheese held on the factory shelves for fourteen days at from 45° to 50° F. and sold at nine weeks old after having been treated in the usual export manner, there were compared with it eight other cheeses from the same vat exposed to other conditions likely to improve ripeness when mature, such as holding on the factory shelves at higher temperatures for the same time, and for a longer time and prolonging the period of storage in the grading-stores before export. The influences of the use of greater amounts of rennet than are commonly employed in practice and different types of cheeses were studied. In all, some 360 cheeses from forty vats were individually examined at various stages of maturity. The cheeses were mostly judged by Mr. Ross, of the Dairy Division, who used as his standard the degree of maturity and type of cheese wanted by the Home market. It was found that—

(*a*) Good cheese materially improved in quality as it matured. Maturing brought out real Cheddar character and reduction in slit openness. There was a difference of as much as 2·9 points in average grade of the same line, varying from 89·2 to 92·1. The best line of cheeses were those held on the factory shelves for a month at 60° F. and in the grading-stores for two months before they normally would have been exported. Cheeses held on the factory shelves at 60° F. for fourteen days and a month respectively, and examined when they would have arrived Home at from nine weeks to fourteen weeks old, did not grade so well as did those held at 45°–50° F. during the first fourteen days and graded at the same age—they had metallic flavours where the others had green yet clean flavours. Those held on the shelves for fourteen days at 60° F. and in the stores for up to four months improved in quality with age, but they were still inferior to those held on the shelves for a month and in the stores for two months prior to the normal time of export. The shrinkage of the best line was approximately 5 per cent. of their green weight, which is in keeping with accepted expectations. It was higher by 1·75 per cent. than the immature produce which had not been exposed to high temperatures, but actually less by 0·6 per cent. than cheese subjected to normal factory export procedure and held till they were six months old, such as may be practised by Home buyers to provide what is wanted by the trade.

(*b*) Cheese of the type made for yield fell off markedly in quality with keeping. They graded best when held in the factory at *low* temperatures and when finally sold at three-and-a half months old; but even under these conditions they were not of high enough quality for trade needs. They badly deteriorated when held on the factory shelves for a month or six weeks. In addition to the falling-off in flavour, several other noteworthy features emerged from their examination: (1) The shrinkage between green weight and factory packed weight was high; (2) the shrinkage in store was very high; (3) they developed excessive openness, which in no case was overcome by maturing; (4) they cracked badly, particularly at the ends, and developed discoloration. This experience emphasizes the fact that the worst features of this type of cheese are brought out after the cheese is normally graded.

(*c*) Cheese made from curd to which an excessive quantity of salt has been added does not ripen normally. Even when held at 60° F. on the factory shelves for a month or six weeks and in the stores for two months it is still harsh in texture and metallic in flavour, both of which qualities are objectionable to cheese-consumers. While the quantity of salt added to curd can with advantage be increased in the autumn, it should be carefully controlled at all times. It is equally important to avoid over- and under-salting.