# *Problem Corner . . .*

January 7, 1958

*Question*

I am interested in obtaining data on the fat content of various meats as well as poultry and fish. In addition, I am interested in data on the melting and smoking points for edible fats such as tallow, lard, and the major vegetable shortenings.

FROM NEW YORK

*Answer*

The best source of information for the kind of data you request is in the Agricultural Handbook No. 8, Composition of Foods: Raw, Processed, Prepared. It is published by the United States Department of Agriculture (1950) and is available from the Superintendent of Documents, United States Government Printing Office.

The data you request regarding the melting and smoking points of various edible fats are not specifically available. The smoke points of fats and shortenings vary with the free fatty acid content and with the content of various additives, such as emulsifiers. Well processed lards, tallows, oils, etc., with no additives and extremely low free fatty acid content smoke at about 425°–450°F. The factors mentioned above tend to lower the values below this figure.

The melting points of lard range from 33°–46°C. and of tallow from 40°–48°C. These values vary with composition, and this changes with the diet of animals and with the carcass location of the fats used in production.

The melting points of shortenings vary with the composition. These variables are so complex because of the blending of fats with differing characteristics that any generalization is quite untenable. Properly the melting and smoke point of any edible cooking fat or shortening is only that which is determined experimentally on each individual sample.

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