

It seems probable that the fat of all young pigs contains a large amount of olein, and is consequently more or less soft. From this and subsequent work we are inclined to think that age and maturity or ripeness are factors of importance towards a 'firm' fat. In discussing the various rations used in this investigation, we shall place in each table the results obtained from certain immature or 'unripe' pigs (killed at about 100 lbs. live weight) taken from each pen, and it will be seen that the fat of these animals invariably possesses a larger percentage of olein than that of the remainder of the pigs on the same ration, which were not slaughtered until they had reached a live weight of 180 to 200 lbs.

### STANDARDS OF FIRMNESS.

We are not as yet, perhaps, in a position to establish standards of firmness, that is, to say exactly what percentage of olein is to be considered as the limit for pork technically known as 'firm'; but for the purpose of comparing the various results here presented we shall be obliged to adopt provisional limits. These have been decided upon since the completion of the investigation, which has been in progress for the past two and a half years, from the chemical results and the ratings made at the packing house. In connection with the latter data, it should be stated that each dressed pig, after being thoroughly chilled, was critically examined at the packing house. In this investigation we adopted a scale of firmness ranging from 100 downwards. The cut surface of the fat along the back was felt and rubbed with the fingers, and that which was hardest and most resistant to pressure, rated at 100. The softest examined was placed at 20. Oiliness was also specially noted, and it is of interest to know there were but few cases in which the softness (slight resistance to pressure) was not accompanied by this quality. Thickness of fat, shape of carcase, &c., were also remarked.

It is to be pointed out as the result of our experience, that such an inspection, even when made by an expert, cannot furnish figures that will so closely differentiate as to relative softness as do the percentages of olein. In fact, in order to obtain comparative ratings, even of a fairly accurate character, it is essential that the carcasses should remain at least forty-eight hours after slaughtering in a refrigerating room of uniform temperature before inspection.

During several months of the winter, artificial refrigeration to chill the carcasses in the packing house is unnecessary at Ottawa, and it was noted not unfrequently that the temperatures to which the carcasses were exposed during these periods fell to many degrees below zero. As a natural result many of our ratings for individual pigs in the winter are too high. On the other hand, we have found that if owing to any cause the temperature of the refrigerating room in summer is allowed to rise, the ratings are too low.

For these and other obvious reasons, we believe that the olein content furnishes by far the more reliable indication of relative firmness; we are of the opinion that unless the very greatest care and judgment be exercised, the rating from inspection at the packing house is in a matter of close discrimination of little save corroborative value. It is for this reason that in the presentation of the subject we have arranged the ratings in the charts or tables according to percentages of olein rather than by the factory values. Further, to avoid as far as possible the introduction of error arising from such differences of temperature as we have alluded to, we have adopted certain terms and affixed values thereto, as indicated on the following page:—

ing Point.

der.	Loin.
° C.	24.4° C.
° C.	25.7° C.
° C.	28.5° C.
° C.	32.0° C.

its furnish us  
ever, that the  
Ontario.  
served that in  
the fat obtained  
ive also is  
the fat of the  
at of the same