TABLE 1
SOMATIC DEVELOPMENT IN SUCCESSIVE GENERATIONS OF THYMECTOMIZED RATS SHOWING RANGE AND AVERAGE VALUES

	Teeth erupted	Eyes opened	Testes descended	Vagina opened
Controls	7–9 (8.2)	13–16 (15)	25–33 (28.6)	41–50 (44.5)
F_1	8–10 (9.3)	13–18 (15.9)	24–38 (30.4)	40–53 (45.1)
F_2	8–10 (9.5)	15–18 (16.2)	24–36 (30.7)	42–61 (46)
F_3	8–10 (9.6)	15–18 (16.3)	26–33 (30.3)	41–52 (46.5)
F_4	9–10 (9.3)	16–19 (17)	30–33 (31)	44–48 (46)

is no marked retardation, it is seen that these somatic changes occurred at the outer limits of the normal or just beyond it.

From the foregoing data, based on a study of 555 rats in four successive generations of offspring of thymectomized parents, it is evident that thymectomy has resulted in retardation in the rate of growth and in a slight delay in the rate of development.

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GROWTH STIMULATING PROPERTIES OF GRASS JUICE

IN earlier studies on the nutritive value of milk produced at different seasons of the year[1,2] it was found that milk produced on summer pasture had a higher nutritive value, as measured by growth of young rats, than milk produced under winter-feeding conditions. At that time we made this statement, "The significance of these studies lies in the relation of fresh plant tissue as contrasted with field dried material to subtle changes in the milk secreted." More recent and direct studies have confirmed this point of view. Young rats, fed a mineralized milk produced on winter rations and giving an average daily growth of the male of about 2 grams, grew at the rate of 4+ grams per day when the daily allowance of the whole winter milk was supplemented with three cc of fresh, clear grass juice (principally Kentucky blue grass). See the chart for this record.

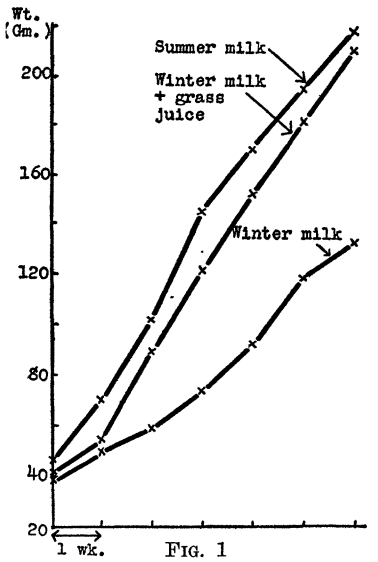

FIG. 1

Studies on the characterization of the factor or factors responsible for this growth response are now in progress. It is evident that in this fresh tissue there are important water-soluble substances which contribute to the difference between the nutritive value of summer and winter milks, and are directly stimulating to growth when added to a winter milk.

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SCIENTIFIC APPARATUS AND LABORATORY METHODS

A DEVICE FOR COPYING SINGLE SOUNDS FROM A PHONOGRAPH RECORD OF SPEECH OR MUSIC

INVESTIGATORS in the psychophysics of speech and music frequently find it desirable to reproduce single speech sounds or individual musical tones in isolation from the performances in which they occur. The present paper describes an electrical and mechanical technique, developed in the Psychological Laboratories of the State University of Iowa, which makes it possible to copy from a phonograph record single sounds of short duration.

The essentials of the apparatus are: (1) Phonograph recording equipment, including an amplifier and two constant speed, 78 r.p.m. turntables, one for cutting and the other for playback; (2) a photoelectric relay; (3) a 32 c.p. light source; and (4) two shields of thin galvanized iron. The shields are shaped as in A, Fig. 1, and are designed to be placed upon the playback turntable, their inner diameters being equal to that of the latter. In position, as shown in side view at B, Fig. 1, they form a one-inch projection beyond the rim of the turntable, C. The projection is capable of being varied in length from 180° to 360° of the circumference of the turntable. As the turntable revolves, the projection interrupts periodically the light from a 32 c.p. lamp, D, placed beneath the projection. When not interrupted, light

[1] C. A. Elvehjem, E. B. Hart, H. C. Jackson and K. G. Weckel, *Jour. Dairy Science*, 17: 763, 1934.
[2] F. E. Stirn, C. A. Elvehjem and E. B. Hart, *Jour. Dairy Science*, 18: 333, 1935.