How can you save on your feed bill? Part Two

Pasture Management for free range and organic Poultry

Why improve the range?

Bagged chicken foods are formulated for the average bird. If they are deficient in any area the bird, with access to the range, has the opportunity to make up this deficiency. This is especially true of vegetarian rations which may have deficiencies in certain amino acids.

We assume that the birds derive nothing from the range and is getting all its needs from the bag. However, with ever increasing feed costs it would make much more sense to start looking at the range to provide significant amounts of nutrients and make up the difference from the bag.

Research has shown that there are other welfare benefits from ranging such as lower incidence of feather pecking.

What can they get out of the range?It is difficult to establish exactly how much birds can get from the range. Some studies suggest that as much as 20% of diet can come from plants but that this is very much dependant on plants available, the weather and the breed of bird.Chickens will eat some plants in preference to others, especially certain legumes, such as clover, red clover, birds foot trefoil, vetches, quinoa, millet, fodder radish, triticale and kale. The clovers are naturally high in protein compared with grasses and prove very palatable to chickens and other poultry. Quinoa is what is called a pseudocereal, something in-between a grass and a cereal. It originates in South America, and is very high in protein, between 12-18%.It is often forgotten that a chicken is an omnivore. On the range it can derive a lot from insects of one sort or another. Insects and caterpillars are very high in protein. A caterpillar can contain 28% protein, while a grasshopper contains 20% and even an ant is 13.9%. As well as protein many insects contain rich sources of calcium and other trace elements as well as reasonable levels of carbohydrates and fats. Even less work has been done on what poultry may get from the range in terms of insects, although they obviously have to be present to be exploited.How does breed affect rangingA DEFRA funded project, finishing in 2002, looked at the different breeds of meat birds and their activity on the range. At one extreme was a normal Ross type hybrid bird at the other the traditional Ixworth. In-between were the continental meat birds such as Master Gris. The findings demonstrated that the older breeds, (Ixworth, light sussex) and slower growing breeds (Master Gris), were much more active on the range than the Ross type bird. Not only were they more actively foraging they were also faster, reacting quicker to potential predation.Two diets were fed in this study, one being an ad lib fattening ration and the other a lower protein ration. Interestingly the birds on the lower protein ration spent more time ranging. The range provided did not include trees/bushes, cover crops or insect attracting crops, but did include in some batches, artificial cover in the form of conifer wigwams. Those batches with the artificial cover ranged more than those without.Although breed of chicken does play a part there are many other variables that will encourage or discourage ranging. When in Nepal I spent considerable time trying to improve local egg production through introducing improved breeds. The main problem I encountered was loss through predation. The improved birds just weren't quick enough.Flock SizeAll research has shown that the larger the flock the less birds range. Less than 500 birds, 40% range, greater than 1500 only 5% range. I would go further than this: in my experience between 100-200 bird flock will achieve getting on for 100% ranging and that this is all down to the pecking order.Pecking order is a hierarchical system of social organisation in animals. It was first described in the 1920s. It appears necessary for social animals to define who is the top dog, or chicken and who the bottom and where everyone else fits in-between. Such a system is thought to give structure and avoid unnecessary conflict and thus save energy. It also appears to give confidence to all within the hierarchy. However, with chickens, there appears to be a limit to the number a pecking order can sustain; the maximum would appear to be around 200.Rearing effects on rangingAnother factor affecting the ability of birds to range is the age at which they first start ranging. The DEFRA trials mentioned earlier noted that earlier access to pasture increased range usage. During summer months we have let chicks, brooded on the range, have access to pasture from a week old onwards. However, it is necessary to provide a secure environment, crows and buzzards would otherwise make short work of them.In many systems, where chicks are not brooded on the range, this is not possible. However, it is possible to take a bit of the range, a few sods a day, to the birds. This would appear to make a positive difference to their ability to range later. They will, even at a few days old, start scratching around in the dirt.Grass and cover crops on the rangeThe grass mixture used is important. Around the house and the pop holes you need a short, hardwearing grass. Such a mixture would be dwarf perennial ryegrass (40%), creeping red fescue, (23%), meadow grass, (25%), wild white clover, (8%), birdsfoot trefoil, (4%)Further away it is possible to look at a variety of alternatives, such as insect attracting mixtures and seed bearing cover crops. These crops would need to be grown on a big enough scale to make an impact. I would suggest two strips, quarter of an acre each for 200 birds. There is little research done on feeding poultry in this way, most of the information coming from game bird experience. However trials work should be carried out during 2010 and results will be published on this website. The crops will need to be protected until big enough to allow the birds in. The trials work will have one strip predominantly insect attracting while the other is predominantly seed bearing. An example of the insect mixture would include birdsfoot trefoil, borage, phacelia and red clover. The seed bearing mixture; quinoa, chicory, kale and millet. Both of these types of mixtures have the ability to provide cover for two years, correctly managed.To make the most of forage on the range it maybe necessary to change the feeding regime. If ad lib feed is provided in the house it is likely to reduce foraging. Instead a reduced diet would have to be fed in house that encourages the birds to forage on the range. Trial work in 2010 should confirm and refine this.To further exploit the range these strips of cropping could be layed out between rows of trees, suitably spaced. At its simplest these could be willows for coppicing and firewood, or fruit trees. The nutrients then left by the birds could then be utilised by the trees as well as subsequent cropping.Ends articleIf you like this article, feel free to share it with your own list, post it on your site, on your blog, or add it to your autoresponder. Twitter it, Facebook it, translate it. As long as you leave it intact and do not alter it in anyway. All links must remain in the article. No textual

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