POULTRY

DING PAYS IN POULTRY

ds of Three Flocks of Leghorns how Specifically Value of Purebred Males.

red by the United States Department of Agriculture.)

t the value of purebred males as much in poultry raising as ck raising is shown by the rec- f three flocks of Leghorns, the or which have been supplied the States department of agricul- y the North Carolina experiment . Flock 1, the egg production ich is included in these records, ted of common hens; flock 2 was

ebred White Leghorn Cockerel.

ced by breeding these hens to on males; flock 3 was produced eeding flock 1 to a rooster from g-producing hen. The following the original flock laid 89 eggs a flock 2 laid an average of 88 eggs ; and flock 3 laid an average of ggs a hen. This increase of 54 nt in one year tells very specifi- the benefits of using a purebred But the percentages alone do ell the whole story, for a big pro- on of the increase came at a sea- May and June—when the produc- of flocks 1 and 2 was relatively nd the prices were good.

LTRY CULLING PAYS WELL

ne Demonstration in Iowa County 09 Hens Out of Flock of 1,548 Were Discarded.

poultry culling demonstrations on the farms of the farm bureau bers in Emmet county, Iowa, rec- kept for eleven flocks showed hens were culled out of a total of in the flocks, according to the d States department of agricul- The average number of eggs a day by the entire flocks before g was 401.5, and the average ber of eggs laid a day by the 939 left after culling was 346.6. The age number of eggs for ten hens y before culling was 2.6; after g, 3.5. The average number of laid a day by 363 of the culled which were not immediately sold 14.4.

SHING WILL INJURE EGGS

inous Film of Shell That Keeps t Air and Germs Is Removed—Keep Nests Clean.

gs should not be washed as this ves the gelatinous film of the shell keeps out air and germs. The should be kept clean so that the will have no chance to become d, as removing dirt by washing allow molds and germs to enter gg and hasten its spoiling.—Exten- Division, North Dakota Agricul- College.

POULTRY NOTES

grass makes up the bulk of feed geese, it is doubtful whether it to raise them unless good grass e is available during the summer.

* * *

e hen that has free range on a in summer finds these same s and that is one reason why neg- d farm flocks lay well in summer very poorly at other times.

* * *

e results found by experiment to prove the contention of some orn breeders that their birds are eaters in comparison with some r breeds.

* * *

a good lot of well-matured pullets ell-moulted early hens are on , and if they are healthy and rous, all that is required to obtain od egg yield is the right kind of and feed.

* * *

here is no one kind of grain that e will furnish all of the different elements required to maintain body of the hen in good condition also furnish the material of which are made.

The KITCHEN CABINET

He that has character need have no fear of his condition. Character will draw condition after it.

THE ODORIFEROUS BULB.

For a meat substitute, if your family is fond of onions, try these:

Stuffed Onions With Ham.—Parboil as many onions as will be needed; remove the centers and fill with one-half cupful of bread crumbs and the same of chopped ham and tongue, or either alone. Place the stuffed onions in a pan with one cupful of stock or butter and water, half a teaspoonful of salt and a few dashes of pepper. Bake until soft. Serve with a sauce made from the gravy in the pan, adding flour and butter and the yolk of an egg just before serving.

Stuffed Onions and Chestnuts.—Parboil ten onions until tender; cut off the tops and scoop out the centers. Chop these fine, seasoning with salt and pepper and chopped parsley; mix with half a cupful of bread crumbs and one-quarter cupful of melted butter. Put in a spoonful of the mixture and three or four blanched chestnuts, then another spoonful. Bake slowly, basting with butter and hot water.

Baked Onions and Cheese.—Parboil a half dozen even-sized onions, drain and put a layer into a baking dish, then cover with a layer of rich white sauce and three or four tablespoonfuls of cheese, grated or minced; repeat with another layer of onions, seasoning well with salt and paprika; cover with the white sauce and cheese and finish with a thick covering of buttered crumbs. Bake until the crumbs are brown.

Onion Salad.—Chop one or more Southern onions, mix with minced parsley and French dressing, highly seasoned with salt and cayenne. Serve on head lettuce.

Onion Sandwich.—Chop a mild onion very fine; add vinegar, a little oil, salt and pepper to taste. Spread on buttered bread and serve as a Sunday night lunch, after church.

Onion Soup.—Take one cupful of onion puree, that is cooked onion put through a sieve. Mix one tablespoonful of butter and flour together, add three cupfuls of milk and when scalding hot stir in the puree. Cook for a few minutes to cook the flour, add a well beaten egg mixed with half a cupful of cold milk and when hot, not boiling, serve.

True happiness—To be truly happy is a question of how we begin and not how we end, of what we want and not of what we have.—Stevenson.

GOOD THINGS FOR OCCASIONS.

For a pretty and satisfying dessert to be served on special occasions, try

Rice and Almond Cream — Blanch one-half cupful of almonds, cut in thin strips, put in a double boiler with three cupfuls of milk, one-fourth cupful of sugar and one-half teaspoonful of salt; when hot add one cupful of well washed rice. Cook until the rice is tender; when ready to serve, fill sherbet cups half full, put on a teaspoonful of apple jelly, then fill with whipped sweetened cream with another bit of jelly on top.

Prince of Wales Cake.—Dark part—Cream one half cupful of butter, add one cupful of molasses, one-half cupful of strong coffee, sift one teaspoonful each of soda, nutmeg, cinnamon, cloves, with two cupfuls of flour. Add three well beaten egg yolks and one cupful of raisins.

Light part—Cream one-half cup of butter, add one cupful of sugar gradually. Mix and sift together one cupful of flour with one-half cupful of cornstarch and two teaspoonfuls of baking powder; add the dry ingredients alternately with one-half cupful of milk. Cut and fold in the whites of three eggs beaten stiff. Bake in layers. Alternate a dark with white layer when putting together.

Luncheon Dessert.—Pour lemon jelly over orange sections, banana, pineapple and grapefruit. When molded serve with cream.

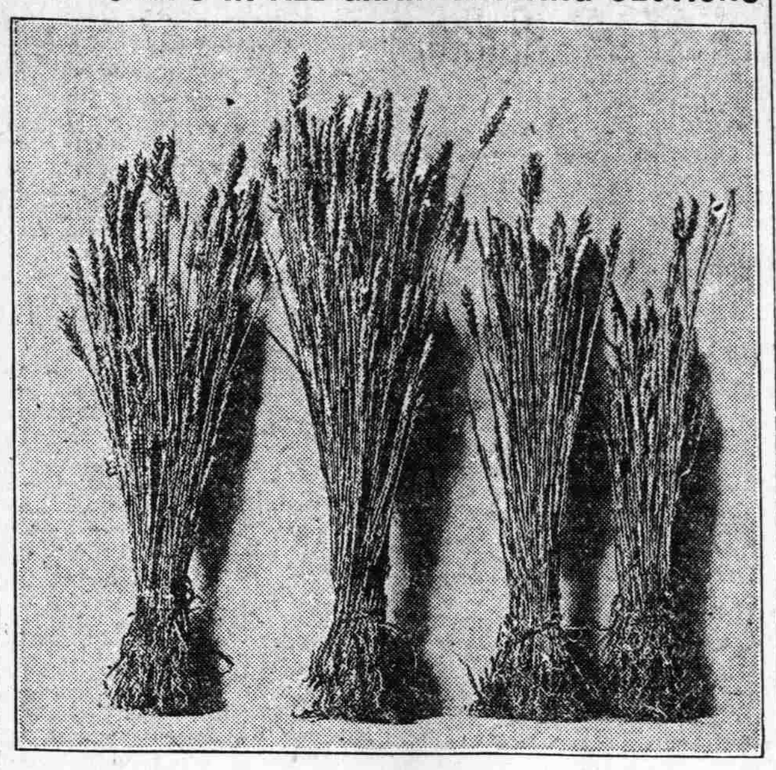
Fig or Date Pudding.—Beat one egg, separating the yolk and white, one-half cupful of milk, six tablespoonfuls of ice water, one-third of a cup of butter, one cupful of flour, one and one-half teaspoonfuls of baking powder, one-half pound of figs or dates, two tablespoonfuls of molasses. Cream the butter, which may be a butter substitute; add the egg yolk, molasses, part of the flour, ice water, remainder of flour with the baking powder, well sifted. Add the figs or dates which have been cut in bits and rolled in flour; lastly the white of egg beaten stiff with a pinch of salt.

Beat one egg, add one-half cup of sugar and half-cup of hot milk with flavoring. Serve at once.

Cranberry Jelly.—Place three pints of ripe cranberries in a granite saucepan, add one and one-half pints of cold water. Bring to the boiling point, remove and mash the berries with a wooden spoon. Add two cupfuls of granulated sugar (one pound), and boil together for one minute. Strain through a coarse strainer into a bowl rinsed in cold water. Set aside until jellied.

Nellie Maxwell

SMUTS ARE MOST DESTRUCTIVE TO CEREAL CROPS IN ALL GRAIN-GROWING SECTIONS



Stinking Smut of Wheat—Grain From Treated and Untreated Seed.

(Prepared by the United States Department of Agriculture.)

Smuts caused an estimated loss in 1918 of 25,000,000 bushels of wheat, 110,000,000 bushels of oats, and 6,000,000 bushels of barley in the United States. These diseases, which are among the most destructive that attack cereal crops, occur to a greater or less extent in all the grain-growing sections of the country.

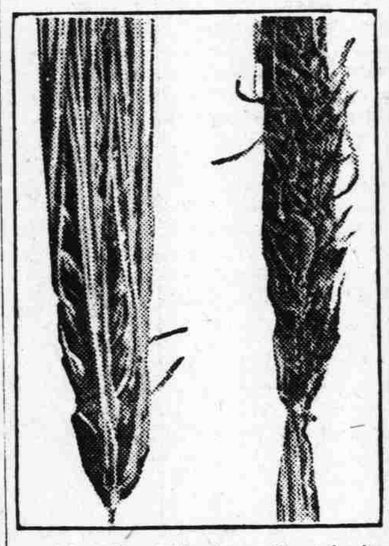
There are two knds of wheat smut, the loose smut and the covered smut; the latter is also called bunt or stinking smut.

Loose smut is found in practically every wheat field. It is most serious in the southern winter wheat section—southern Missouri, southern Illinois, southern Indiana, southern Ohio, southern Pennsylvania, Maryland, Virginia, Kentucky and Tennessee. Throughout this general area the annual losses range from 3 to 5 per cent. In many individual fields losses of 15 to 20 per cent are known. Outside of this general region the damage due to loose smut ranges from about 1 to 2 per cent.

Bunt, or stinking smut, also is found in the different wheat-growing areas of the country. Commonly, the damage done by this smut is from 1 to 5 per cent of the crop. Frequently, however, fields show losses which range from from 20 to 40 per cent. Several fields have been destroyed in which the damage amounted to 50 or even 80 per cent.

How to Distinguish Smuts.

Loose smut shows up most strikingly at the time when the wheat comes into head. The diseased plant is found to have the kernels and chaff replaced by



Healthy Wheat Head and Smut Laden Head.

a black, sooty mass of dustlike particles. These dust-like particles, the spores of the smut fungus, begin to blow from the diseased head soon after the latter emerges from the boot. These spores are carried by the wind to neighboring sound heads which are in bloom at the time; they lodge between the glumes or chaff, where they start growth immediately and penetrate the newly forming kernels. When these infected kernels are ripe they can not be distinguished from sound kernels, but they nevertheless contain the smut fungus. When an infected seed is planted and germinates the smut plant within it also begins to grow and develops within the growing plant; when the plant begins to form the head the developing tissues of the grain and chaff are destroyed and the smut fungus produces its spores.

Wheat heads infected with bunt are readily distinguished a short time before the wheat is ripe, although the trained observer can detect the presence of the disease several days before. The heads of smutted plants stand more erect on account of their lighter weight. The chaff is spread apart by the swelling of the enlarged false kernels or smut balls, which give the heads a dark color. These smut balls contain a greasy, ill-smelling mass of smut spores.

In thrashing operations these smut balls are knocked out and the head more or less broken apart and the smut spores scattered over the sound kernels; such grain has a darker color and a disagreeable odor due to the presence of the smut spores. Smutty wheat is docked more or less by the miller.

When smutty seed is sown in the soil the stinking smut spores germinate simultaneously with the wheat kernels, and the smut fungus penetrates the young wheat plant. It continues to grow within the tissues of the wheat plant and forms its spores in the place where the healthy kernels should be developed.

Control of Loose Smut.

Loose smut is very difficult to control because the fungus is inside of the seed which is sown and hence can not be reached by ordinary chemicals without killing the wheat embryo. The disease, however, can be controlled by the so-called hot-water treatment. The method involves soaking the seed grain in cold water for 4 to 6 hours. It is then dipped in hot water at a temperature of 129 degrees Fahrenheit for 10 minutes; the seed should then be spread out to dry.

It is very important that the water be kept at the exact temperature and the seed immersed for just the correct period of time. If the water is allowed to get one or two degrees above the temperature indicated, or the time prolonged beyond the 10 minutes, considerable injury to the grain will result.

The hot-water treatment, on account of its difficulties, is not practicable on the average farm. One must have an accurate thermometer and facilities for keeping the temperature of the water constant. This can be done quite easily where steam is available.

The Control of Bunt.

Bunt, or stinking smut, is readily controlled by the use of formaldehyde. A simple procedure is to place 1 pint or 1 pound of commercial formaldehyde in 40 gallons of water. The seed to be treated should be freed as much as possible from smut balls and other foreign matter, and should then be dipped in the folmaldehyde solution and kept there about 10 minutes. During this period the sack should be raised and lowered so as to stir up the grain and get it thoroughly in contact with the solution. After treatment the grain should be spread out to dry and then sown as soon as possible. One pint of formaldehyde solution, dissolved in 40 gallons of water, is sufficient to treat about 40 bushels of seed grain.

Another method of applying the solution is to spread the grain to be treated on a clean floor, and by means of a sprinkling can sprinkle the solution over the grain. The grain should be shoveled over in order to get the solution well in contact with the grain. The solution should be applied at the rate of about one gallon to one bushel of seed grain. The grain should be piled up and covered with sacks or canvas and left for two or three hours. It should then be spread out to dry and sown as soon as possible.

After treating the grain, great care must be taken not to place it on a floor or in sacks which are contaminated with the bunt spores, or to sow it in a drill which is contaminated.

Bunt Problem of the Pacific Northwest.

In the Pacific Northwest, bunt, or stinking smut, presents a very serious problem because of soil infestation in that region. During the thrashing of a smutted crop the smut spores are blown long distances over the fallowed land, as summer fallowing for wheat is a common practice. When the fall rains occur, along about seeding time, these spores in the soil germinate and infect the young wheat plants as they develop. On this account, seed treatment is not entirely effective; but, as a general rule, the copper sulphate treatment gives much better results than the formaldehyde.

The copper sulphate or bluestone treatment consists in dipping the seed in a solution of copper sulphate, 1 pound of copper sulphate being dissolved in 5 gallons of water. After immersion the seed is dried or sown immediately. This solution may cause considerable injury to the grain. This damage can be lessened greatly by dipping the seed, after removal from the copper sulphate solution, in a solution of 1 pound of quicklime to 16 gallons of water. The lime prevents the continued injurious action of the copper sulphate.

DADDY'S EVENING FAIRY TALE

by MARY GRAHAM BONNER

© by the AUTHOR.

PRINCE SLEET'S GREETINGS.

"Well, old King Snow, what's the news?"

"It's still winter," said old King Snow, "as long as you and I are around."

"Don't you sometimes appear in the spring and in the fall?" asked Prince Sleet.

"Oh, yes, but even then it is wintry, which is almost the same thing. And the fact that you are here too makes it most assuredly winter."

"How fine you talk," said Prince Sleet, "with your great words! You must have been to school since I last saw you."

"Ah, no," said old King Snow. "I haven't been to school, but I've seen so much of the children this year. They've had a fine winter.

"They really like me, Prince Sleet, and it flatters me. I must admit it, it flatters me."

"Why, there's old King of the Clouds, and I do believe there comes old Mr. and Mrs. Hail and the Hail children. They're such a fine family—

"How Fine You Talk."

relatives, you know, of the old Hail family who've lived on this earth for years and years and years.

"And there comes my good friend Mr. Wind. Well, well, well! This is nice!" And Prince Sleet looked happy indeed.

"Sure as I'm born," he continued, "there is Prince Icicle and his beautiful bride. Well, friends, I'm glad to see you all."

"We heard you were coming," said the King of the Clouds, "and we thought we'd like to tell you we're glad to see you."

"Well, now, that is so nice, so extremely nice! And I am so glad to see all of my good friends. How about a little jollification? A little party, eh?"

"Just the thing, Prince Sleet," said the Hail family. "We remember dear old Granny Hail said your great grandfather used to give the most glorious storm parties anywhere around, and so that folks wouldn't feel jealous or hurt he'd go around and around to many, many parts. You take right after him."

Prince Sleet smiled a snowy, wet, icy smile, which they all thought was very sweet and nice, and then he made a low bow.

"Well, old Wind, what do you say to a jollification?"

The wind gave a long whistle, "I should say I'd like it," he answered.

So Prince Sleet led a chorus and this is what they sang:

"Oh the winter snow, the winter snow,
Is fine, is fine indeed.
And when the wind doth blow, the wind doth blow,
Let us all follow his lead.
And we'll storm and we'll rave,
And we'll rush and we'll run,
And ourselves will not spare,
For we think it is fun
To dash through the air.
The air so keen and cold—
We love it more than gold."

After they had sung this song they all started to play games, to rush this way and that, to dash against window panes and into people's faces as they tried to catch each other. They hid under a person's chin or they would play tag. Oh, such games as they played, such scrambling and such tearing along and such racing and such flying.

And through it all the wind howled and Prince Sleet howled and they sang and roared too, "Keep it up, keep it up, this is fun, fun, fun!"

And when at last they were all tired out everyone gave Prince Sleet a vote of thanks for coming to cheer them up—all but the earth people who said: "Well, we're thankful that storm seems to be over!"

Testing Time.

The test of a resolution is how it will stand adversity. Some girls resolve to be cheerful and they keep that resolution till they are disappointed. Others resolve to be kind, and they live up to that resolution till something occurs to irritate them. When everything is favorable a resolution may be said to keep itself. The test comes when things go wrong.—Girls' Companion.

A Chance to Rise.

Butcher—I am in need of a boy about your size. I would pay you $5 a week.

Applicant—Will I have a chance to rise?

Butcher—Oh, yes; I want you to be here at four every morning.—American Boy.

IMPROVED UNIFORM INTERNATIONAL

SUNDAY SCHOOL LESSON

(By REV. P. B. FITZWATER, D. D., Teacher of English Bible in the Moody Bible Institute of Chicago.)

LESSON FOR MARCH 7

JOHN WRITES ABOUT CHRISTIAN LOVE.

LESSON TEXT—I John 4:7-21.

GOLDEN TEXT—Beloved, if God so loved us, we ought also to love one another.—I John 4:11.

ADDITIONAL MATERIAL—I John, II John, III John.

PRIMARY TOPIC—Loving One Another.

JUNIOR TOPIC—Loving God and Our Neighbors.

INTERMEDIATE AND SENIOR TOPIC—How to Show Love for God and His People.

YOUNG PEOPLE AND ADULT TOPIC—Christian Love Upon Society.

I. The Origin of Love (vv. 7, 8).

Love is of God, for God is love. God not merely loves, but he is the fountainhead of love. Love of country, love of humanity, filial and parental love, every particle of love everywhere has been derived from God; his love is infinite, eternal and unchangeable. Since love is of God, everyone who loves is born of God and knoweth God. The Christian, by his life of love, interprets God to the world. It is not enough that the world should be told that God is good and kind, it should see his nature expressed in the life and love of the disciple. The Christian's life is the world's Bible. Where love is wanting, knowledge of God is wanting.

II. God's Manifestation of Love (vv. 9, 10).

God's method of making known his love is through the incarnation—the sending of his only begotten Son into the world to be the propitiation for our sins (John 3:16). The coming of Jesus Christ into the world and his taking on human nature makes possible life for those who receive him. If we would know God's love, let us look at Jesus Christ. Those who gaze upon him in reverent contemplation cannot doubt God's love.

III. The Supreme Motive of Love (v. 11).

God's love is the grand incentive prompting his children to love.

IV. Love the Proof That God Dwells With Us (vv. 12-16).

1. No man hath seen God at any time (v. 12), but there is abundant proof of his being. The one unmistakable proof of his being is love in the heart of man. Love is not native to the human heart, for the heart is deceitful above all things and desperately wicked (Jer. 17:9). Out of the heart proceeds murder (Matt. 15:19). Love in the heart is proof that God dwells within.

2. Love proves that God's Spirit is within us (vv. 13-16). The fruit of the Spirit is love (Gal. 5:22). God's Spirit dwells within his children. The indwelling Spirit shows us Christ and makes us believe in him as God's Son, the Savior of the world. Those in whom God dwells will always make this confession. Those who deny the Deity of Christ have no fellowship with God, and those who have fellowship with God will confess Christ as his Divine Son.

V. Love's Relation to the Judgment (vv. 17, 18).

It casts out fear. A judgment day is coming, for God hath appointed a day in which he will judge the world in righteousness by that man whom he hath ordained (Acts 17:31). It will be a terrible thing for those unprepared to meet God at that time, but for those who are indwelt by the living God there will be a joyful meeting. He that dwelleth in God and God in him will realize the perfection of love in boldness in the day of judgment, because as he is so are we in this world (vv. 16, 17). The way to get rid of the fear of meeting God in the judgment is to be living with God now.

VI. God's Love the Ground of All Love (v. 19).

The reason we love is that our lives have come into touch with the great fountainhead of love. The incoming of God's being and nature becomes the animating and controlling principle of our lives. The one in whom love is not the master principle does not know God.

VII. The Child of God Possesses Dual Love (v. 20).

The proof that one loves the unseen God is that he loves the person visible who bears the likeness and image of God, and has become a member of the same family through the redemption in Christ Jesus. Love to God and man is united in the one breast of the Christian. The one who hates his brother while pretending to love God is a liar.

VIII. The Solemn Command From God (v. 21).

God commands that those who love him should love their brethren. Obedience to this command will eliminate all war and contentions.

Life.

Life is made up, not of great sacrifices or duties, but of little things, in which smiles and kindness, the small obligations given habitually, are what preserve the heart and secure comfort.—Sir H. Davy.

Our Great Blessing.

There is nothing that makes more for human happiness than the simple fact that some one needs us, that some task is holding us fast. We may ignorantly think of it as a burden, but it is our great blessing.