

No purpose will be served by discussing in detail the above data in this bulletin ; but the fact may be emphasized that they indicate the olein content and melting point, and especially the former, as data of great diagnostic value in this research. Indeed, to such a degree has subsequent work shown this to be the case that, although many other determinations, *e.g.*, nitrogen, non-fatty tissue, &c., were made on the larger number of pigs, we shall only present the figures for the olein and melting point estimations. We feel convinced that these data are reliable and in themselves sufficient to be used exclusively in pronouncing a judgment upon the relative firmness of the pork under investigation.

#### IMMATURE OR 'UNRIPE' PORK.

After the completion of the foregoing work and at the outset of the investigation about to be described, four very young pigs were examined in order to learn the nature of the fat of immature animals. Of these, two were from Western Ontario and two from Eastern Ontario. These pigs were slaughtered at the Geo. Matthews Co. Packing House, Hull, Que., June 27, and examined June 28, 1899. We adjudged Nos. 57 and 58 as decidedly soft, and Nos. 59 and 60 as only moderately firm.

An independent examination was made by Mr. W. E. Matthews, some two days later. His report is as follows :—'We have looked the little pigs over and think they are almost too small to secure anything definite from, but we find that Nos. 59 and 60 are by far the firmer pigs, No. 57 being a little soft, and No. 58 the softest of the lot. Not knowing where the pigs came from, we express the opinion that they are from what we would call a 'corn section,' as the fat on all shows signs of oil.'

It is to be noticed that this expert adjudged all the pigs soft (though varying in degree of softness), but considered them too small to draw definite conclusions from. It will now be shown that the laboratory data bear out in a marked manner Mr. Matthews's judgment. As already stated, only the data respecting the olein and melting point will be considered here, the other results being of minor importance for the purposes of this investigation.

TABLE IV.—Immature Pork ; Composition and Melting point.

No. of Pig.	Locality.	Dressed Weight.	Olein.		Ratio of Palmitin and Stearin to Olein.		Melting Point.	
			Shoulder.	Loin.	Shoulder.	Loin.	Shoulder.	Loin.
		Lbs.	p. c.	p. c.	p. c.	p. c.		
57	West.....	27	90.6	88.2	1:9.6	1:7.5	25.2° C.	24.4° C.
58	" .....	23	86.9	85.9	1:6.5	1:6.1	24.5° C.	25.7° C.
59	East.....	42	83.3	82.2	1:4.9	1:4.6	27.6° C.	28.5° C.
60	" .....	30	73.3	72.9	1:2.7	1:2.7	29.8° C.	32.0° C.

These pigs when killed had been recently weaned, hence the results furnish us with no information regarding the effect of feed ; it is significant, however, that the two softest were obtained from a so-called 'corn section' in Western Ontario.

If the above data are compared with those of table II. it will be observed that in all the fats the percentage of olein is considerably greater than that in the fat obtained from the 'firm' supplied by The Davies Co. Exceedingly instructive also is a comparison of the ratio of palmitin and stearin to olein. Thus, in the fat of the 'firm' pork of The Davies Co. we obtained 1 : 1.76 ; the ratio for the fat of the same part of the pig No. 60 (the firmest of the four) was 1 : 2.69.

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