

Vitamin A in Butter



L:573971,A31127,3.73
H7
045026

Miscellaneous Publication No. 571
U. S. Department of Agriculture

Contents

	Page
Foreword	III
A Nation-wide survey.....	IV
Summary of the results.....	2
Procedures used in conducting the survey..	3
Vitamin A potency of creamery butter by regions	4
Effect of storage on the vitamin A potency of butter	7
Vitamin A potency of butter on retail markets.....	
Possibilities for improving the vitamin potency of milk and butter.....	
Reports by cooperating States.....	

FOREWORD

Early in 1941 the Committee on Food and Nutrition (now the Food and Nutrition Board) of the National Research Council transmitted a proposal to the Secretary of Agriculture recommending that studies be undertaken to determine the normal variation in the vitamin A values of milk and butter as affected by seasonal and regional feeding practices, and also the actual variation in the vitamin A values of market butter as sold in the towns and cities in different regions.

The Secretary forwarded the recommendation to the Bureau of Dairy Industry and the Office of Experiment Stations, Agricultural Research Administration. Representatives of these Department agencies outlined a plan of procedure and presented it to the directors of the State agricultural experiment stations during their annual meeting in Chicago, in November 1941, with the result that a Nation-wide cooperative survey was approved.

The directors of the State experiment stations designated C. H. Bailey, Director of the Minnesota Agricultural Experiment Station, to work with O. E. Reed, Chief of the Bureau of Dairy Industry, and James T. Jardine, Chief of the Office of Experiment Stations, as a committee to develop cooperative plans for the study, to assume over-all administrative direction of the project, and to appoint a Technical Committee to formulate the analytical methods and procedures.

The Technical Committee was composed of the following scientists: L. A. Maynard, New York (Cornell), chairman; C. J. Koehn, Alabama; H. R. Guilbert, California; F. P. Zscheile, Jr., Indiana; G. W. Snedecor, Iowa; L. S. Palmer, Minnesota; I. L. Hathaway, Nebraska; W. H. Peterson, Wisconsin; and C. A. Cary, Bureau of Dairy Industry. Later, C. A. Cary was made chairman, W. D. Salmon of Alabama succeeded C. J. Koehn, and W. F. Geddes of Minnesota succeeded L. S. Palmer.

The first responsibility of the Technical Committee was to organize and undertake such cooperative work as was necessary to develop suitable methods for obtaining samples of butter and for determining its carotene and vitamin A content. Meantime, plans were developed and arrangements were made for participation by State experiment stations that were so located as to be able to provide data fairly representative of the butter produced in the United States.

After a year's cooperative work, the Technical Committee made recommendations regarding methods of obtaining butter samples and determining their vitamin A potency. These methods were approved by all agencies participating in the study and, in all essential respects, these were the ones used in the analytical work and in compiling the results. The Technical Committee worked closely with the State leaders throughout the study and also assumed the responsibility for the compilation and evaluation of the data.

The study itself and the organization necessary to undertake it have been complex and the work has been carried to completion with difficulty under war conditions. The organization, procedures, and results will stand as an example of what can be accomplished by voluntary cooperation.



Agricultural Research Administration.

A NATION-WIDE SURVEY

To determine the importance of butter as a source of vitamin A in the diet of the people of the United States, a Nation-wide survey was made by the Bureau of Dairy Industry and the Office of Experiment Stations, Agricultural Research Administration, United States Department of Agriculture, in cooperation with 20 State agricultural experiment stations.

Cooperating Agencies and Project Leaders

Alabama	W. D. SALMON
California	G. A. RICHARDSON
Idaho	D. R. THEOPHILUS AND O. E. STAMBERG
Indiana	B. E. HORRA
Iowa	E. W. BIRD
Kansas	J. S. HUGHES AND W. H. MARTIN
Louisiana	E. A. FIEGER
Maryland	C. W. ENGLAND
Minnesota	L. S. PALMER AND ROBERT JENNESS
Mississippi	MARVIN GIEGER
Montana	J. A. NELSON
Nebraska	I. L. HATHAWAY
New York (Cornell)	B. L. HERRINGTON
North Carolina	W. J. PETERSON
Ohio	W. E. KRAUSS
Oregon	J. R. HAA
Pennsylvania	R. A. DUTCHER AND N. B. GUERRANT
Washington	U. S. ASHWORTH AND MARGARET MCGREGOR
Wisconsin	W. H. PETERSON
Wyoming	H. S. WILLARD
Bureau of Dairy Industry...	H. G. WISEMAN AND W. A. TURNER

Washington, D.C.

Issued July 1945