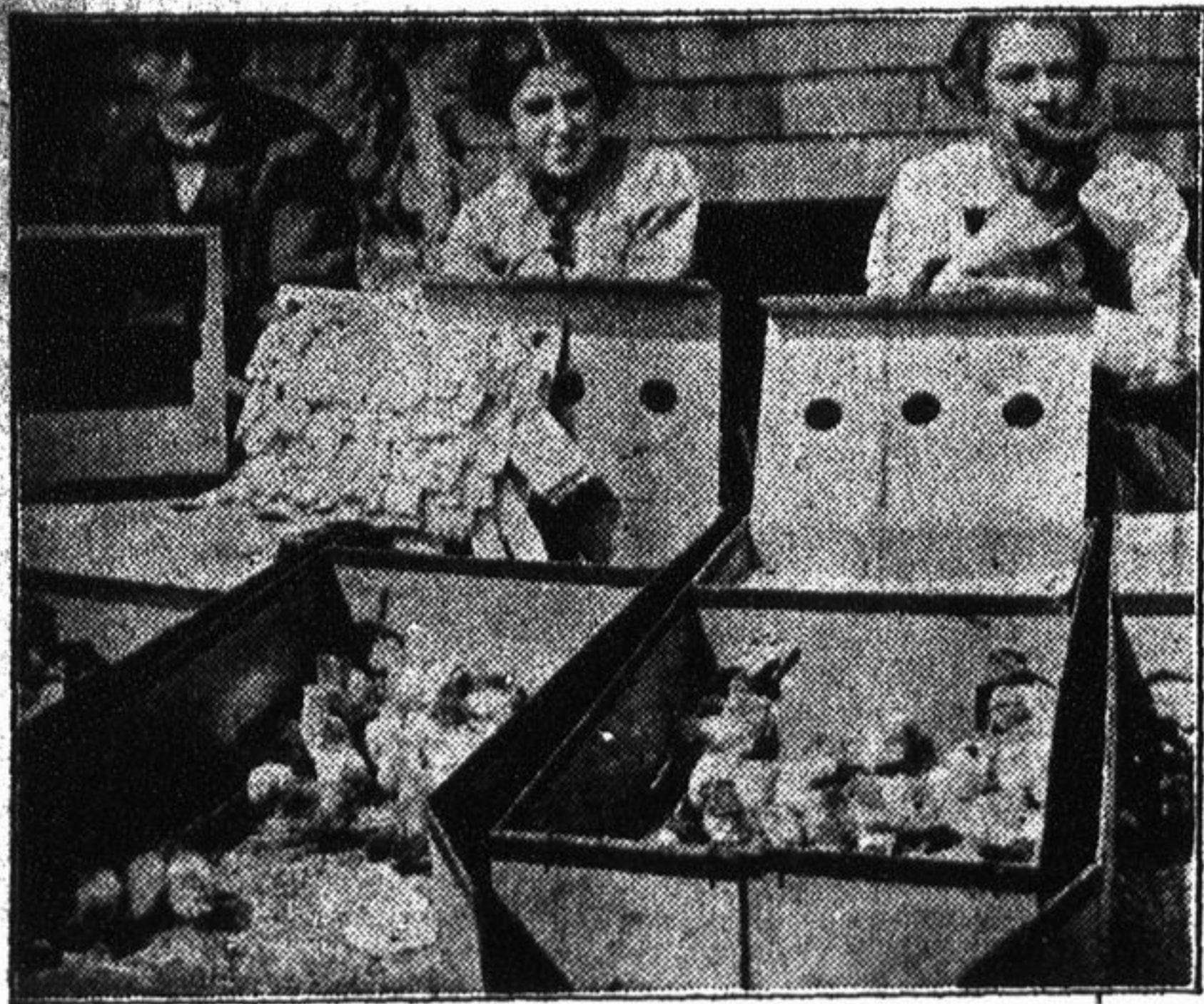


**HATCHING AND CARE OF THE LITTLE CHICKS SO AS TO AVOID HEAVY LOSS**



"Paper Hens" That Are Kept Busy.

By D. O. BARTO, Associate in Poultry, University of Illinois.

The place where the heaviest losses occur in poultry raising is almost at the beginning of the work—in the hatching and care of the little chicks. If these matters are neglected or carelessly attended to, even for a day or two, no amount of attention later can repair the loss.

The life of the chicks begins in the egg and many things may, and frequently do, happen to the egg without breaking it which entirely destroy the life of the germ or greatly weaken its vitality. All of these things have a direct bearing and important influence on the success of rearing chicks, yet they are frequently overlooked.

The sooner eggs are placed under the brooding hen or in the incubator after they are laid, the better the chances of getting vigorous chicks from them. An egg is injured for hatching or for eating if it is allowed to be in contact with air for any length of time. Keep the nests clean and fresh and do not let the hens run where their feet may become sticky and soiled before entering the nest.

While keeping the eggs before they are set they should be placed where the temperature is but little above freezing. Eggs are rarely injured for hatching by chilling, unless they are frozen so that they burst the shell, but when they are exposed for some days to a temperature no lower than 75 degrees the germ frequently begins to develop and is thus greatly weakened for hatching.

**REQUIREMENTS OF HYGIENIC DRESS**

By CHARLOTTE M. GIBBS, Household Science Department, University of Illinois.

The purposes of clothing among so-called highly civilized nations are three. First in order of importance should be to protect, then to decorate, and to express modesty. Fashion, a modern feature, is an important determinant of dress, but may be considered under decoration. In the rush for fashion, show and ornament people often forget that the real need of clothing is, after all, for protection. The result is that clothing often harms the body rather than aids in performing its natural functions.

In the great movement for the improvement of public health an attempt is being made to educate people to care for their bodies, and to prevent disease. Personal hygiene is strongly emphasized, and proper dress is a part of personal hygiene.

If clothing is to be thoroughly hygienic it must help maintain a normal body temperature, protect from extreme heat or cold; it must care for the excretions of the skin, and in order to do this it must provide proper ventilation, and at least that which is to come next the skin must be capable of frequent cleaning. Certain parts of clothing, as the shoes, protect from external injury. To serve these various needs, more than one layer of clothing is worn, and the functions of the outer and inner layers are quite different. In order to maintain a normal body temperature in cold weather the clothing next the skin should be of such a nature that it does not conduct the bodily heat away rapidly, while the outside garment must protect from wind. Air is an excellent nonconductor of heat, therefore a material which holds air in its meshes, or two thin layers of material which hold air between them, are warm. There must, however, be still air, so that the outside garment should not allow too rapid change. A sweater is a good illustration of this principle. When worn as an outside wrap on a windy day it is not very warm, but worn under a coat it adds much to the warmth of the whole costume. Undergarments knit of wool, cotton, linen or silk afford meshes for air. Wool and silk are poorer conductors than linen and cotton, therefore warmer, but have some disadvantages. Wool feels rough when washed, and the meshes should, thus being their only way to hold air, but it is also irritating.

Color influences the choice of clothing to a certain extent from the standpoint of protection as well as from the artistic standpoint. Light colors are cooler than dark ones in that they do not absorb the rays of the sun so readily. In under garments there is little distinction. The virtue of the red flannel shirt, if it had any, was perhaps due to the fact that the dye was irritating to the skin.

**Feeding Lambs.** The ewes that are suckling lambs should be fed very liberally. The young lambs will grow rapidly, to give him a chance. There is profit in it. The sheep quarters, at lambing time especially, should be kept well bedded and very clean.

**USEFUL SUBSTITUTES FOR THE USUAL HAY CROPS ON ILLINOIS FARMS**



Soy Beans Grown for Hay.

By ARTHUR LUMBRICK, Agricultural Experiment Station, University of Illinois.

Owing to the fact that clover failed in so many parts of the state during the past season there will be a marked shortage in the hay crop for this year. To supply this need, it will be necessary for the farmers to use some quick growing crop that will mature within a few weeks from the time of sowing. For this purpose there is nothing better than a mixture of oats and Canada field peas. It is suggested that the oats be drilled in at the rate of a bushel per acre and the Canada field peas be drilled in, driving the other way across the field at the rate of about three pecks to a bushel per acre.

The growing season of these two plants is about the same and one will be able to take off a hay crop by the middle or last of June. If it is desired to have green forage to feed either young stock or dairy cattle several different seedings may be made so as to provide green stuff for a longer period. When there is a shortage of pasture grass, it is often desirable to have some crops to be used in this manner. Only enough of the green hay should be cut to feed for one day. If one chooses, he may let the oats and pea mixture grow until about the time when the oats are in the milk stage and the crop can then be cut

and cured for hay in the ordinary manner.

As the oat and pea hay can be removed by about the middle of June, there is still time to grow another crop of hay on this land. As soon as the hay is taken up the land should be disked thoroughly and a good seed bed prepared. German millet makes a very good crop to be seeded at this time of year as it does well during the hot weather, and makes quite a heavy growth. When seeded alone German millet should be sown at the rate of a peck to the acre.

Perhaps a better crop than millet if one can secure the seed is a crop of soy beans. One should secure an early variety of beans such as the Ito San or Medium Yellow. These beans should be drilled in with an ordinary grain drill at the rate of four or five pecks per acre. They will make sufficient growth by the time of early frost to produce a considerable quantity of nutritious hay. Cow peas may be used instead of the soy beans, but are not so desirable because they have a more trailing habit and are more difficult to cure. The soy beans when used for hay are handled much the same as any other kind of hay. Soy bean hay has about the same feeding value as good clover hay, being especially rich in protein. One will secure better results if he will inoculate the land with some soy bean bacteria before sowing the seed.

**SOME NEW IDEALS OF CIVILIZATION**

By MRS. OLAF N. GULDIN, Chairman Home Economics, General Federation of Women's Clubs.

It is related that one of the early astronomers kept cursing and wishing that he might have been present in the creative days to have offered God a few suggestions. But when the true principles of astronomy began to be understood, the astronomer kept praising God and exclaiming: "Oh, God, how great is thy creation! How infinite is thy majesty!"

When we look everywhere, read statistics on sin, sickness and sorrow, we might feel like the early astronomer. But as we realize that our concept of civilization is not the real concept, we see that if we are to have a better civilization we must raise our viewpoints to a higher standard of what constitutes real civilization. Civilization in a democracy must pass through the individual. We are an integral part. It will be reflected in our institutions, municipalities, homes. If we have not reached the best interpretation of what constitutes the best



Mrs. Olaf N. Guldin.

civilization, we must clarify our own minds and see civilization in its large aspect. To be explicit, it is claimed that the average life of the white slave victim is five years. It is also said that 60,000 die annually, that 60,000 new recruits must be supplied from the ranks of womankind. We can legislate, but we cannot cure it until mankind perceives that there is a higher standard upon which to base our estimate of life. These standards that result in jails, prisons, reformatories are the standards that mark our civilization.

With our present day enlightenment we are beginning to realize these institutions can be greatly reduced. That is the reason I am talking domestic science, because I believe it holds the key to unlock many phases of these conditions. In the first place, if we try to bring on the millennium it will take the united work of all good men and women. With housework disorganized as it is at present, it takes about all the strength, time and money to manage the homes. Unless we can simplify the labor to give us more time for study and growth, we can hardly be the means through which a better civilization can pass.

Our next step should be to introduce industrial training, domestic science and more practical work into our public school system. Our schools prepare children for colleges, but are not adapted to the needs of the great mass of school children. The most modern cities are studying the industrial needs of the community and utilizing school plants to fit children for their life work. The average child is interested in these concrete methods. They are adapted to child life. This does not mean doing away with the cultural studies, but it succeeds in keeping the children in school much longer and fitting them for their life work.

Germany, realizing that the people must be trained to do expert work, is away ahead of us in industrial education. All children at seventeen years of age are in some form of school in Germany; 85 per cent. are in school at twenty years of age. In the United States 18 per cent. are in school at twenty years of age. What is the result of all this? Germany in forty years has grown from a poor nation to the second richest in the world. The German wealth is the product of their industries. Germany's amount of foreign trade is almost twice ours. Since 1882 wages in most of the German industries have been doubled. The total income of all the people has increased from \$2,800,000,000 in 1896 to \$4,120,000,000 in 1907, doubling in eleven years. We are selling the Germans raw material and buying finished products from them. Interesting as these statistics are, they do not tell the best part of the story. Germany is adding skill, efficiency, making trained experts out of her people. She is organizing continuation schools, also schools that run in conjunction with the work of the industries to give these opportunities to the people.

Does this mean nothing to a nation? Does it not add moral, spiritual power, when men and women become masters over their environment and realize the meaning and joy in intelligent labor? Would those same persons occupied mentally, physically, interested in progress and growth, not secure a greater development under these improved conditions? Many of these things we have yet to work out in our national life.

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