

almost convincing proof that sex is determined from the very beginning of embryonic development, and is not influenced in the slightest degree by such environmental factors as food or temperature.

The controlling of the sex of the offspring has always been regarded by the breeder as a matter of very great importance and economic value. Many attempts have been made to discover means whereby this might be accomplished, and not a few claims have been put forward as to success alleged to have been achieved. But carefully-conducted experiment has invariably shown that the evidence adduced in support of these claims is entirely negative. Professor Castle, for instance, tells us, in discussing the statement that feeding plays an important factor in the determination of sex, that whilst better nourishment of the mother may lead to the production of more eggs, it does not result, as has sometimes been suggested, in a larger proportion of female offspring; and he also informs us that, whilst on the other hand poor nutrition of the mother may diminish the number of eggs which she liberates, it will not increase the proportion of males among the offspring produced.

A few years ago it was the view of a large number of people that sex was the result of a combination of forces, and could be influenced by external conditions. It is now widely believed, however, that sex is determined, not by such conditions, but by determinants or factors existing in the germ cells themselves, and is irrevocably fixed on fertilization. Castle, Bateson, Punnett and others have suggested that these sex determinants are inherited as Mendelian units, and many interesting experiments conducted by these and various other scientists furnish very strong evidence in favor of the hypothesis.

SHORT COURSE AT MASSACHUSETTS AGRICULTURAL COLLEGE

We learn that the usual short course in bee-keeping at the Massachusetts Agricultural College is to be held from May 29th to June 13th next, under the personal direction of Dr. Burton N. Gates (in charge of the apicultural service of the College and State). In addition to the usual lectures and demonstrations, there will be displays by manufacturers, inventors, supply merchants and queen-rearers.

The gathering will wind up with a Convention on the 12th and 13th, at which the following gentlemen are announced to speak: A. H. Byard ("Improved Flexible Plate Foundations Fastener"), H. F. Cary ("Shook Swarming"), F. Danzenbaker ("Inventions"), H. F. Davis ("Electric Foundation Fastener and Wire Embedder" and "Electric Honey Cutter for Sectioning Comb Honey"), O. F. Fuller ("Fuller Queen-Rearing System"), R. H. Holmes, F. M. Keith ("Queen-Rearing"), A. C. Miller ("A Few Homely Facts"), Dr. James P. Porter ("Life, Habits and Development of the Honey Bee"), E. R. Root ("Production of a Swarm Artificially"), M. E. Root ("Progress of Apiculture in the Two Last Years"), A. W. Yates ("Bees in Relation to Fruit Culture and Plant Life").

Those desirous of attending the course are requested to communicate with Dr. N. Burton Gates, Amherst, Mass.

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FROM A V

[We are exceeding Mr. W. T. Huntsman from whose letter we extract. Mr. Huntsman of some 52 years spent Ontario readers will their acquaintance with column.]

"In a few weeks I s age. My first acquaintmenced in 1860 throu My interest in that w excited and I obtained in the old box-hive, g until I built up an a times I have sold three being engaged at that. Canada Tract Society the sailors around the could not attend to the them up.

"In the spring of 1910 daughter came west to homesteaded and preection. My intention was in or near Maple that s "Last spring, April 21 of my eyes received a s flying stick, causing i suffering for nearly fly of the eye was saved. I the specialist, Dr. Ma says that I was fortun eye, although I lost the

CELLAR WIN

There has been quite lar wintering and out cently and I am tempt words upon the same years ago I lost a numbe out-doors, although they Since then I have alv bees and they always c vided they have plenty o dry air. I lost three o last winter, but these th and so it was my own i cellar's. I have 100 hiv small cellar 15 feet x 1 high. I have just been h I find they are doing sp them right down on the always winter with the l der them. I have at pre of the different races o banded. Carniolans, C black, and I don't know ses. It would be hard doing the best.

On the 18th of Octobe and saved the bees, givi stores, and they are doing the others. I should lik winter outside. I know ced that way. Bees hav to fly here ever since lon mas. Are they not safer winds do not strike the carried them all in and i in three hours, and it will same time to put them ou pack them in that time. I is also the matter of the boxes to be taken into cor one proposes to winter ou Jarratt. A. I

THE SEASON IN MI

The bees are wintering sidering the tough weath