TABLE 118. PROPERTIES OF VARIOUS FOOD PRODUCTS

SUBSTANCE	COMPOSITION		SPECIFIC HEAT ABOVE FREEZING IN HEAT UNITS	SPECIFIC HEAT BELOW FREEZING IN HEAT UNITS	LATENT HEAT OF FREEZING IN HEAT UNITS
	Water	Solids			
Water	.....	.....	1.00	0.50	144
Lean Beef	72.00	28.00	0.77	0.41	102
Fat Beef	51.00	49.00	0.60	0.34	72
Veal	63.00	37.00	0.70	0.39	90
Fat Pork	39.00	61.00	0.51	0.30	55
Eggs	70.00	30.00	0.76	0.40	100
Potatoes	74.00	26.00	0.80	0.42	105
Cabbage	91.00	9.00	0.93	0.48	129
Carrots	83.00	17.00	0.87	0.45	118
Milk	87.50	12.50	0.90	0.47	124
Oysters	80.38	19.62	0.84	0.44	114
White Fish	78.00	22.00	0.82	0.43	111
Eels	62.07	37.93	0.69	0.38	88
Lobster	76.62	23.38	0.81	0.42	108
Pigeon	72.40	27.60	0.78	0.41	102
Chicken	73.70	26.30	0.80	0.42	105
Ice Cream	.....	.....	0.80	.....	88
Wines	.....	.....	0.90	.....	.....

CHAPTER XXV

VENTILATORS AND NATURAL VENTILATION

OF the two methods of ventilating available, namely by mechanical means, and by the so-called natural forces, the later is often favored, because it is not dependent upon fans, blowers and motive power apparatus, any of which may get out of order; it requires no supervision, and it costs nothing for power to operate. It is dependent upon the operation of natural laws and is not subject to the requirements of control possible with mechanical ventilation.

Natural ventilation utilizes two separate agencies, (1) the buoyancy of the air caused by temperature difference between inside and outside of the building, and (2) the energy of the wind. The former is the same action that produces draft in a chimney. The two forces are entirely distinct and separate, and may either co-operate or oppose each other, depending upon the design of the ventilator.

A ventilator is an opening in the roof, properly protected against rain, snow and down draft; and surrounded by a hood or cowl intended to utilize the force of even the slightest breeze from any direction what-soever, in such a manner as to assist and increase ventilation. Occassionally a damper is required to prevent over-ventilation in cold, stormy weather. In any event, openings near the floor of the building which is to be ventilated are necessary to allow the ventilators to act.

Ventilators may be classified in general as, stationary and rotary, and each of these may be divided into siphoning and non-siphoning. The rotary ventilators being one which always presents the same face to the wind, and the siphoning ventilator being one which is so constructed as to use the force of the wind to siphon the air out of the ventilator, usually allowing some of the external air to pass through the head.

Engineers, architects and contractors who must make a selection should be guided by the following four general points, (1) quality of material, (2) design, (3) construction and (4) capacity (conditions should be stated otherwise a fair comparision of this item is impossible.)

What is generally desired more specificially is, the greatest amount of reliable ventilation for a given cost of equipment. The following facts affect ventilation and ventilator capacity:

1. Temperature difference between inside and outside of building.
2. Height of ventilator above air inlet openings.
3. Wind velocity.
4. Shape and design of ventilator.

Material for this section furnished especially for THE GUIDE by Frank Kelley, C. T. Palmer and Thornton Lewis.