

their conclusions regarding this disease without mention of the maturity of the fruit under experiment. Certainly there are some difficulties in determining experimentally whether the development of flesh-collapse can be attributed to any extent to overmaturity. The first of these difficulties is to determine what constitutes any special stage of maturity, and the second is to select for experimentation a number of apples coinciding in respect to their stage of maturity. No precision can be ensured in this matter. The fact is that the judgment as to maturity is made mainly on appearance of colour, and that the seasonal conditions, the nature of the locality, the amount of the leafage of the trees, and other factors are liable to modify these appearances upon which maturity is judged.

The lack of precision in this matter is a real difficulty in the way of securing consistent results in experimentation; it has no doubt been responsible for several irregularities in the results of my maturity experiments last year. Despite this difficulty, it was absolutely necessary that some attempt should be made to determine the influence of maturity upon flesh-collapse, so vital is this question both to the apple-grower and the cool-store interest. The position of these two parties is as follows: The apple-grower, on the one hand, expects to pay for cool storage out of the increase in profits from selling out of season when prices are high; his aim is to unload when the prices are at their highest. Cool storage, on the other hand, has won a place for itself because it has made this possible. When, however, the fruit is at last marketed one line competes with another. The highest prices go for lines with those qualities that appeal to the customer. One of these qualities is colour, and colour increases with maturity, and the more advanced the maturity the more difficult is it to store the fruit successfully. The accompanying table gives some details of experiments showing the effects of maturity upon the development of flesh-collapse in cool store:—

TABLE I.—SHOWING THE AVERAGE PERCENTAGE OF STURMER APPLES AFFECTED BY FLESH-COLLAPSE IN COOL STORE, AMONG THE OVERMATURE, THE MATURE, AND THE LESS-MATURE FRUIT RESPECTIVELY, AT EACH EXAMINATION.

Date picked and stored.	Date examined.	Duration of Cool Storage.	Extent to which Overmature affected.				Extent to which Mature affected.				Extent to which Less Mature affected.			
			Very Bad.	Bad.	Slight	Total	Very Bad.	Bad.	Slight	Total	Very Bad.	Bad.	Slight	Total.
		Mths.	Per Cent.	Per Cent.	Per Cent.	Per Cent.	Per Cent.	Per Cent.	Per Cent.	Per Cent.	Per Cent.	Per Cent.	Per Cent.	Per Cent.
1922.	1922.													
29 April ..	29 Aug.	4'0	5	16	39	<b>60</b>	..	..	..	..	..	..	..	..
11 " "	29 " "	4'5	..	..	..	..	0	1	10	<b>11</b>	..	..	..	..
30 March	29 " "	5'0	..	..	..	..	..	..	..	..	0	1	8	<b>9</b>
29 April ..	4 Oct.	5'0	3	13	52	<b>68</b>	..	..	..	..	..	..	..	..
11 " "	4 " "	5'5	..	..	..	..	0	2	19	<b>21</b>	..	..	..	..
30 March	4 " "	6'0	..	..	..	..	..	..	..	..	0	1	9	<b>10</b>
29 April ..	3 Nov.	6'0	9	16	53	<b>78</b>	..	..	..	..	..	..	..	..
11 " "	3 " "	6'5	..	..	..	..	3	7	26	<b>36</b>	..	..	..	..
30 March	3 " "	7'0	..	..	..	..	..	..	..	..	1	3	9	<b>13</b>

It will be seen that Sturmers were used in these experiments, and that an attempt was made to select three distinct stages of maturity, these being called "overmature," "mature," and "less mature"