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Poultrynz

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Poultrynz Editorial

The cold weather is with us now. While I always say that everyone should keep their Fowls "Dry, Clean and Warm" we need to add to this "fed." If your Fowls are hungry in the Winter time they are very vulnerable to becoming weak and very cold. We can not expect Fowls to be in full lay either so if they miss a few days there should be no panic. Even though by now they would have finished moulting they need a friendly eye kept on them. Mud is always a bad sign too and anything wet or damp must be corrected. Inside pens are the answer. Remember: Dry, Clean and Warm.
Until next issue.

Regards, Ian Selby.

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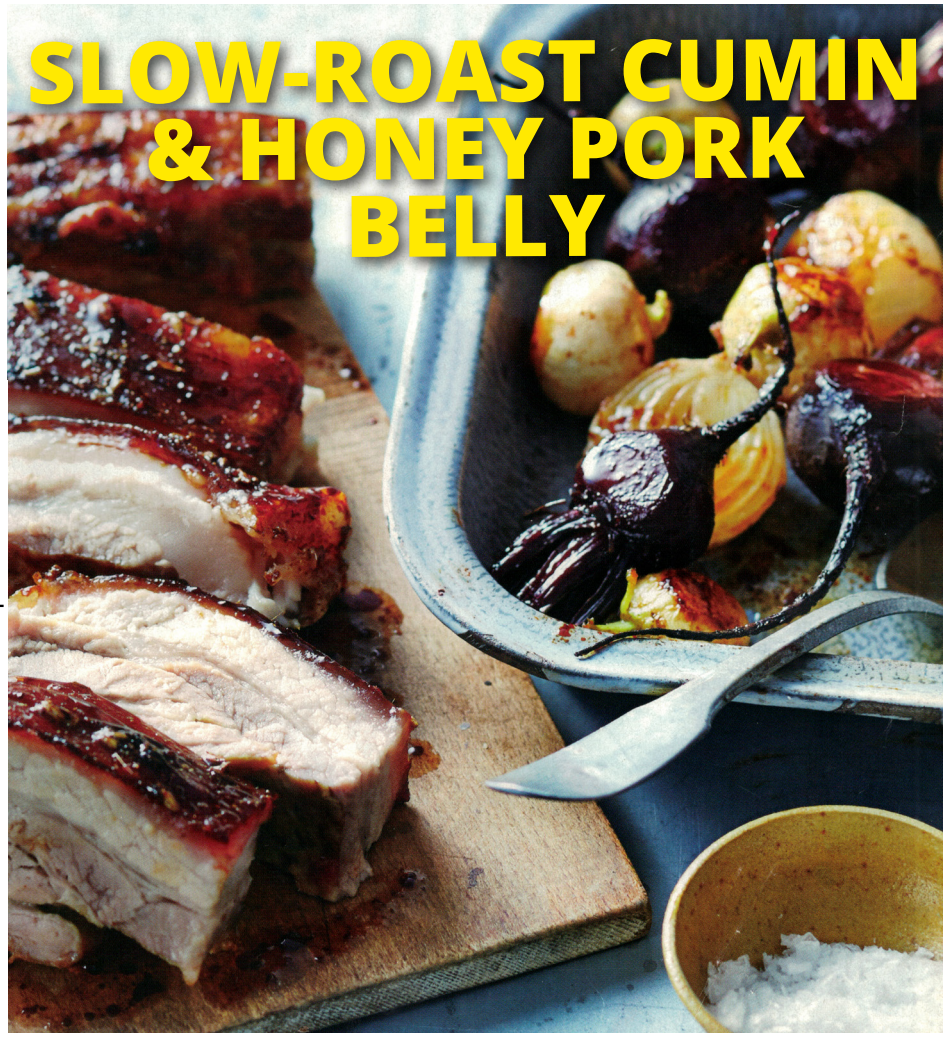
Continuing the tradition of Fostering the Fancy for 122 years

SLOW-ROAST CUMIN & HONEY PORK BELLY



INGREDIENTS

Serves 4-6

- 2kg boneless pork belly, rind scored
- 2 tablespoons olive oil
- 2 tablespoons flaked sea salt
- 1 teaspoon crushed white peppercorns
- ½ cup water
- 1 bunch spring onions, trimmed, halved
- 1 bunch baby turnips, trimmed
- 1 bunch baby beets, trimmed
- ¼ cup honey
- 2 teaspoons ground cumin
- 1 teaspoon ground chilli
- 1 teaspoon ground fennel seeds

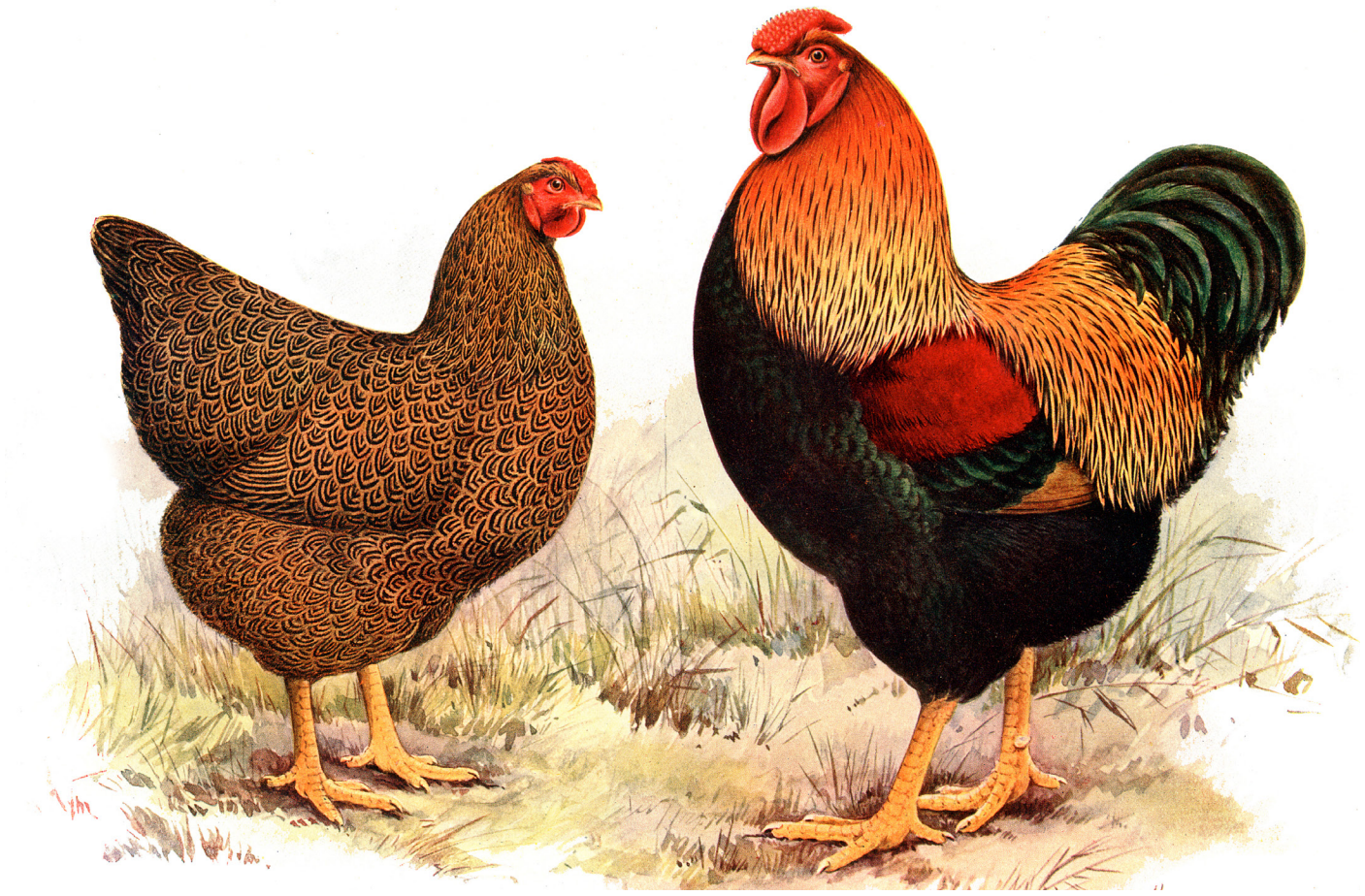
METHOD

1. Preheat oven to moderate, 180°C. Position a roasting rack over a large baking dish.
2. Place pork on rack, skin side up. Drizzle with oil. Rub salt and pepper all over rind. Pour water into pan. Bake for 2 hours.
3. Add vegetables to dish under pork. Brush pork all over with combined honey and spices.
4. Increase oven to 200°C. Bake for 15-20 minutes, basting pork occasionally, until caramelised and golden. Remove from dish and rest, covered loosely with foil, for 10-15 minutes.
5. Return vegetables to oven while pork is resting (10-15 minutes). Slice pork and serve with vegetables.

Top Tip

If making this meal for six, add some wedges of pumpkin to roast vegetables. Accompany with steamed greens such as broccolini or beans.

THE BEAUTIFUL PARTRIDGE WYANDOTTE BANTAM



A Partridge Wyandotte Pair

by Eugene S. Carlson.

I have been interested in Partridge Wyandottes since my boyhood days. As I look back on to those first years, I come to realize more and more that I owe my being as a Standard Bred Poultryman to three great fanciers. To Wm. H. Milward (the master breeder of over 65 years with partridge colour) who traded a pen of his Partridge Wyandottes for a Springer Spaniel puppy with my brother, and this instilled the love for good fowl within my heart. To the late Judge O.L.McCord, long time election commissioner of the American Poultry Association, who judged our local show and where I exhibited my birds as a youngster for the first time. It was Judge McCord who said as he placed his hand on my shoulder, "Son, they are just too good for a poultry house, better take them to bed with you." Those few words gave me the incentive and confidence I needed at that time to step out into this world as a breeder and exhibitor. Lastly, to Louis Paul Graham whose writings, art and photographic work inspired my thinking and did so much toward helping me reach a place in this great poultry industry. There are others, but to these three gentlemen I am indebted for it were they who helped plant the seeds of Standard Poultry within me, and helped cultivate it into its being with me to this day.

In later years I have become very interested in the Partridge Wyandotte Bantam. They are steadily becoming as fine a variety as are their larger cousin. Each year we can see a major improvement in this breed. The colour pattern is identical to the larger fowl, and our Standard of Perfection calls for identical description in plumage colour, so we must breed to it with that in mind. There is something about partridge colour that once you have tried breeding it, one cannot give it up very easily. It offers a challenge toward the endeavour of improvement, although it is not a difficult colour pattern to work with, yet it offers just enough of that something which is intriguing to our own wisdom.

Some can make progress in the easy way of doing

things. They may possess the ability to be somewhat of a genius in the mastering of it, but cannot explain why they have accomplished it in this manner. But the real honest to goodness breeder is the one who has the foresight to look ahead to the future by setting his goal of what his ideal must be, and then strives toward reaching that ideal, He must go forward with the foresight In his thinking to accomplish that which he is striving for; developing it little by little, accepting his downfalls with a smile and his gains with a determination for the future. This is a breeder. He is one who really sees his birds even before they ever exist. He learns by his ability to do just how to create his desires. He sees the bad in his strain as well as the good in it. To many of us can see just the good In our own strains, and all of the bad in the others. If we see eye to eye with our neighbour and be proud of his accomplishments as we are of our own; we are then helping not only the other fellow but also ourselves, and in this manner our variety will gain in a higher plane in the field of bantam breeding.

The Partridge Wyandotte bantams as are all other varieties of bantams have their faults. The most noticeable fault lies in their size, we are overcoming this by careful breeding of birds nearer to Standard weights and showing the stamina for better breeding. The contour of a good Wyandotte bantam is a bird of curves, and we must get away from those which are just birds of angles. One with full breast, well spread back and full spread tail with a well rounded body set on balanced legs and having a head that is round and wide with full red lobe and eye and neat trim beak is about what is most desirable in a true Wyandotte bantam. Providing the comb follows the crown of the head for nothing distracts from an other wise good specimen if the combs has excessive pebblings, hollow thumb marked or telescoped spike. The wattles should be round full and balanced; long course wattles is not a good Wyandotte characteristic to have in our breeding pens. Feathering should be the kind that sets the bird off without breaks, long or narrow feathers are not at all desirable. After having some experience with the breeding of the Wyandotte bantam one soon learns to feel what feather quality in the variety is like.

Male colour is coming along very nicely, and we can be proud of those we now have, for they are showing wonderful even shade in the red, carrying good striping in hackle and saddle and with greenish black breast sets them off just as we like them. We desire of our males to have that medium shade of red in the hackle, saddle and wing-bow, and if that shade is the same throughout we are assured he came from a dam that has that richness in feather that is so much admired. Some ticking or flecking in breast and fluff Is permissible and usually a male with this defect will breed good pencillings in its offspring, providing the females are good in this respect. Males of definite black breast without greenish sheen usually produce purple in the sheen of the females. Also discard any male which does not carry distinct striping in hackle and saddle. By this I mean that many males stripings are broken in saddle, or unevenness in the stripe having a full greenish black stripe at saddle base and then breaks into a narrow stripe about half way up the feather. Others have a tendency to have the black run right out into the tip of the feather, thus not allowing the red to follow completely around the entire feather. A centre of good rich red along the quills is not objectionable. The males undercolour calls for slate which often runs into a light gray but if the male is well balanced in type, carries proper even surface colour, nicely striped In hackle and saddle and having some sheen I then would not let undercolour become a major worry to any extent.

Our females today are beginning to have a good rich even ground colour. We are getting away from those lemon coloured males and females. We must

work toward one of the major weakness and eliminate those having shaftness in the breast. We must also work toward improvement of pencilling including all sections as well as hackle. It seems to me the pencillings are a little to course for the feather to carry rightly In the make-up of this pattern. Again I stress sheen or gloss in the pencillings and with it we know we have good healthy type of stock to work with.

A Partridge Wyandotte pullet showing good markings

A happy medium shade of colour in both male and female is in my way of thinking the making of a good Partridge Wyandotte Bantam. Trying to overcome colour defects by mating light with dark and visa versa breeds trouble, as the offsprings will have no semblance of true colour balance. Knowing your stock, generation to generation is what it takes to make a better bird. Keep feather sets from the best each year and study this from time to time will prove to you that you have gained or lost what you have been striving toward. We may never reach perfection, but we can do our best by getting near to it in our Partridge Wyandotte Bantams by working for betterment of colour, Improvement in pencillings and stripings and retaining and sticking with that medium rich shade of colour that so easily takes to the public eye. By showing the realness in our Partridge Wyandotte Bantams will secure the admiration of all lovers of good bantams. As a meat fowl and an egg producer, we have it in the Partridge Wyandotte Bantam. I shall not advocate a certain feeding program to follow but only suggest that you feed them right and give them proper attention will pay you extra dividends. I have raised the bantams right along with the large fowl and they have grown out nicely under the same environments. In conclusion, we must think and combine these three things together if we are to create the right kind of Partridge Wyandotte Bantams, namely: Breed, Feed and Show.

THREE VARIETIES OF BLUE

by Dusty Peery. From an American Poultry Association Yearbook.

Blue Breeds - Orpingtons, Wyandottes, Langshans and Leghorns

I have been interested in blue varieties of poultry for several years. I have raised Blue Pekin Bantams and friends have raised Blue Rosecombs and White Crested Blue Polish. The American Poultry Association and American Bantam Association standards call for blue to be a medium blue laced with darker blue or black. We have all tried to achieve good lacing in our breeding programs, a few times results were good, usually results were poor. Good lacing seems extremely difficult to achieve. This blue is said to be heterozygous, that is, it does not breed true. The results of breeding blue to blue are 25% black, 50% blue and 25% blue splash.

While developing my strain of white Dutch Bantams, I had some "off colour" chicks. One was a lovely blue pullet, slightly laced with darker blue. At about one year old she also developed a bit of white hackle lacing. Having no blue Dutch, I decided to breed her to a Black Dutch male. Her three chicks were all blue pullets, but they were a plain pigeon blue without any lacing. The next year I bred these three blue pullets to Black Dutch again, and this year I bred blue to blue as well as a few blue to black. Of the blue chicks this year, the ratio is 100% plain pigeon blue males and 65% to 75% plain pigeon blue females. The remaining females, 25% to 35%, are a slightly darker blue, with darker blue or black lacing. My blues certainly did not follow the Standards here in the US, so I began looking for information. In a letter to Mrs. Anna Banning in Holland, among other items, I mentioned these blues and the lack of lacing. Mrs. Banning replied to my letter and said that the Holland Standard called for Blue Dutch to be the non-laced variety, and that other breeds also called for a non-laced blue variety. She did say that this non-laced blue was also heterozygous, it would breed blue, black and blue splash.

The Holland Standard is set up with the variety section having all common varieties listed by number. If a deviation of the variety standard exists in a certain breed, that deviation is listed under the breed. It most resembles the organization here of the American Bantam Association Standard.

Number 70 in the Holland Standard is "Blauw (onge-

Andalusian Pullet

zoomd)" which translates to Blue (non-laced). It calls for a light coloured blue without lacing.

Number 71 in the Holland Standard is "Blauw (gezoomd)" which translates to Blue (laced). The description calls for medium light blue with dark blue black lacing.

Number 72 in the Holland Standard is "Parelgrijs" which literally translates to Pearl gray and corresponds to Self Blue in the US and Lavender in other countries. It is described as a true breeding blue, light blue with silver tint, no lacing.

In the Holland Standard there are 19 breeds which list variety #70, non-laced blue; 20 breeds list #71, laced blue; and 6 breeds list #72 lavender. As a matter of fact, 5 breeds have listings for #70 and #71, non-laced blue and laced blue. And 3 breeds list all three blues #70, #71, and #72. I have the full list of breeds if anyone wishes to see it, let me know.

The British Poultry Standards, Fourth Edition, gives variety descriptions under the individual breed standards. A prerequisite to reading the British Standard is to define self colour - "a uniform colour, unmixed with any other." In Britain the self blue of the US is called lavender and when they use the term "self colour" it could be black, buff, blue, white or any other plain unmixed colour. Blue is always listed as "The Blue" and only by reading the descriptions does one know whether it is laced or non-laced blue for that breed standard.

The British Standard has this description of Andalusian: "The breed owes it's name to the Province of Andalusia in Spain, and is one of the oldest of the Mediterranean breeds. It is a contemporary of the black Spanish with which, no doubt, it is closely related. The blue Andalusian, as we know it today, was developed from black and white stock imported for Andalusia about 1846, and blending of the two colours most probably created the blue. The earlier specimens were large, and game-like in carriage, with medium combs and lobes, and of a self colour, although individual birds were selectively bred for lacing, by infusion of black Minorca blood."

"Colour - Male and female plumage: Clear blue, edged with distinct black lacing, not too narrow, on each feather, excepting the males' sickles, which are dark (or even black), and his hackles, which are black with a rich gloss, while the female's neck hackle is a rich lustrous black, showing broad lacing on the tips of the feathers at the base of the neck. Under colour to tone with surface colour."

Other breeds calling for a laced blue variety in the British Standard similar to the Andalusian laced blue are: Australorp, d'Anvers, d'Uccles, Faverolles, Jersey Giant, Modern Langshan, Orpington and Naked Neck.

The Pekin Bantam has a description for non-laced blue: "A rich pale blue (pigeon blue preferred) free from lacing, but with rich dark blue hackles, back and tail in the male." The description for Wyandotte non-laced blue is "One even shade of blue, light to dark, but medium preferred; a

clear solid blue, free from mealiness, 'pepper', sandiness, or bronze, and quite clear of lacing; a 'self colour' in fact." Other breeds in the British Standard calling for a similar version of non-laced blue are: Cochin, Frizzle, Japanese, Leghorn, Minorca, Old English Game, Poland, Rosecomb and Silkie.

Lavender is described in the British Standard under d'Anvers and d'Uccles: "Male and female plumage: This is a true breeding pale silvery blue, all the feathers being of one uniform shade." Under Pekin Bantams, lavender is further described as "The lavender is not a lighter shade of blue Pekin. IT is different genetically and is of a lighter more silver tint without the darker shade associated with the normal blue. The Silver tint is most obvious in the neck and saddle hackle feathers of the male." Besides the Belgian breeds and the Pekin, breeds listing lavender varieties include Araucana, Rumpless Araucana and Japanese.

J. Robert Smyth reports, "The genetic basis for the difference between Andalusian type of blue-black distribution and the self-coloured blues has received little attention. Carefoot (1988) concluded that the laced pattern of the Andalusian Bantam was due to homozygosity for the eumelanin intensifier, melanotic (ml), the pattern gene (Pg), and the columbian restriction gene (Co), on an E/E BI/B1+ background. Cote (1976) noted that blue was ineffective in modifying black melanin attributable to Ml and Lg, which suggests that the absence of these genes might result in a self-blue pattern."

Lavender Araucanas

Carefoot discusses lacing, "Moore and Smyth (1972a) successfully analysed the genetic make up of the pattern of the Silver-Laced Wyandotte. They showed that the laced effect was the product of three separate genes on an eb ground. The first one was columbian Co which cleared the back and breast of the eb bird to that of the Columbian Wyandotte. Then a combination of the black enhancing gene melanotic Ml and an ordering gene of which they denoted lacing Lg-added sufficient black pigment to the feather and arranged this pigment in an outer lace. It will be shown that this 'lacing' gene is in fact the pattern gene Pg."

Under the section on Blue, Carefoot comments, "The breeding of self blues, without lacing is akin to the breeding of buffs in that both are pastel shades and require minor modifiers to attain the ideal standard."

From all the information gathered, including the above, it would appear that a simplification of each of the three varieties of blue would be:

1. Lavender (self blue in U.S. only) is caused by the gene denoted lavender (lay). It is a true breeding, homozygous (breeding the same), pale silver tinted blue colour. Lavender is the gene which when add-

ed to a mille fleur changes it to a porcelain. Any varieties which are part blue, such as Blue Red or Blue Wheaten cannot have the lavender gene because it dilutes all colours, not just black; it would also change the red to buff.

2. Blue (laced) is most common in the U.S., where the only standards for blue specify lacing. A medium blue is what most breeders strive for, but blue varies from almost black to the very palest blue colour. Lacing is listed as being black or a darker blue. It appears from the literature that some experts say the lacing is caused by the lacing gene Lg, while some say it is a pattern gene Pg. Having no expertise about genes., it does appear that some separate entity or gene does exist that is responsible for lacing on a feather. Blue birds, either solid blue, or partly blue such as Blue Light Brown or Blue Golden, do not breed true; they are heterozygous. They breed black-blue-splash (in the case of Blue Golden x Blue Golden, breeding would yield 25% Golden, 50% Blue Golden and 25% Blue Golden Splash). The blue parts of the birds are supposed to be laced.
3. Blue (without lacing) - referred to as a self colour in the British Standard. This blue is exactly the same as the above #2 laced blue except that the gene that causes the lacing is missing in this non-laced blue variety. The same is true in Holland; they have a non-laced blue variety. It is still heterozygous, breeding black-blue-splash and the blue colour can still vary from almost black to the palest blue, with a medium or pigeon blue being preferred. These blue feathers are not laced. They are a self colour to the edges.

My non-laced Blue Dutch Bantams are very attractive. I plan to do some serious record keeping next year to document the exact numbers that are produced from non-laced blue x non-laced blue pair matings. I also plan to mate some of the laced blue females to non-laced blue males and to black males. I would be pleased to hear from anyone who has a theory as to why only a small percentage of my females are laced, and the males are never laced. I would also be interested in other breeders experiences with a non-laced blue variety.

Blue Minorca Cockerel

WHAT SHOULD I DO IF?

Author unknown

One must accept that successful individual treatment is really not often practical in chickens, mainly of course for economic reasons, because not many birds are kept as pets in the same way as dogs, cats or exotic animals. They are kept for production, either of eggs or meat and their individual value is relatively low. These factors must always be borne in mind and often it is the diagnosis of the problem that is most important so that preventive measures can be taken for other birds in the flock.

Blue and shrivelled comb

Colds: These can be caused by a variety of germs and usually spread right through the flock so treatment of all the birds, either by drinking water medication or by individual injection, is needed after an accurate diagnosis has been made. As you will know, most of the useful medicines are now only available from your vet, as governments are progressively trying to reduce the amounts of antibiotics, pesticides, etc. that get into the food we eat, by legislation.

Crusted eyes: These may be just one factor in a respiratory disease or may be caused by infected dust in the bird's environment, peck wounds from other birds or by ammonia fumes. Individual treatment with antiseptic eye ointment is often successful, but as always, the true reason for the condition should be established before treatment is started.

Blindness: Excess ammonia can also cause true blindness. The fumes damage the penorbital tissues, drying them up and causing both pain and blindness. Regular treatment with a greasy eye ointment helps in some cases, but in others the damage to the eye is permanent. Marek's disease sometimes causes blindness in individual birds if the cancer tissue is present in the optic nerves. Either one or both eyes may be affected and there is no cure.

In young birds the chicks can become blind if they are reared in a house with only red, and particularly infrared, lights or heaters. When they are a week or so old, you will notice that the birds cannot see to find the feeders and drinkers. Again, there is no cure because the developing retinal tissue in the eye is actually destroyed.

Swollen sinuses: The cause is usually a serious flock infection that needs specific treatment, usually in the drinking water. Even after treatment, the condition often becomes chronic in individual birds and the sinuses remain full of a hard cheesy core. In these cases, applying hot compresses to the face and squeezing out the matter will help. Sometimes, antibiotic can also be injected or dripped directly into the affected sinus.

Gasping for breath: This usually means that there is a severe infection affecting the windpipe, lungs or airsacs. Your poultry vet will be needed to make the diagnosis.

Distended crop: The crop can become paralysed just because the bird has eaten too much, in which case turning it upside down and milking out the contents through the beak may help. This, however, requires skill as it is easy for the bird to choke. Sometimes the material in the crop is a mass of fibre: grass stems, for example. The impaction can be removed by a fairly simple operation carried out by your vet, but he will probably have to put in stitches and, unfortunately, birds can reach their crop with their beak and often pull the stitches out. The fibrous mass is also likely to be present in the gizzard and the first part of the intestine where it cannot be removed and in this case, the operation will only give temporary relief. Giving birds access to large, insoluble grit and preventing them being able to peck at stemmy grass or hay until their gizzards are fully developed will prevent the condition, unless it is a symptom of a more serious paralytic disease such as Marek's.

Bloody diarrhoea: In chickens, this is often caused by coccidiosis. Specific treatment will help and a diagnosis can often be made quickly by a laboratory examination of affected droppings.

Brown diarrhoea: This can be caused by anything from simple indigestion to severe infection, so clearly treatment without a diagnosis will not be useful.

White diarrhoea: This is often accompanied by white staining of the vent and is actually not diarrhoea at all, but an excessive excretion of semi solid urine from the kidneys. Kidney failure is most frequently the result of stress, but a fault in the water supply for the birds, certain nutritional imbalances or serious infections can also cause kidney damage.

Pecked vents and prolapse: Any abnormal colour around the bird's vent will encourage others in the flock to peck at it and this can rapidly lead to a real "epidemic"

of cannibalism in the flock. The vent may be stained by droppings, or in laying birds, it can appear swollen and bloody because of a prolapse. A prolapse may be caused by an abnormally large or broken egg being stuck in the passage, but is more often the result of pullets coming into lay too quickly. In this case, the whole oviduct becomes over developed, swollen and haemorrhagic so that part of it protrudes from the vent like a pile. This protrusion rapidly becomes infected with dirt from the poultry house and it also attracts the attention both of the affected bird itself and other birds so that it is pecked, causing bleeding and often death.

White Diarrhoea in Poultry

Large normal eggs that are stuck can sometimes be safely removed if you lubricate the passage with liquid paraffin and gently squeeze out the egg, trying to get your fingers behind it. Simple prolapses can be dressed with a soothing antiseptic ointment and pushed back as far as possible. Stitching is not possible as it prevents further eggs from being laid.

Prolapse is also seen in birds that are too fat when they begin to come into lay. The high intra-abdominal pressure squeezes out part of the oviduct. It is often a food too high in whole grain or maize products that causes the birds to put on too much weight.

Aggression and cannibalism: Vent pecking from whatever cause, frequently leads on to a serious outbreak of cannibalism in a flock. Aggression is one of the most serious problems that poultry farmers have to cope with and aggressive behaviour and cannibalism can be started by anything that makes the birds unhappy or stressed, or even just from curiosity. Irritation from parasites, an uncomfortable, cold, damp floor or poor design of the poultry house that allows competition between birds to develop with the rapid appearance of bully birds, will all trigger off an outbreak. Another cause is a nutritional deficiency that leads to a craving for protein. This will start an outbreak of feather pecking in the birds and this quickly leads on to cannibalism. Also, there are some specific virus infections (particularly Infectious Bronchitis) that attack the brain. These cause nervous signs that may show up as flightiness, aggression or cannibalism. Vaccination against Infectious Bronchitis is usually a good policy, even in small flocks.

Aggression and flightiness in controlled environment houses can be reduced by giving the birds less light or changing to some red bulbs. In windowed houses and pole-barns, slanting beams of sunlight must be prevented from getting into the house. Also, more feeders, drinkers and nest boxes for laying birds should be put in and placed so that competition between birds is reduced and bully birds cannot dominate other birds. Giving the birds more to interest them is also an important factor in good management and will reduce the tendency of birds to attack each other. Both the bully birds and also ones that are

consistently bullied should be identified and separated from the flock. Aggression very quickly becomes established, and I mean in a matter of hours not days. Once established, it is very difficult to eradicate. The whole subject of aggressive behaviour in poultry is very complex.

Paralysis: This is most often caused by virus cancers like Marek's disease, but can also be the result of nutritional deficiency or some forms of food poisoning. A visit to the vet will be necessary to establish a diagnosis. In the meantime, the affected bird should be put on its own in a comfortable warm place with plenty of food and water. Make sure that the floor is not slippery.

Bleeding wounds: The bird must be isolated immediately before it is pecked by other birds, and the wound dressed. The coloured veterinary aerosol sprays are usually satisfactory.

Broken legs and wings: Fractures in birds do not heal as easily as in mammals because many of the bones are hollow. This reduces the bird's weight so that, in natural surroundings, it can fly better. Wing fractures are usually best dealt with by immobilising them by binding both wings close into the body with wide adhesive tape. If only the affected wing is bandaged, the bird is lopsided and panics. Remember that fractures can go septic and probably will need treatment with drugs, so your vet should always be consulted. Fractured legs can sometimes be simply splinted and strapped up, but again this is really a job for the vet. In all cases, the bird should be put on its own as soon as the injury is seen.

Fractures must be differentiated from dislocations. These usually affect either the hock or the hip joints and the whole leg suddenly gets out of alignment. The cause may be nutritional, but individual treatment is seldom satisfactory.

Swollen hocks and feet: These problems are usually the result of some kind of infection. This may be started by the birds having to walk and live on damp infected litter, particularly if the ammonia level is high. Treatment with ointment and a specific antibiotic against the infection may be successful and hot fomentation of infected feet is also sometimes useful.

Scaly legs and faces: This problem may be caused by a specific mite infection when the use of a specific ointment, lotion or injection will usually bring about a cure, but this is often slow and patience is required. As with most skin conditions, however, the cause is often nutritional.

Overgrown Beak

Overgrown beak and nails: These should be clipped with dog nail clippers. The cause may be nutritional but is usually just because there is nothing in the bird's environment for the toes to grip on or on which the bird can sharpen its beak. Obviously, this is most commonly the case in birds that are kept in metal or plastic cages. Wooden perches or a few logs or thick branches from an old tree on the floor of the house will help.

Blue and shrivelled comb: This is a sign of any severe illness, so again one can't generalise on a cure. Among the commonest causes are kidney failure, egg peritonitis, heart disease or a sudden acute infection.

Swollen abdomen: The two commonest causes are dropsy (which is the result of heart disease) and egg peritonitis. In either case, there is little that can be done for the individual bird, but if your poultry vet can establish the underlying reason for the condition, control measures can often be taken to prevent it occurring in other birds in the flock.

As in so many of the articles that I have written, readers will be disappointed that there are so few easy 'home remedies' for diseases in their poultry, but I hope that you will all have come to appreciate that the balance between health and disease is a very fine one in poultry, just as it is in human beings, and that it is usually the reasons why the birds have come to grief that the flock owner must establish.

WHAT IS INBREEDING?

A Breeding Trio of Columbian Pekin Bantams.

by Clyde Weaver. USA.

With all the flux that take place in the poultry fancy by members dropping out and new members replacing them, we should look at possible ways to prevent this. Are we guilty of assuming everyone that takes up poultry knows everything there is to know. How often have you been surprised at questions asked you by breeders who have been in poultry for some time.

At an annual show if breed clubs would have a question and answer period this would help members. Breeders would have a chance to find answers to their questions about the breed and variety. This could be the difference of preventing a possible drop out. We all would benefit from it.

Many of the questions that are asked of the judges are specific breeding questions. Unless the judge is familiar with the specific breed, he cannot give the correct answer. The answer the judge would give would be of a general nature. This will not help the specific breeder with his specific problem.

Judges seminars where judges and breeders could attend would be a help. This would let the exhibitor know what the judge would be looking for. It would refresh the judge's mind and help the exhibitor to be looking for the defects. Many of the breeders own a Standard of Perfection, but only study the part that pertains to their breed. The general information is felt to be only for the judges, which is wrong.

Sharing with each other would help us all. How many times has someone asked what is inbreeding"? The reply many times is mating brother and sister. That is where it stops. There is more to it than just mating brother and sister. This type of answer will not help the newcomer, but will lead him into trouble.

What is inbreeding? This is how I understand the method and how I apply the method; and it works for me.

It is the mating together of closely related birds, year after year, in direct line, from a few original birds. This differs from line breeding in that the BEST birds resulting each year from such matings are again mated and remated even to the extent of pairing brothers and sisters in an effort to establish certain desirable qualities. This practice is kept up indefinitely in the hope of establishing better colour. Shape may be improved in this way; however, rarely is the case. Loss of size and deterioration of shape are misfortunes that usually follow inbreeding. Vitality will often become less vigorous in flocks where inbreeding is practiced.

Such undesirable consequences may be avoided by the method of selection and through the practice of migration. To gain the best results from the practice of inbreeding, eggs from mature hens only should be

hatched, and only the most vigorous of all should be selected for this purpose. No bird, either male or female, lacking in vigour should be bred from. This must be rigidly observed or vitality will quickly Wane. Migration consists in sending pullets a distance away where they may have the advantage of a change of climate and soil. The pullets may be returned as yearling hens and used as producers. Cockerels also may be sent into a locality entirely different - one where a limestone soil prevails will be of the greatest advantage. By changing the environment of the birds, it is felt that this helps to build up the birds resistance to disease and builds up vitality. So by sending pullets to one location and cockerels to a different location, you have doubled your vitality.

To be successful in inbreeding, perfect records of the blood lines must be kept. A most complete system of marking must be followed: the toe punch must be used constantly - every chick that is hatched must be so marked as to be identified without doubt as to both of its parents. The hen and the cock of the mating must be recognized with certainty by their toe marks. To increase the certainty of recognition, in addition to toe markings, sealed leg bands may be used; when identified in this way, the greatest possible distance in relationship may be assured. Weaklings and those that produce them may be traced in this way, as may also deformities of body. The practice of establishing first the colour and marking and afterwards the size and form, usually results in the loss of the latter, and when the attempt has been made to regain these desirable features, colour is lost. The only safe method to follow is that which is carefully directed toward retention, at least, if not the improvement, of all three qualities. The practice of placing too much emphasis on beautiful colour of birds that lack size and breed characters has encouraged the plan of working for colour. The best rule is to endeavour to secure the most nearly perfect size, shape, colour, and markings all combined.

To influence colour and markings, birds possessing these to a marked degree should be selected for the mating. If size, shape and perfect colours are possessed by individual birds, advancement will be made more quickly than by the use of birds lacking in any of these desirable qualities. Yet one cannot always be so fortunate as this: when colour is best, size and shape are the features demanded and colour may in a measure be neglected. No matter how well the birds may be selected, size, shape, and vigour are apt to dwindle in the order mentioned.

To overcome these dangers, new blood may be gradually fed into the blood line of the birds used for inbreeding. To do this, a vigorous hen of large size, perfect type,

A Bantam Fancier with his winning birds

and of as good colour and markings as possible should be chosen. This hen should be mated to the best cockerel produced from the inbred stock of the year before. If the offspring resulting from this mating are desirable, the same hen should be used another year and be mated to the best cockerel that was bred the year before from the inbred stock. The best pullets bred from this hen should be mated to their own sire. If the offspring from this mating are what they should be, the best of them may be mated as new blood into the line of inbred stock. No attempt should be made to use the new blood until the second generation has proved successful, and the second or subsequent generations only should be used. This same process may be repeated year after year, the results of which will be cockerels, which may be mated each year to one or two of the best hens of the inbred stock. Hens in their second year from the same blood may be mated to the best cockerels of the inbred line.

The foundation stock must be as nearly perfect as possible in size, shape, and colour. Birds for foundation stock should be chosen from flocks that possess the desirable qualities hoped for, and they must be perfect so far as can be determined. This is necessary from the fact that in future generations imperfections may spring up which did not make their appearance in the first cross. If undesirable features make their appearance in the first cross, new hens should be selected and the ones used the previous year should be mated to another cockerel to prove whether the dangerous features came from the hen or whether they were brought to the surface by the union of the two. If they came entirely from the hen, they will reappear later; if they were due to both parents, they are apt to occur again. If they do not make their appearance in the results of the second mating, this fact may be accepted as satisfactory evidence that the fault was in the first male selected. No chance work may be permitted in selecting birds for this purpose; and, in addition to this, unusual care must be given to keeping records of the intermingling of blood lines to avoid dangers that are apt to follow.

In introducing new blood it should always be borne in mind that exceptionally beautiful prize-winning birds are not always the best for this purpose.

Start with birds that are as near perfect that you can obtain. Record keeping is a must. Wrong records and your birds are not going to produce birds that will win. Beautiful birds do not make the breed. Type is breed and colour is variety.

Colour Varieties of Pekin Bantams

Brown Red Pekin Cockerel

Columbian Pekin Hen

White Pekin Cockerel