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For the Good of The Game

Handling and Candling Eggs

With Side Lights
On Live Poultry

By JOS. R. NUGENT

PRICE TWENTY-FIVE CENTS

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JOS. R. NUGENT

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PREFACE

As the egg trade has about come to the conclusion that the average work on egg candling contains such a mass of scientific detail that, at times, the instructions contained therein for candling eggs were not as clear as they might have been if less detail and simpler language had been used, I have written this book with the object in view to avoid elaborate detail, and to explain the different stages of deteriorated eggs in as simple language as possible.

In addition to the candling instructions, I have also endeavored to clearly explain to the producer what effect small-sized, sick or crippled poultry has on the dealer's profits.

I hope the explanations given will result in a better understanding between the producer and dealer, and result in a "Live and let live" policy on both sides.

Joe P. Nugent.

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Introduction

The United States Department of Agriculture gives notice that: Shipments containing more than five per cent of bad eggs will be regarded as violating the Food and Drugs Act.

"In the opinion of that Department, eggs which contain yolks stuck to the shell (Spots), Blood Rings, Red or White Rots, Green Whites, Sour Rots, Moldy Eggs, and any other eggs which consist wholly or in part of a filthy, decomposed, or putrid substance, are adulterated.

"Eggs which are adulterated may be shipped in interstate or foreign commerce for use in tanning or other technical ways, without violating the provisions of the Food and Drugs Act only, if they are first denatured so as to render them incapable of being used for food. Since it is impracticable to denature eggs in the shell, adulterated eggs must be broken out and denatured prior to shipment."

Both the Federal and State authorities are determined to enforce the laws governing the sale of bad eggs. It follows that dealers in eggs should be extremely careful in the matter of making sure that the stock they offer for sale meets the law's requirements.

While the officials will consider that any lots of eggs destined for food purposes and containing a maximum of 5 per cent bad ones as being barely passable, still they will be liable to view with suspicion any lots containing that number of bad ones, or perhaps less, as being stock that was not candled with the view to eliminate all bad ones, but candled to leave in as many bad eggs as one dared and escape prosecution. In that event it might give the owner a bad reputation and should make him an object of suspicion in any future dealings; because it probably would be a difficult matter to convince the officials that one meant to be fair, in view of the fact, that means were at hand to assist the owners of eggs in putting their stock into salable condition if they were so minded to employ them. Ignorance would hardly serve as a mitigating circumstance in these days of candling lamps and colored egg charts.

With the many candling appliances so easily obtainable, even the producer should not check the blame to the shipper, nor the shipper or retailer to the commission man. The original and each successive owner should be held accountable for the stock he sells.

Selling or buying eggs "case count" absolves no one from blame for offering bad eggs for food purposes. The officials understand clearly, that the buyer who employs that method is putting a premium on shiftlessness, encourages the seller to shirk his plain duty in the matter of eliminating bad eggs, encourages mediocrity, and encourages an evasion of the law. The authorities will consider the "case count" buyer or seller as deliberately hostile to the cause of progress and fair dealing; and in all probability will force the offenders to disagreeably realize that buying and selling bad eggs is a poor business—financially or otherwise.

If heat, carelessness, or neglect on the owners part should result in bad eggs, it would be an injustice on their part to make an innocent purchaser the victim because of them.

Eggs from hens separated from the cockerels at the close of the breeding season are the least impervious to heat; but all eggs begin to deteriorate from the time they are laid—and rapidly in hot weather. Candle your eggs at the approach of warm weather!

If you are a producer, gather eggs once daily in the spring months, and twice daily in hot weather; and keep in a cool, dry place until they are ready for market. Then candle carefully; do your level best; but in any event, be sure to throw out ROTS—as Black Rots, Spots, Blood Rings, Red and White Rots, Musty and Moldy Eggs, and Green Whites and Sour Rots—if you can detect these last two grades.

When hauling to market, place in regulation fillers with partitions between, and hay, straw, or excelsior in the tops and bottoms of containers. Keep them in the shade, and, when possible, place them in the vehicle so that the eggs will have access to plenty of air.

If you are a shipper, candle carefully for grades before you load into your refrigerator car, or cooler. And it will pay in the long run if you should candle your SUMMER eggs out of the cooler at shipping time, even though they had been **candled** in several months previously.

If you are a retailer, candle your eggs carefully just before delivering to a customer, even though you think they are all good. It will not take half a minute to candle a dozen eggs; but it might take years to live down a bad reputation for “Quality” and “Service” that one bad egg would give your store. Replacing a bad egg does not make the recipient forget the original bad one. The first bad egg nauseates some persons to the extent that they quit using them until cold weather, and even then, cautiously. You can’t afford to let a slogan like the following dwell in a customer’s mind: “When you think of bad eggs, think of So-and-So & Co.”

Don’t wait until summer to candle. Guard against hid-out nests or incubator eggs in the spring, or held, stale eggs in the fall.

Only today, May 12, 1917, the lady of the house called my attention to an egg she had broken into a saucer intending to mix it with flour for pancake batter. It was a sorry-looking mess; the yolk was scattered over the saucer, contained blood, a partly hatched chicken, and had a sickening, sour odor. I asked her if she would have any trouble in having the egg replaced. She replied: “He (meaning the grocer) won’t get the chance to replace this, or any other egg in future—for me!” The foregoing is not fiction; just a simple fact.

Do not rely upon the replacing of bad eggs to appease a housewife. Do not give her a chance to discover that you did not inspect the stock before sending it out. Placing the blame on the wholesaler, shipper or producer does not interest her; she only understands that it was your duty to see that she got just what she ordered in the first place.

Your dealer might act in good faith, and think that every egg he delivers is perfectly good; but he must rely upon the infallibility of his egg-candlers, who must not make one mistake in 10,000—a difficult feat, as they have to sort and candle several grades working at top speed, and though they use the utmost caution, it is a difficult matter to keep from dropping a bad egg now and then into a case containing good eggs.

The application of the Golden Rule to egg sales by every person that sells them would greatly assist our Government in their endeavor to stamp out the bad egg evil; it will be considered the kindest manner of co-operation, and fully appreciated.

The following pages will describe how the different classes of eggs look against the light, when broken, and how disposed of:

FRESH SPRING EGGS.

STRICTLY FRESH GATHERED:

Contents clear and full-bodied. The yolk, or air-space scarcely ever perceptible. Shell, firm and crisp.

No. 1 STORAGE PACKED FIRSTS:

All good-sized stock. No Small, Dirty, or Cracked eggs. Should average, at least, 44 pounds net to the 30-dozen case. Not necessary to candle in March, April, or May, if reasonably certain that the stock is Fresh Gathered, from clean, regular nests. Some dealers take no chances, but candle them if intended for storage.

CURRENT RECEIPTS:

Original receipts, ungraded. Contains mixed grades, as: No. 1, Small, Dirties, and Cracked eggs. Careful shippers do not store them ungraded.

STORAGE SECONDS:

Culled from fresh Current Receipts. Contains Small and Slightly Stained eggs. Only their size and appearance keeps them out of the No. 1 Storage Packed class. Stored freely.

DIRTIES No. 1:

Broadly Stained and Smooth Dirties—not crusted. Safe to store.

DIRTIES No. 2:

Crusted, dirt, or yolk-smears. Not safe to store, on account of the more or less odorous nature of the matter on the shell, which often penetrates to the contents. Susceptible to mold. Not favored by housewives.

BLIND CHECKS, CRACKS, WASHED, LEAKERS:

Blind Checks are not visible to the naked eye. Detected when “clicked” together when grading for storage packing or when candling. Some shippers include Blind Checks with Dirties, but, to be safe, put them with the Cracks, as the chances are that they will be cracked before reaching their destination. Cracks, Pin-hole Checks, and Washed eggs should be disposed of locally, as they are very susceptible to mold. Leakers should be discarded if not sold locally. Very susceptible to germs.

PRICES:

In the wholesale markets there is usually from 2 to 3 cents difference between No. 1 Storage Packed and Seconds, and about 1 cent difference in each of the grades from Seconds down; that is, Dirties are usually 1 cent lower than Seconds, and Cracks are usually 1 cent lower than Dirties. The shippers, as a rule, sell their storage grades from Seconds down at a lower price than they pay for the original Current Receipts.

It will be noted in one of the chapters that Pin-hole Checks and Washed eggs are listed with Cracks. The sellers will understand from that notation that eggs so treated are a loss to the buyer. Both are unfitted for storage. When selling Pin-hole Checks, it would be only fair to tell the buyer what he is getting, as inadvertently, he might place them in with No. 1 Storage stock and subject the entire case to mold.

It should not be necessary to call a buyer's attention to a Washed egg; they advertise themselves by their smooth shells and lack of the luster which is observed in the shells of unwashed fresh eggs.

.SUMMER SECONDS.

SMALL, DIRTY, SHRUNKEN:

As graded in the Spring Seconds.

HELD, STALE, WEAK AND WATERY, HEATED:

Caused by holding too long before marketing; rough handling when shipping or hauling to market, which loosens the membrane allowing the air-space to shift; and heat, principally, which produces deteriorating conditions in the Fertile or Infertile egg.

WHEN CANDLING:

The more or less visible air-space is the infallible sign of the Held egg. The shifting air-space denotes the Weak and Watery egg, and the darkened, flat yolk rising to the top of the egg marks the first visible sign of a Stale or Heated condition. In hot weather the Fertile egg shows the Hatch-spot (the embryo chick) on the flattened yolk. Often all the foregoing conditions can be observed in the same egg.

WHEN BROKEN:

The eggs will "stand up," but the yolk may be of a pale yellow color, and flat, lifeless; the White, thin. In the Fertile egg the Hatch-spot is thick. These eggs will deteriorate rapidly in hot weather. Cold-storing for a short hold, or an early consumption, is advisable.

The foregoing list of Seconds, though salable and of good odor and taste, will not stand much shipping or long storing. Available for any home use if kept in a cold place and not held too long before using. "Breakers" freeze the contents in cans, for manufacturing the desiccated or dried egg product. This product is used for egg flavors. Bakers are extensive users of these eggs.

BADLY HEATED, OR SOFT YOLKS:

Another and poorer class of Seconds. Age and rough handling, combined with heat, weakens the yolk membrane to the point where it permits of some seepage of the yolk into the white.

WHEN CANDLING:

Shows some shrinkage, but not necessarily heavy. The straggling yolk is found near the top of the egg, and shows by its more or less loose condition, whether it will "stand" when broken.

WHEN BROKEN:

The yolk, light colored, and usually breaks and runs over the pan; seldom can be separated from the white. Hatch-spot shows plainly if Fertile. White, thin and watery.

As these eggs are undoubtedly the forerunner of White or Mixed Rots, it would not pay to take any chances on their getting through to market before they arrive at the Rot stage, particularly after a long haul. Housewives are suspicious of this egg when it shows the conditions described. "Breakers" find them available if the odor is good and they are reasonably certain that bacteria are absent to a certain extent. Some shippers pack these eggs with Cracks, on account of their being a poor storage proposition.

SUNKEN YOLKS, OR FLOATERS:

Deteriorated farther than Badly Heated or Soft Yolks. Either subjected to a greater degree of heat, or a heat of longer duration, than the ordinarily heated Seconds.

WHEN CANDLING:

The darkened yolk is found at the bottom of the shell, and, when rotated, rolls heavily. If not stuck to the shell, it is edible at this stage to a certain extent. Considerable shrinkage.

WHEN BROKEN:

The yolk is flat, and in the Fertile egg the hatch-spot is plainly seen; also the infallible sign of the embryo chick—the "tread," a white, flimsy line streaked through the center of the hatch-spot.

NOTE:

These Seconds, like the previous ones, are a poor storage proposition, and should be used as soon as or soon after, they reach the stage described. They do not "stand up" as well as the earlier Seconds, and for that reason are not altogether suited for poaching, soft-boiling, or straight-up serving. Mostly suitable for flavoring purposes. Heat causes rapid deterioration.

These eggs, or any weak or heated eggs, when shipped any considerable distance without refrigeration, are liable to arrive in a more advanced state of decomposition than when they started. That is often the reason why a shipper cannot understand the difference between his grade at the shipping-point and the candled grade at the receiving end. Instances are known where some heated, fertile eggs started out on a 100-mile journey by freight in the month of August—and arrived as chickens!

SECONDS—ANY SEASON.

MUSTY OR ODOROUS EGGS:

Eggs held in damp, musty places, or held where vegetables are kept, either in their fresh or putrid state, readily absorb odors, as potatoes, onions, or lemons; or damp strawboard in egg-cases will affect the natural flavor of the egg.

WHEN CANDLING:

The light might not show anything wrong; but their odor, even in the shell, is usually distinct enough to be easily detected.

WHEN BROKEN:

The condition noted in the foregoing might apply when a Musty egg is broken—nothing apparently wrong, except the unmistakable odor; but this egg is undesirable, for the reason that it will impart its musty or vegetable odor to any food into which it is mixed. "Breakers" or bakers discard them if containing any foreign odor, taking no chances on ruining their products with them.

MOLDY EGGS:

Stock held under damp conditions; prevalent in Cracked eggs or manure-crusts.

WHEN CANDLING:

Often shows with stuck, black spots; heavy shrinkage.

WHEN BROKEN:

Shows green mold; often with yolk stuck to shell at mold-spot. Odor, musty, moldy. Considered totally unfit for food purposes at this stage.

BLACK ROTS:

Should be listed last; but, as the Moldy Eggs are not much better, will list them here. Not necessary to candle them; the blue-green, greasy shell and extremely light weight betray them without using the light. There is absolutely no excuse for a Black Rot in a basket or egg-case. Contents show all black against the light.

SUNKEN-SPOT YOLKS (LIGHT SPOTS) AND HEAVY SPOTS:

The yolks of eggs held in colder temperatures than that which they have been previously subjected to, if not moved from time to time, will settle and adhere to the shell membrane usually near the bottom of the egg, and develop as Light Spots. Eggs subjected to incubation temperatures, or lying in damp places, or out-of-way nests on the ground, develop as Heavy Spots.

WHEN CANDLING:

Usually shows heavy shrinkage; shifting air-space. Part of the yolk will be stuck to the shell and show as a thick, dark blotch about the size of a five-cent piece. If the stuck spot shakes loose easily and shows no blood ring, it might be termed a Light Spot. The stuck spots are usually found near the bottom of the egg. If the spot contains blood, or shows black under the light, the egg would be termed a Heavy Spot. The Infertile egg usually shows the dark spot stuck to the membrane covering the air-space at the top of the egg.

WHEN BROKEN:

A Light Spot might drop clean from the shell, with no part of the yolk adhering to the shell; but the odor is usually more or less stale. Of doubtful food value. In the Heavy Spot, parts of the flattened yolk stick to the shell; often contains Blood Rings, and has a sour, fetid odor. Yolk, light yellow. White, watery, and often a light yellow color. Very bad.

WHITE ROTS, OR MIXED ROTS:

Usually found in Fertile eggs. Styled Mixed Rots by some on account of containing broken blood rings, broken yolks, and many Spot conditions—Spots that were shaken loose from the shell and not used at the time; also because the yolk and white, which, on account of broken membranes, seem to be completely mixed.

WHEN CANDLING:

When rotated, the yolk is not distinguishable separately; the entire contents appear as a loose, light-colored mass; hence the name Light or White Rot. Shows some shrinkage.

WHEN BROKEN:

Contents are thoroughly mixed, a sickly, pale yellow in color, and an offensive, sour odor. Yolk and white not distinguishable separately, and thin and watery.

NOTE:

Not detected readily by a novice in candling unless when rotating he notices the very loose condition of the yolk and the unusually light color of the contents.

These eggs are an advanced stage of the Badly Heated (Soft Yolk) or Sunken Spot eggs. Heretofore some candlers, for the want of a better name, styled them Sour Rots, or Mixed Rots, using this last term principally on account of the mixture of white and yolk, and, too, because of doubt as to whether to term it by any one of the three names mentioned. On account of this confusion of terms, many dealers have not taken the trouble to name or chart the advanced stage of the Badly Heated (Soft Yolk) or Sunken Spot eggs; taking it for granted, no doubt, that the candler understood that when the eggs mentioned in the foregoing have arrived at the complete yolk-breaking stage, they are unfit for food purposes. The term White Rot, then, may be useful in designating the final passing of its immediate predecessors.

RED ROTS, OR MIXED ROTS:

Usually appears in the Infertile egg. Age and weakened membranes, coupled with heat, partly decomposes the contents and makes them thin and watery. The weakened membrane, too, permits of seepage of the yolk into the white—one of the conditions which also makes for White Rots. Some persons account for the Red Rot by attributing it to a diseased condition of the ovaries, causing blood to seep through the soft, flimsy shell before it had fully formed.

WHEN CANDLING:

Shows some shrinkage, but not necessarily heavy. The entire contents are very dark colored; the white scarcely distinguishable. When rotated, the white and yolk roll as one mass.

WHEN BROKEN:

Yolk is much darker than usual, and would seem to be compact were it not for the presence of a considerable portion of it mingling with the white.

NOTE:

Less seems to be positively known about the Red Rot than about other eggs in the tabooed class—that is, as to the cause of all of its badness. Suffice it that this egg with its extremely dark-colored yolk, with parts of it mixed with the white—in fact, any egg with a breaking yolk—would have a difficult time in “getting by” the average housewife. The Department of Agriculture asserts that it contains enormous amounts of bacteria.

BLOOD RING ROTS:

Eggs, if Fertile, and held too long in a temperature of 70° F., or over, will begin to incubate—anywhere; or, if Infertile, to weaken and spoil—in an incubator, under sitting hens, when exposed to the sun in out-of-way nests, or on the bottom layer of egg-cases. This incubation develops a Blood Ring as the temperature gets higher. The Blood Ring is the embryo chick, the germs of which were killed on account of low temperatures before they were fully incubated. At a temperature of 103° F., this germ will appear in twenty-four or forty-eight hours.

WHEN CANDLING:

Shows some shrinkage, but not necessarily heavy. The yolk shows as a dark mass at the top of the egg. On this yolk, a distinct, thread-like dark ring will appear when the egg is rotated, varying in size from half an inch in diameter and under.

WHEN BROKEN:

The hatch-spot shows clearly in the yolk, surrounded by Blood Rings and other blood streaks. The white, thin and watery.

NOTE:

Light Blood Rings are considered by some authorities as of a certain value for food purposes. But the Federal Government's regulations do not seem to make any distinction between Light and Heavy Blood Rings; therefore it would seem scarcely worth while to try to put a Light Blood Ring through.

GREEN WHITES, OR GRASS ROTS:

Grass has nothing to do with the greenish tint in the white of this egg. Hard to account for except that as they are prevalent in the wet, spring months, and as almost invariably the green tint is found in the Caked or Washed Dirties and Cracks, it is to be presumed that the germ which infests this egg is not produced by heated conditions, as is the case with whole-shelled and clean eggs.

WHEN CANDLING:

Hard to detect under the candle, except that the contents appear very light—too light to be normal.

WHEN BROKEN:

The yolk is usually firm, but tough, and occasionally parts of it are found to be mixed with the white. If decomposition has set in, there is a fetid odor; otherwise, the odor might be good. But if the greenish tint shows in the white, to be safe, discard this egg.

SOUR ROTS:

Another egg that is hard to catch under the candle, except that the white might appear to be thick, or the yolk might be partly mixed with the white on account of broken membranes, or if your sense of smell is acute enough to detect the sour odor before the egg is broken.

WHEN BROKEN:

Unless the above conditions prevail, as broken membranes or thick whites, only the sour odor will betray this egg. Considered unfit for food purposes if this odor is evidenced.

NOTE:

As the Green White and Sour Rot eggs can be scarcely detected against the light, even by expert candlers, some authorities seldom mention the existence of these eggs, except that the Badly Heated and Sunken Yolk eggs in the advanced stage are sometimes inaptly termed "Sour Rots."

PERCENTAGE OF GRADES AND LOSS IN EGGS:

In the spring, during Storage Packing, many dealers estimate the grades and loss as follows, (basing 400 cases to the car).

Loss: Mashed and Shorts.....	.00½%	2 cases.
Seconds: Small, Checked, Dirty.....	.14½%	58 cases.
No. 1	.85 %	340 cases.

The foregoing figures vary according to the sections of Small or Large egg production. But 5 per cent either way should about catch the extremes, as: Large egg sections, should yield 90 per cent No. 1; and Small egg sections, 80 per cent No. 1. In summer, eggs from cool climates show a higher percentage of No. 1. Figures are too varied to try to give an average estimate here.

FIGURING COST PER DOZEN, GIVEN PRICE PER CASE:

Divide by 3, and point off three places to the left.

COLD STORAGE TEMPERATURE AND HUMIDITY:

Temperature, 29-30° F. Humidity, 82-80%.

TO KEEP EGGS FROM SWEATING:

Before taking the eggs into a warm temperature, spread them out on clean, slat-shelved poultry racks; or transfer them from the cases to cages made of wire mesh; and have 1-inch cleats on the bottom, to allow the circulation of air underneath if several cages are to be dried at the same time. Remove fillers, but leave flats between layers.

Whether using the racks or cages, after the eggs are taken to the higher temperature, turn the electric fan on them until they are thoroughly dry. Candle carefully after drying.

TO DISTINGUISH STORAGE EGGS FROM FRESH:

It seems to be easily done by any one not actively engaged in the egg business; but storage egg dealers, or veteran egg-candlers do not seem to be able to pick them out. The veterans can tell a Held egg, but they cannot say if the egg has been held in or out of storage.

SHRINKAGE:

This refers to the air-space. The area of the air-space shows the extent of the shrinkage.

TOP AND BOTTOM:

In this book, when mention is made of the "top" of an egg, the large or butt end is meant; the small or pointed end is the "bottom" of an egg.

TO DETECT AGE IN EGGS:

Eggs begin to evaporate soon after they are laid, causing a shrinkage of the contents; the vacuum created on account of this shrinkage fills with air, and is termed the "air-space."

No air-space denotes a Strictly Fresh egg. As the age of the egg increases the space grows larger.

Some persons claim that an egg is about a month old if the circumference of the air-space at its widest part is of the circumference of a ten-cent piece; when it gets around to the circumference of a twenty-five cent piece, it is between six and nine months old. If held outside of cold storage, this last condition would stamp the egg as Stale. Eggs evaporate more rapidly outside of cold storage.

FERTILITY OF EGGS AFTER SEPARATION:

Eggs are sometimes Fertile after the male bird has been removed for as long as 21 days, but as a rule the fertility is practically gone the tenth day, and often earlier than this. This depends considerably on the individual and perhaps the vitality of the bird.

AGE TO BEGIN HATCHING:

HENS	1	year old; incubation 21 days; useful 5-10 years.
TURKEYS	1	" " " 28 " " 10 "
DUCKS	1	" " " 28-35 " " 10 "
GEESE	1	" " " 30-35 " " 10 "
GUINEAS	1	" " " 25 " " 10 "
PIGEONS	1	" " " 18 " " 10 "

Pigeons hatch 5 pairs a year, feathered fully in 4 weeks.

SUMMARY.

It will be noticed that the specifications for No. 1, Spring storage stock, March, April, and May, call for "Fresh Gathered stock, from clean, regular nests." Eggs gathered in these months are the soundest and best flavored eggs of the year. Further, by keeping them in cold storage they are better preserved than if kept outside of cold storage; because the cold temperature of the rooms disposes of the heat problem, the worst enemy of the egg, and a certain humidity in the egg-rooms prevents dry, atmospheric conditions from absorbing moisture from the egg and lessens evaporation—shrinkage. The equalization of the two in proportion brings the eggs out of cold storage in good condition after nine or twelve months' holding.

On the other hand, eggs held outside of cold storage evaporate rapidly, because of the dry, warm air absorbing moisture in the egg, and but little if any moisture in the atmosphere of sufficient duration to assist in lessening evaporation; hence the Stale egg, even if held one-third of the time a Storage egg is held.

A Storage egg put away in the spring and held for the season, until January first, would not be considered a Stale egg by the trade, because the sanitary condition under which it is held, coupled with the cool and humid atmospheric surroundings, keeps it as sweet as it went in, and its nutritive value would not have been lessened in the least.

Regarding Summer Seconds, or Heated eggs: It should be understood that eggs begin to deteriorate from the time they are laid, and rapidly in hot weather, when bacteria apparently thrive best; so it behooves the producer to exercise more care with his Summer stock than with the Spring or Winter eggs. Bacteria may be present in a Heated egg to a certain extent, but not enough to harm any one; and until the egg shows every evidence of being unfit for food, it may pay to use some caution as regards discarding them entirely.

When an egg shows that it will not stand much handling or shipping, a producer would have the choice of taking it to his dealer for his ruling, use for flavoring purposes at home, or cook for chicken food. It would be poor business to take a chance on the consumer discovering the condition of the egg mentioned.

"Breakers," after candling, break the shells of eggs, and, as an extra precaution, examine the contents closely before using. If the yolks show a weakened, heated condition, but if the odor is a little stale (not fetid or sour) they will use them; because, though some bacteria may be present, the extreme heat employed in manufacturing the product would effectually dispose of them or the slightly stale odor. But when an egg gets close to the Badly Heated, Sunken Yolk (Floater) stage, it would have a poor chance in qualifying as a "breaker's" product upon arrival.

All Blood Rings are placed under the ban; because, though a Light Blood Ring might go through the "desiccating" process with the extremely heated temperatures used and emerge as an egg powder, practically germless and wholesome, yet the United States Department of Agriculture feels, no doubt, that the line must be drawn somewhere, lest the confusion and misunderstandings engendered in discriminating between Light and (undoubtedly bad) Heavy Rings would be too great and not worth the trouble of making the distinction.

If an egg started on a journey as a Light Ring, but arrived as a Heavy Ring, would the responsibility be fixed upon the owner of the egg at the Heavy Ring stage if distinction were made between Light and Heavy Rings? The present ruling dispels all doubt.

At times a blood-clot will be noticed in an egg; but if the egg shows every sign of being perfectly good, outside of the clot, it is just as good as it looks; because the clot simply means that a small blood-vessel has been ruptured during the formation of the egg, and the removal of the clot before using is all that is necessary. Do not confuse these eggs with Red Rots or Blood Rings.

In another part of this book mention is made of the "Grass Egg," and that grass has nothing to do with its bad condition, nor has it; but grass or any green food may have a tendency to make dark yolks. Housewives prefer the darker yolks because they make a more appetizing appearance when served "straight up" and are more wholesome appearing, even out of the shell before using, than the pale yolks; but there is not a particle of difference in the nutritive value of the pale and dark yolks. As the feeding of milk, tallow, and white cornmeal will bleach a chicken's flesh, the want of green foods will produce pale yolks in eggs.

For sanitary reasons, it is well for the housewife to wash eggs just before using them: but a dealer should **never wash eggs** for market purposes, as it washes off the mucilaginous coating that to a great extent protects the eggs from mold. Without this coating, washed eggs are very susceptible to germs and mold; therefore they cannot be used for storage purposes.

Those of you who have not made a study of candling should do so; not only for financial reasons, but you will find a certain pleasure in the study, and a positive pleasure in the knowledge that any stock that might be sent out from your hands has another name besides just eggs—"Quality!"

LIVE POULTRY.

It may not be amiss, herein, to touch upon the subject of farm poultry, as much has been said about the small-sized poultry and eggs.

Many assert that small birds lay small eggs; others declare they do not. Veteran poultry and egg dealers who have handled vast amounts of both at wholesale say they fight shy of either if fair to large sizes of poultry and eggs can be obtained instead.

A veteran, wholesale poultry dealer when asked his reasons for discriminating against small-sized poultry and why he advised against raising them, said:

"I can not sell the small birds for as much per pound as the larger bird—often a difference from two to four cents a pound, dressed. If for no other reason, the one given should make them decidedly unpopular for market use.

"As for raising them, they consume fully as much feed as the larger varieties, and consequently cost more per bird per pound to feed and care for, and bring less per bird per pound on the market. Therefore, in order to beat that handicap, they should be phenomenal layers. Some claim they are—the raisers of small poultry who inherited the custom from their ancestors."

Some persons might dispute the poultry man's assertion that it costs as much to feed small fowls, as large ones; but if there is any difference at all—presumably in favor of the small fowls when cooped—it would scarcely be nearly enough to offset the higher prices obtained for the larger birds.

And there is no doubt that there are just as prolific layers among such breeds as Plymouth Rocks, Wyandottes, Rhode Island Reds, and the like, as there are among the smaller breeds; as the numerous egg-laying contests in different parts of the country have proved.

But in my opinion, the size of the bird does not always determine the size of the egg it lays. I've known Brahma's to lay small eggs upon occasion, and Minorca's large eggs upon occasion; at other times the same birds would perform just the opposite.

With respect to the small bird as a retail market proposition, the fact is forced upon us, whether to our liking or not, that the average housewife does not like it, principally because it has little fat, and a bird with little fat is scarcely ever a tender one.

Raising large breeds of poultry, then, suitable for eggs and market purposes, seems to be the sounder proposition, on account of obtaining for them more money per bird and pound, and at the same or hardly much more cost of feed and care than that expended for the smaller birds, which are forced to be sold for less money per bird and pound, as the poultry man said.

In very hot weather only, small birds might have a chance to compete with the larger birds in the live poultry market, but never in the dressed poultry market, where the price of heavy poultry is always higher than the lighter stock—this refers to fowls and springs; not broilers.

If two farmers drove up, one with a coop of 20 Barred Rock fowls, weighing 100 pounds, the other with a coop of 20 Leghorn's, weighing 60 pounds, the result should show something like the following:

20 Rocks, 100 pounds, at 18 cents.....	\$18.00
20 Leghorns, 60 pounds, at 16 cents.....	9.60

Balance in favor of Rocks.....\$ 8.40

The foregoing is not exaggerated, and at the time of this writing the price in the country for fowls is 21½ cents.

In the big markets the small fowls and springs are the last thing sold, and at a discount from the larger poultry's price. Call it prejudice if one wills, but the wholesaler is "facing a condition; not a theory." Even if the two lots of live poultry mentioned were sold at the same price per pound, the difference in favor of the larger breed would be \$7.20. And figuring eggs at 25 cents a dozen, the Leghorns in the example given, would have to lay in two months, 402 more eggs than the Rocks laid in the same space of time to overcome the handicap of the price and weight of the Rocks.

The wholesaler is very much in earnest in his endeavor to weed out small-sized poultry; and some dealers, a few years ago, offered to trade any heavy breed cockerel they had for a smaller bird—not pound for pound, but **bird for bird**,—taking the loser's end; and the majority of the breeders offered by the wholesalers were fit to grace any poultry show.

In conclusion, one should think if the wholesalers have any sentiment at all in connection with any particular poultry breeds, those breeds most suitable for all-round market purposes would have the first claim to their affections.

STUFFED, SICK, OR CRIPPLED POULTRY.

All live poultry buyers are agreed that the worst evil they have to contend with is "croppy," sick, or crippled poultry. The following is a composite statement of their views:

"When poultry is brought in stuffed with shelled corn, wheat, or other hard grains, the buyer cannot get the stock back on to a regular feed until the hard feed works out of the craws. The bird is sluggish for days, and if a carlot buyer takes up the stock, he refuses to buy them in a croppy condition unless he is allowed a "dock," or weight allowance, which is usually about 5 per cent. This dock often causes a loss to the buyer, particularly if the poultry had been bought on a basis of a small margin of profit, as 90 per cent of the live poultry is bought.

"It is against the law to stuff live poultry in New York city, where a shipper used to stuff it in the old days to keep from going broke; but the raiser is not up against anything like that, as he is obtaining 10 to 1 compared to the shipper's profit, even if the raiser sells with empty craws.

"It may interest the seller to know, too, that the shippers sustain a dead loss on: Sealy Legged, Swelled Vent, Crooked Breasts, Crippled or Sick birds. This stock is graded as "culls" by dressers, and is **always sold far below cost**, if sold at all.

"Carlot buyers of live poultry will not put the foregoing class of stock into their cars at all if they can be detected before they are loaded; and if, by accident or otherwise, they get into the cars, the inspectors at destination points detect them, and refuse to allow them to be placed on sale. Even with extra precautions taken at the receiving end, the death loss en route, at times wipes out the profit on the venture as a whole."

A live poultry dealer does not object to a small amount of feed in the craws, and where the intent has not been to stuff them; but in any event, it does not seem to be altogether right to sell \$3-a-hundred corn as \$18-a-hundred poultry. It seems to be wrong, viewed from any angle.

Were it not for the many fair customers, the average poultryman would have to go out of business, and if the "stuffers" and the sellers of sick and crippled poultry understood that the poultry-buyer often has a difficult time in making a living with No. 1 poultry, it is hard to believe that they would deliberately burden him with stock that produces a dead loss.

PERCENTAGE OF WEIGHT GRADES IN POULTRY:

No. 1 Poultry, under 3 pounds.....	20%
No. 1 Poultry, from 3 to 3½ pounds.....	24%
No. 1 Poultry, from 3½ to 4½ pounds.....	36%
No. 1 Poultry, from 4½ to 5½ pounds.....	14%
No. 1 Poultry, from 5½ and up.....	2%
No. 2 Poultry, all weights	4%

TO DETERMINE BUYING PRICE OF LIVE POULTRY TO CLEAR 1 CENT PER POUND PROFIT, GIVEN DRESSED OFFER DELIVERED:

25 birds, 2½c per head.	
Dressing cost, 100 lbs.....	\$0.625
Express or Freight, 100 lbs.....	1.00
Ice (Barrel Pack), 100 lbs.....	.25
Package (Barrel), 100 lbs.....	.20
Fixed Expense (office, etc.), 100 lbs.....	.50
Divide by Dressed Yield 85.....	\$2.575
Dressed Expense	\$3.03
Take 1c less offer.....	\$13.00
Subtract Dressed Expense.....	3.03
Cost, Dressed Buy.....	\$ 9.97
Multiply by per cent yield.....	.85%
Cost of Live Buy.....	\$ 8.47

This example does not cover box-packed or milk-fed stock. To cover any individual case, add or subtract costs or yields as apply.

The buying price resulting in the foregoing, with expenses added as listed, should show a profit of 1 cent per pound on a 14-cent, dressed, delivered offer. It works the same with any price.

POULTRY BOX MEASUREMENTS.

The National Poultry, Butter & Egg Association, recommend standard sizes for each size-grade of dressed poultry, and material of White Wood or White Tupelo, nailed—not tongued or grooved.

They advise the standardization of poultry boxes of the following dimensions:

Dry-Picked, Broilers, One Layer, Breast Up.

	Length	Width	Depth	Ends	E.T.B.
	In.	In.	In.	In.	In.
15 lbs. under..	14	14	4	1½	1¼
16 @ 20 lbs....	16	15	4	1½	1¼
20 @ 24 lbs....	16	16	4½	9-16	¾
25 @ 30 lbs....	17	17	5	9-16	¾

Dry-Picked Chickens, One Layer, Breast Up.

31 @ 36 lbs....	19	17	6	5½	¾
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Dry-Picked Chickens, Two Layers, on Sides.

31 @ 36 lbs....	16	14	7	1½	5-16
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Dry-Picked Chickens, One Layer, on Sides.

37 @ 42 lbs....	29	17	3½	5½	¾
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Dry-Picked Chickens, Two Layers, on Sides.

37 @ 42 lbs....	17	15	7	5½	¾
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43 @ 48 lbs....	18	16	7½	5½	¾
-----------------	----	----	----	----	---

49 @ 58 lbs....	18½	16	7¾	5½	¾
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50 lbs. & over.	18½	18	8½	5½	¾
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(Outside cleats on last three.)

Dry-Picked Fowl, Two Layers, on Sides.

31 @ 36 lbs....	15½	13½	6½	7½	¾
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37 @ 45 lbs....	16	14	7½	5½	¾
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46 @ 54 lbs....	16½	15	8	5½	¾
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55 @ 66 lbs....	17	16	8½	5½	¾
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68 lbs. & over.	18	17	9	5½	¾
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(Outside cleats on last three.)

Dry-Picked Ducks, Two Layers (O. S. Cleats).

42 @ 52 lbs....	20	13½	7½	5½	5-16
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53 @ 62 lbs....	23	14	8	5½	¾
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60 lbs. & over.	24	14½	8½	5½	¾
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Dry-Picked Geese, Two Layers (O. S. Cleats).

All weights ...	28	19	12	¾	1½
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Dry-Picked Turkeys (Outside Cleats).

Y. toms, 11 lbs.					
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and under...	26	22	12	¾	1½
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Y. toms, over					
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11 lbs.	27	25	12½	¾	1½
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Hens, 11 lbs.					
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and under...	22	20	10½	¾	1½
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Hens, over 11					
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11 lbs.	24	20	11½	¾	1½
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Scalded Broilers, Breast Up.

15 lbs., under.	14	13	3½	5½	1¼
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17 @ 21 lbs....	16	16	4	5½	1¼
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22 @ 24 lbs....	16	16	4	5½	¾
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26 @ 31 lbs....	18	16	4½	5½	¾
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Scalded Fryers, Breast up.

32 @ 36 lbs....	18	17	5	5½	¾
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Scalded Roasters, Two Layers, on Sides.

37 @ 42 lbs....	17	15	7	5½	¾
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43 @ 46 lbs....	17½	15	7½	5½	¾
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47 @ 54 lbs....	18½	17	8	5½	¾
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55 lbs. & over.	20	18	8	5½	¾
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(Last three with outside cleats.)

Scalded Fowl, Two Layers.

31 @ 36 lbs....	14½	13½	7	5½	¾
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37 @ 45 lbs....	16	14½	7½	5½	¾
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46 @ 54 lbs....	17	15	8	5½	¾
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55 @ 66 lbs....	18	16	8½	5½	¾
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67 lbs. & over.	18	17	9	5½	¾
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(Outside cleats on last three.)

MARKETING BUTTER.

Government regulations forbid more than 16 per cent moisture in butter offered for sale—to be exact, 15.99.

There is no Government ruling as to salt content, but dealers prescribe that butter shall not contain more than $3\frac{1}{2}$ per cent; anything over that figure they take off—that is, any considerable figure over $3\frac{1}{2}$ per cent.

It would be a difficult matter for a farmer to determine when his stock of butter is in excess of 16 per cent moisture; but there should be no cause to worry on that score, because, as a rule, excess moisture conditions prevail only when the stock has been deliberately adulterated with water or milk. The average farmer's output of butter usually scores either a little below or not enough over the limit to hurt anybody.

Some persons have tried selling a mixture based on the theory that "one pint of milk or water, with a pound of butter, makes two pounds of butter." But the United States authorities have already made that a costly business for the few who have tried it, principally in the large cities.

This particular brand of "moonshine" butter should be detected at a glance as the presence of excess moisture is unmistakable; usually showing the milk or water plentifully interspersed over the top of the butter.

TO WASH OUT EXCESS SALT:

An old-fashioned way would be to break the butter into chunks about the size of a baseball (if it is chilled), then place the pieces in a tub or barrel, and run enough water into the receptacle to cover the butter. Let it stand over night, and the salt will be found to have been washed through to the bottom.

TO WORK OUT EXCESS MOISTURE:

Simply squeeze the water out by hand.

MARKETING HIDES.

PREPARING HIDES FOR MARKET:

Scrape off any meat adhering to the hide, and, as soon as possible after stripping, spread it out in a basement or barn, with the hair side down. Strew salt liberally on every part; if no hide salt is at hand, table salt will answer. Stack the hides on top of each other. They will keep a considerable length of time if treated in this manner.

WHEN TAKING TO MARKET:

Tie up in bundles, with strong twine, hair side out.

SHEEP PELTS:

Salted down the same as hides, except that they need airing from time to time, which should be done by taking them up separately and restacking.

NO. 1 GRADE:

Any cow or steer hide that is free from any blemish. Bought by the pound.

NO. 2 GRADE:

Grubby, Butt-branded, Cuts, Dragged, Hair-slipped or Tainted. Bought by the pound at a lower figure than No. 1 stock.

BULL HIDES:

Graded for No. 1 and No. 2 the same as cow or steer hides, but they bring considerably less money per pound than the class mentioned.

HORSE HIDES:

Same grading, but bought by the piece.

THE CANDLER WITHOUT A FAULT

OLD WAY

THE OLD WAY IS
 Slow
 Expensive
 Unprofitable
 Unsanitary
 Unsystematic
 Uncomfortable
 Poor Product
 Eye Strain

THE GRANT WAY IS

Daylight
 Money-Saving
 Speedy
 True Test
 Comfortable
 Systematic
 Sanitary
 Eye Saving

NEW WAY—Model No. 5

THE GRANT EGG CANDLING
 CHART FOR THE PROPER
 CANDLING OF EGGS.

Illustrated in eleven colors, shows how a good egg should look under the candler and also describes every known form of bad or doubtful eggs, with the exact reproduction just as the egg really looks in an egg candler

Educational. Every one who handles eggs should have one of these charts. Size 19 x 25.

Price postpaid.....\$1.00

All Prices F. O. B. Chicago
 Subject to market changes without notice.

Grant Da-Lite Egg Candles

Model No. 4

For electric light current. . . . \$5 00
Equipped for use with batteries extra . . . 1.00

Model No. 5

This candler is also made double for man to work on each side of bench, see page 1 . . . \$7.50

The term Da-Lite as applied means that you have no dark room to build. The dark room is enclosed within the Grant Da-Lite Egg Candler, so that it has perfect darkness just where it belongs—just around the egg. The original cost of the Grant Da-Lite Egg Candler is even less than the cost of constructing a place for any other known form of egg candler.

Grant Da-Lite Egg Candles are being used by most all the produce dealers in the United States as well as thousands of retail merchants and there is no section but what we can refer you to users. They are especially adopted for the grocers as well as the large produce shippers.

Adjustable Stand

Fits Models No. 4 and 5 . . . 50c

Model No. 9

The portable candler for grocer counter or huckster wagon. Comes complete fully equipped including special battery . . . \$6.45
Extra battery (special type) for replacements45
Extra lamp bulb for replacement30

Model No. 3

Designed especially for kerosene lamp. . . .
Price complete including lamp \$7.00

Always specify when ordering One or Two light holes
Subject to market changes without notice.

DELTA ELECTRIC EGG CANDLER

Delta Electric Egg Candler

NOTE—By removing the egg attachment you have a handy Electric Lantern

Powerful Light Penetrates Thickest Shells

The DELTA EGG TESTER is suitable for use by all handlers of eggs not located where electric light service is available. Operating on two No. 6 dry batteries which can be purchased as readily as oil from all hardware, automobile and electrical stores, it has great burning life and the cost of fuel is low.

Tests Any Time, Anywhere

It is designed to be burned for long or short periods and can be used by the farmer or grocer who only tests a few dozen eggs at a time or by the packer who tests continually.

No Danger of Fire—No Oil, Grease, Dirt or Smell

The body of the tester is made of heavy sheet steel substantially formed and ribbed to give great strength. It is handsomely finished in baked black enamel trimmed in nickel-plate.

Two eggs can be tested at the same time, making testing as fast as those handling a dozen or more at once. Small windows are cut on each side of the hood, allowing a stream of light to illuminate cases of eggs on both sides. As testing should be done in a dark room, the cases are illuminated without lighting the room. Eggs can be assorted for size and dirties before being tested, thereby saving assorting after they have been handled for testing.

A convenient switch instantly turns the light on or off. A heavy flanged base prevents upsetting. Has a convenient bail and handle for carrying. Will hang on the wall.

PRICE, Lamp complete with two dry cells.....\$2.70
 " Lamp only without dry cells..... 2.00

Haight's Perfect Egg Tester

A tester that tests perfectly and adapts the city cold storage and large receivers' system of candling eggs to the country dealers' use at trifling cost. No handler of eggs should be without it. Easily operated, and rapid. Prepare eggs for cold storage by it with perfect safety.

The tester stands 12 inches high, and is 8 inches deep. Made substantially of tin, and enameled with black iron enamel. Furnished complete with No. 2 lamp....\$1.50

Subject to market changes without notice

Common Egg Tester

Tin globes to fit over incandescent electric lights for testing eggs.

Price, each\$0.40

Little Wonder Egg Tester

can be used anywhere in the room. Pressure of egg operates light. Can be carried anywhere. No danger of fire. Used by merchants, farmers, hotels, restaurants and egg dealers. You have the benefit of an electric tester whether your town is equipped with electric lights or not.

The batteries can be replaced when exhausted at less price than you can buy the current for if you have a light plant.

Any shady corner of your place of business will make an ideal place to do the work. No dark room to accumulate filth.

You are taking no risk from fire, as is the case with the lamp device in a box. No light until egg touches box. Out as soon as removed. Price, each.....\$5.00

Vegetable Parchment Paper for Poultry

Our Genuine Vegetable Parchment Paper is absolutely odorless, tasteless, and water, grease, air, germ and acid proof. Used extensively for wrapping poultry and lining boxes. We can furnish this in any size, and in 25, 30 or 40-pound stock.

Regular sizes, 24x36 in., 36x40 in., 18x24 in., 22x32 in., and 36x60 in.

	Per pound 30 lb. stock	Per pound 25 lb. stock
Less than 50 lbs.....	\$0.18	\$0.20
In 50 lb. lots.....	.17½	.19½
300 lb. lots.....	.16½	.18½
500 lb. lots.....	.16	.18
1,000 lb. lots.....	.15½	.17½

Special sizes will be cut to order and billed on above prices. Waste arising in cutting will be charged at above prices.

Parchment paper in rolls, made from 30-lb. weight paper. We carry in stock 9, 12, 13, 14, 15, 16, 18, 20 and 24 inch rolls.

Less than 50 lb. lots, per lb.....	\$0.18
50 to 200 lb. lots, per lb.....	.17½
200 to 500 lb. lots, per lb.....	.16½
500 lbs. and over, per lb.....	.16
1,000 lbs. and over, per lb.....	.15½

Requests for quotations on any size or weight of vegetable parchment, plain or printed, will receive immediate and careful attention.

Roll parchment substitute 2½¢ less per lb.

Manila Wrapping Paper

Manila Paper, for wrapping poultry, 24x36, per lb.....at market price

Parchment Poultry Head Wrappers

	1M,	5M,	10M,	20M,	50M,	100M,	200M,
Made from 30-lb. Stock	Per M	Per M	Per M	Per M	Per M	Per M	Per M
Broilers, 5x5x7x10.....	\$0.75	\$0.63	\$0.62	\$0.59	\$0.56	\$0.55	\$0.53
Fowl, 6x6x8½x12.....	.95	.82	.81	.78	.74	.72	.70
Turkey, 7x7x10x14.....	1.25	1.10	1.08	1.03	.98	.95	.93
Made from 40-lb. Stock	Per M	Per M	Per M	Per M	Per M	Per M	Per M
Broilers, 5x5x7x10.....	\$0.84	\$0.83	\$0.83	\$0.79	\$0.75	\$0.74	\$0.72
Fowl, 6x6x8½x12.....	1.09	1.08	1.04	1.00	.96	.94	.94
Turkey, 7x7x10x14.....	1.47	1.44	1.34	1.31	1.27	1.24	
Made from 50-lb. Stock	Per M	Per M	Per M	Per M	Per M	Per M	Per M
Broilers, 5x5x7x10.....	\$1.05	\$1.04	\$0.99	\$0.94	\$0.93	\$0.90	
Fowl, 6x6x8½x12.....	1.36	1.35	1.30	1.23	1.20	1.16	
Turkey, 7x7x10x14.....	1.83	1.80	1.71	1.64	1.59	1.55	

Subject to market changes without notice

Egg Cases and Fillers

Prices F. O. B. Chicago

FILLERS PER CASE (Case Included)	Small Lots	12	25	50
Medium fillers, per case of 12 sets.....	\$1.60	\$1.55	\$1.50	\$1.45
Special 3-lb. fillers, " " " ".....	1.69	1.64	1.59	1.54
Heavy No. 1 fillers, " " 10 ".....	1.57	1.52	1.47	1.42
¾" cushion fillers, 400 to case.....	1.90	1.85	1.82	1.77
Corrugated flats, per case, 35 lbs.....	1.43	1.39	1.34	1.29
Extra Division Board of flats, per 100 35c; per 1,000—\$3.00.				

Prices F. O. B. Factory in Southern Illinois

	Average Weight	Small Lots	100 Lots	250 Lots	500 Lots	1000 Lots
Medium fillers for cold storage..	2¾ lb.	\$0.10½	\$0.10¼	\$0.10	\$0.09¾	\$0.09½
Special 3-lb. fillers.....	3 lb.	.11½	.11¼	.11	.10¾	.10½
Heavy No. 1 fillers.....	3¼-3½ lb.	.12¼	.12	.11¾	.11½	.11¼
K. D. ⅝" cottonwood cases, fancy stock.....		.20¾	.20	.19¾	.19½	.19
K. D. ⅝" Tupelo cases, white wood.....		.19½	.19	.18¾	.18½	.18
K. D. ⅝" gum cases, red wood..		.18½	.18	.17¾	.17½	.17
K. D. heavy No. 1 cases, "L" fasteners.....		.50	.49	.48½	.48	.47

For nailed up cases with centers, add 3c to these prices.

¾" drop cleat cottonwood cases (cases in which fillers are packed), .18½ each.
 ¾" cushion filler (400 to case) per case, case included: small lots \$1.70, 25 case lots \$1.67, 50 case lots \$1.65.
 Corrugated flats (35 lbs. per case) per case: small lots \$1.35, 25 case lots \$1.30.
 Medium division boards (extra) per 100 30c, per 1000 \$2.50. 3-lb. division boards (extra) per 100 35c, per 1000 \$2.75.
 Egg case nails 3d: single keg lots \$5.25, 5 keg lots \$5.00.
 Fine white kiln dried excelsior: per cwt. \$1.40, 5 bale lots \$1.30, ton lots \$25.00.
 Fillers are quoted packed 12 flats and 10 fillers per set.

Acme Egg Case Straps

Per Bundle, 100 pair.....\$1.90 Per Bundle, 500 pair..... 1.80

Marxoff Box Scraper

Just like your safety razor—Simply reverse blades when dull

Length—10 inches.
 Weight—15 ounces.

Unequaled for Scraping Marks from Boxes, Barrels, Hogsheads, Pails and all Wood Packages.

EVERY SHIPPER NEEDS THIS WONDERFUL TIME SAVING TOOL

Save the loss in your shipping room. A good sharp tool always ready for use. Interchangeable, keen cutting, double edged, hardened steel blades, ground to exact cutting angle. The notches in the blade breaks the chips, will scrape ACROSS the grain or WITH the grain. You simply reverse the blade when dull or quickly insert a new one. No time wasted at the grind stone. The Marxoff saves time.

Complete as illustrated, including card with 6 extra blades (12 keen cutting edges) by prepaid parcel post—only \$1.00

Additional blades, ½ dozen on card (12 cutting edges) by mail 35 cents

Subject to market changes without notice

Farmers' Friend Square Egg Case

A carrying case made for convenience in carrying eggs from farm to market. The case is square and requires the same fillers and division boards as the ordinary 30-dozen egg case. The cover is adjustable; fastens at any point, so that the case will hold any number of eggs up to its capacity and will eliminate breakage, thereby soon paying for itself.

Stenciling

We stencil the name and business address on two sides of each carrier without charge upon orders of two dozen or more. For orders of less than two dozen a charge of 25c will be made for stenciling. For each additional side stenciled, 10 cents per dozen extra.

PRICE LIST

Single Carriers	6 doz. size 45c each Per doz.	9 doz. size 50c each Per doz.	12 doz. size 65c each Per doz.	15 doz. size 80c each Per doz.
1 to 2 dozen.....	4.75	\$5.00	\$5.25	\$5.90
3 to 6 dozen.....	4.65	4.90	5.15	5.80
7 to 12 dozen.....	4.55	4.80	5.05	5.70
Over 12 dozen.....	4.45	4.70	4.95	5.60
Weight:	70 lbs. per doz.	75 lbs. per doz.	85 lbs. per doz.	100 lbs. per doz.

Farmers' Friend Oblong Carrier (4x9)

This egg case, because of its shape, can be placed in the back of a buggy, or if placed in the front, gives plenty of room for one's feet. The Oblong Farmers' Friend Egg Case is 19 inches long, 8 inches wide and 10 inches deep. There are four fillers, 4x9, so the case contains 12 dozen. Cases are painted and have a handle for carrying.

PRICE LIST

1 Egg Case.....	\$0.65	3 dozen Egg Cases, per doz.....	\$5.15
3 Egg Cases.....	1.75	6 dozen Egg Cases, per doz.....	5.05
1 dozen Egg Cases, per doz.....	5.25	12 dozen Egg Cases, per doz.....	4.95

Extra fillers for oblong case, 15 cents per set.

Humpty Dumpty (6x6)

The Humpty Dumpty egg crate is light, durable and strong, and affords excellent ventilation to the eggs in transit, and the case when empty can be knocked down or folded completely, thus effecting a saving in freight or express charges upon the returned case. It is made in several sizes to meet the requirements of everyone.

PRICE LIST

Size	Weight	Each	1/2 Doz.	1 Doz.
30-doz.,	170 lbs., per doz.....	\$0.75	\$4.00	\$7.50
15-doz.,	90 lbs., per doz.....	.45	2.25	3.75
12-doz.,	75 lbs., per doz.....	.40	2.00	3.50
9-doz.,	60 lbs., per doz.....	.35	1.75	3.25
6-doz.,	55 lbs., per doz.....	.30	1.65	3.00
3-doz.,	45 lbs., per doz.....	.27	1.50	2.75

Cloyd's Ventilated Coop

This coop is a combination of wood and wire, made of tough oak and anti-rust, No. 13, smooth galvanized wire. It is light weight and durable, and has excellent ventilation. Meets with all requirements of railroad and express companies. The illustration represents the No. 3 coop, measuring 40x30x13 in. The capacity is two to three dozen hens; three to four dozen springers. All coops are shipped knock down and nested, thereby securing minimum freight rates. Weight about 25 lbs.

PRICE LIST

1 to 3 doz., each.....	\$1.05	5 to 8 doz., each.....	\$0.95
3 to 5 doz., each.....	1.00	8 to 10 doz., each.....	.90
Size 30x30x13, 5 cents less per coop.		Size 30x42x20, 5 cents per coop more	

Special prices on car lots. F. O. B. Factory, Tennessee.

Subject to market changes without notice

Seminole and Suwanee Folding Egg Carton

These Egg Cartons save time because they have no lock end. Fillers are light colored, like the rest of the carton. The flap is as deep as the front side of the carton, thereby stiffening the carton and securely holding the cover down. This wide flap may be printed, and when the carton is open upon a shelf this advertisement is very prominent. Also note the advantage of being able to print the ends. This makes the advertisement visible from any point of view.

These boxes have a 2x6 cushion filler, machine-made, and fit the standard 30-dozen egg case. Cartons packed 250 in a bundle. Fillers packed 500 in a bundle.

Standard size 2x6—Seminole and Suwanee.

	Shipping Weights Per M.
500.....	150 lbs.
1,000.....	150 lbs.
2,000.....	150 lbs.
3,000.....	150 lbs.
5,000.....	150 lbs.
10,000.....	150 lbs.
15,000.....	150 lbs.
25,000.....	150 lbs.

PRICE LIST

	Manila Lined Suwanee Grade	Special Prtd.	Solid Chip Seminole Stock Prtd.	Board Grade Special Prtd.
Stock Prtd.	\$10.85		\$9.45	
	10.38	\$10.58	9.05	\$9.55
	10.08	10.33	8.85	9.30
	9.85	10.20	8.70	9.20
	9.75	10.00	8.60	8.95
	9.50	9.65	8.35	8.70
	9.35	9.45	8.20	8.45
	9.20	9.30	8.10	8.30

Write for prices on larger quantities.

NOTE—Fitted with patent seal. No Extra Charge. See following page description.

New Patent Seal for Egg Carton

This is a new and very practical feature which our factory have just patented and it is gaining considerable favor with the trade.

Instead of using paper seals which have to be affixed by hand, the seal is printed right on the carton, forming a part of the lid; it slips into a slot in the lower half of the carton, glues thereto and effectually seals the contents. It affords a great saving of labor and expense and the price is no more than that of ordinary cartons.

We can add this patent seal to any special printed Suwanee or Seminole cartons at no extra charge, thus saving the cost of separate seals.

Scout Folding Egg Carton

A low priced carton, made from 18-pt. stock, Manila lined board.

These boxes are the smallest 2x6 boxes made and yet the size of the egg cell is as large as used in our 3x4 boxes, making a compact, neat, strong box at a price which defies competition.

This box takes up the least room, and in fact will easily slip into a coat or overcoat pocket.

The small carton has the tendency to make the eggs appear larger.

Cartons packed 250 in each bundle. Fillers nested in each carton.

Write for prices on larger quantities.

2x6—Scout

	Weight Per M.
500.....	115 lbs.
1,000.....	115 lbs.
2,000.....	115 lbs.
3,000.....	115 lbs.
5,000.....	115 lbs.
10,000.....	115 lbs.
15,000.....	115 lbs.
25,000.....	115 lbs.

PRICE LIST

	Stock Prtd.	Special Prtd.
	\$8.40	
	8.00	\$8.50
	7.85	8.35
	7.75	8.20
	7.65	7.95
	7.45	7.70
	7.35	7.55
	7.20	7.30

Egg Carton Seals—Gum Label

The use of seals is a very practical advertisement, and a guarantee printed on the label assures the buyer of the high quality of the goods. Many egg cartons have loose-fitting covers, and it is necessary to seal them to insure the safe keeping of the contents.

Seals printed in red, green or blue with appropriate engravings, for which no extra charge is made. Furnished with wavy edge, saw or star edge or plain edge. Write to us regarding your requirements.

Stock Printed Seals

Note illustration of stock printed seal which can be furnished immediately. 1,000 lots, per M, \$0.85; 5,000 lots, per M, \$0.70; 10,000 lots, per M, \$0.65

Subject to market changes without notice

3x4—Eagle and Navajo

Weight
Both Grades
Per M.

500.....	105 lbs.
1,000.....	105 lbs.
2,000.....	105 lbs.
3,000.....	105 lbs.
5,000.....	105 lbs.
10,000.....	105 lbs.
15,000.....	105 lbs.
25,000.....	105 lbs.

Write for prices in larger quantities.

Navajo and Eagle Folding Egg Cartons

Many butter and egg dealers and grocers prefer the square or 3x4 folding egg carton, which we illustrate. This carton can be printed with the advertising on the top and sides, or on the wide flap of cover. It has glued corners and is shipped folded flat with the filler placed inside. Generally packaged 250 cartons to a bundle. Plain and stock printed cartons (Selected Eggs) are the same price.

Fillers nested in each carton. Cartons packed 250 in each bundle.

Stock Prtd.	Manila Lined Navajo Grade Special Prtd.
\$7.70	
7.40	\$7.90
7.30	7.80
7.20	7.45
6.95	7.30
6.75	7.00
6.60	6.85
6.40	6.75

Stock Prtd.	Solid Chip Board Eagle Grade Special Prtd.
\$6.65	
6.55	\$6.95
6.40	6.85
6.25	6.60
6.05	6.40
5.85	6.20
5.75	6.10
5.65	6.00

Egg Boxes For Parcel Post

Eggs need protection. This shipping package is so constructed that the eggs are separated by a thickness of corrugated board and the entire contents are surrounded by a double wall of air-cushioned corrugated board. Absolute protection is therefore assured, as the box possesses sufficient strength and durability to stand the usual rough handling in transit. Their extreme light weight, when compared with other packages, will, in many cases, save the postage for an extra pound. Folded flat for shipment.

Eggs—For shipment in zones each Egg must be wrapped with cotton, excelsior, newspapers, tissue paper or material of a similar nature when shipped in our boxes and box so wrapped that nothing can escape from the package. Any commercial wrapping paper is acceptable.

Eggs—For LOCAL DELIVERY our boxes are all right without additional wrapping Inside or Outside.

Weight limit for first and second zones is 50 lbs.—for all other zones, 20 lbs.

	Size	Packed	Price Per Doz.	Wt. Per Doz.
1 doz.	7 $\frac{3}{8}$ x5 $\frac{1}{2}$ x2 $\frac{3}{8}$	2 doz. per bdl.	\$1.00	5 lbs.
2 doz.	7 $\frac{3}{8}$ x5 $\frac{1}{2}$ x5 $\frac{1}{4}$	2 doz. per bdl.	1.40	9 lbs.
3 doz.	7 $\frac{3}{8}$ x5 $\frac{1}{2}$ x8	2 doz. per bdl.	1.75	12 lbs.
4 doz.	11 $\frac{1}{2}$ x7 $\frac{3}{8}$ x5 $\frac{1}{4}$	1 doz. per bdl.	2.30	17 lbs.
5 doz.	9 $\frac{1}{2}$ x7 $\frac{3}{8}$ x8	1 doz. per bdl.	2.70	19 lbs.
6 doz.	11 $\frac{1}{2}$ x7 $\frac{3}{8}$ x8	1 doz. per bdl.	3.00	23 lbs.
10 doz.	15 $\frac{3}{8}$ x9 $\frac{1}{2}$ x8	1 doz. per bdl.	4.00	34 lbs.

F. O. B. Chicago, Ill., Anderson, Ind., Brooklyn, N. Y.

AN EXTRA CHARGE OF 25C PER SIZE WILL BE MADE FOR SPLITTING BUNDLES.

Anderson Egg Box

For Fancy Eggs for Hatching.

The Anderson Egg Box is made of corrugated paper and has double faced corrugated paper partitions like the Eyrie, to protect each individual egg. The ability of the Anderson Egg Box to fold flat enables us to ship them in a knocked down condition, third class freight. They take but little room in storage and are very easy to set up. By sealing the box with gummed strips which we furnish, pilfering or substitution of common eggs for fancy eggs while in transit is eliminated.

PRICES.

	Shipping Weight.	Per doz.
1 Setting	10 lbs. per doz.	No. 3, \$1.50
2 Setting	13 lbs. per doz.	No. 4, 2.10
50 Egg Size.....	24 lbs. per doz.	No. 5, 3.00
100 Egg Size.....	45 lbs. per doz.	No. 6, 5.00

AN EXTRA CHARGE OF 25C FOR ORDERS OF LESS THAN 1 DOZEN OF A SIZE.

F. O. B. factory, Anderson, Ind.

This box may be used for either Parcel Post within weight limit or Express.

Use string instead of sealing strips for Parcel Post.

Subject to market changes without notice

PRICE LIST — October 15, 1917

Subscriptions and Changes Within Notice

Egg Cases — Egg Case Fillers — Egg Cartons
Division B
Egg Can

THIS BOOK IS DUE ON THE LAST DATE
STAMPED BELOW

AN INITIAL FINE OF 25 CENTS
WILL BE ASSESSED FOR FAILURE TO RETURN
THIS BOOK ON THE DATE DUE. THE PENALTY
WILL INCREASE TO 50 CENTS ON THE FOURTH
DAY AND TO \$1.00 ON THE SEVENTH DAY
OVERDUE.

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MAY 4 1933

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