

CONCERNING POULTRY

By : Otto Boswinkel

Grains, seeds, greenfeed and herbs

In my previous article I promised to continue about chicken feed, grains, seeds, weeds and herbs. The following is meant for 'indoor' poultry especially ones that do not have access to 'free range' with the opportunity to 'forage' for a percentage of their food. Free Range poultry will naturally be able to find a good percentage of weeds, seeds and insects depending on the time of year and freshness of the 'free range'.

Mixed grains

Let us have a look at the mixed grains first. Just as with the meal, you have to look for quality. Is it dull, powdery or mealy, or musty smelling, then quality is not there! A simple test for freshness is the so called 'germination-test'. Easy to do, you just let the mixed grains sprout in a damp situation. Take a plastic box, put in a thin layer of the grains and let it soak in lukewarm water for some (max. 4) hours at room temperature. (Not too long! Soaked grain starts to ferment after 4 hours!) Then rinse in a strainer with lukewarm water, put it back in the box and cover the box with a damp (paper)kitchen towel. After 24 to 36 hours the first seeds will already have germinated, if the mix is of good quality! If there is no sign of sprouting after 48 hours, the quality of your mix is reasonably doubtful! The test is best done at room temperature.

Right: an example of mixed grains where only some have sprouted. It is obvious that, apart from the peas, the quality of the seeds is far from optimum.



Mixed grains mostly contain corn, oats, barley and wheat. Other combinations are possible. In my opinion this is a bit too simple and I use to enrich with mixed pigeon seeds and extra buckwheat. Why this? Because of the buckwheat is particularly rich in essential nutrients and well balanced amino acids. In this way

you will get a far more varied mix of seeds, which has much profit in vitamin-, trace element- and mineral construction. Such mix shows the following analyse of ingredients. In this example I used a mix of wheat, oats, corn, various pulse, milocorn dari, kardi and such.

Unities per 100 grams

Amino acid	barley	corn	oats	wheat	buckwheat
Isoleucine	3,48	3,66	3,76	3,68	4,47
Leucine	3,58	12,5	7,26	7,04	7,01
Valine	6,67	4,85	5,10	4,13	7,34
Fenylalanine	5,05	4,88	5,00	4,86	6,23
Tyrosine	5,14	3,82	3,30	2,32	4,89
Tryptofaan	3,10	0,70	1,26	1,07	4,61
Treonine	1,45	3,60	3,31	2,69	4,77
Histidine	3,31	2,72	2,10	2,08	2,56
Arginine	2,11	4,19	6,29	3,54	5,10
methionine	4,72	1,92	1,68	1,46	5,24
Lysine	1,66	2,67	3,71	2,08	4,76
Kcal	355	360	372	347	349
protein	11,4	9,01	13,5	12,4	12,4
fat	1,4	3,0	7,1	2,6	1,7
carbohydrate	72,6 gr	74,4 gr	73,6 gr	68,8 gr	72,2 gr

Photo right: a rich mix of seeds



Below you see the average of the analyse of a purchased 'all ready' mix of seeds. Don't forget: Exposure to sunlight will cause decline in values and quality!

360 kcal per 100 grams.

* ashes	1,6%	méthionine	1,7%
* raw protein	8,8%	calcium	0,7%
* raw fat	3,9%	lysine	2,6%
* raw cellulose	3,0%	potassium	4,2%
* phosphorus	3,3%	starch	62,4%

The percentage of starch explains the high caloric value of mixed grains and seeds. So when you give your chickens more grain than a fifth of their daily feed portion, there is a serious change that they get too fat, especially after the age of 8 to 10 months.



Photo left: A good example of a rich variety at the point of germinating

Germinated Seed

A good 'mixture' of grains is best to use and let it germinate

as described above. It will make an excellent and very 'natural' addition to the basic feed. Don't let the sprout grow larger as 2 to 6 mm; at this state they will have best quality. Sprouted seeds are a superb source of essential fatty acids, easily digested carbohydrates and vitamins, notably vitamin B. The essential fatty acids are poly-unsaturated, the best for man and animal and as mentioned indeed of essential vital importance for the body. The process is explained by the existence of the enzyme diastase, which is formed during the sprouting process and converts starch into sugar. The seeds now have a completely renewed chemical composition which does not resemble the unsteeped seeds. The values of for instance vitamin B quadruple. Also vitamin C, that was almost nil, is now prominent on hand. It will go too far to explain the whole process, but you can take my word for it that these sprouts are real vitamin bombs!

Photo right: Actually these sprouts are already too large. This will reduce the nutritional value.



I use to give the sprouted seeds mainly during winter; the chickens love it! And I start giving them to the newly hatched chickens from day 10; of course you have to adapt the size of the seeds to the size of the chickens!

Growing seeds

Here is a simple method to supply your poultry with greenfeed in winter time, when it is hard to find fresh weed or herbs. This is what you can do: take a large (flower)pot with some holes in the bottom. Fill it up for 2/3 part with fine quality potting compost and water it a bit. (Make sure the potting compost has no dangerous additives, many do, even added garden 'bonemeal' is harmful) Then take a handful of seeds and spread it out over the compost, cover it up with another 0,5 cm potting compost and press a little. If you wish, you may cover the pot with plastic, then put it at room temperature and let it grow. As soon as you see that the sprouts are coming at the surface, you have to take the plastic

away and air it. Check moisture regularly. After about a week you can give it to your chickens, best is to wait until it has grown up to 10cm. May be they have to get used to it, but after that they will mow it like mowing-machines! If you take the pot away in time, thus as the plants are still with their roots in the earth, and give it time to recover from this attack, then you can do 3 or 4 times with the same plants.

The same as the sprouted seeds, these young plants contain lots of essential nutrients. Especially the young plants of wheat, also called wheatgrass.



Photo: Mark Koers

Greenfeed

Almost every manufacturer states on the bags that it is wise to give your poultry greenfeed. They don't say why. Well, among other things, it is important as greenfeed has a lot of fibre, and fibre is important for a healthy intestine flora. Once in the bowels, the remainder of these fibre act as pro-biotics, the basis for the normal intestinal 'flora and fauna, the natural and essential micro-organisms in the gut. These are organisms that take care of optimal functioning of the digestion- and metabolism-process in the bowels. These are the most important processes for all living beings.

Besides this, greenfeed supplies the body with many easily convertible vitamins, minerals and trace elements. Of course you can use a vitamin preparation, but assimilation of 'chemically prepared' vitamins differs from 'natural' vitamins. Natural vitamins always are to be preferred.



Photo left: Apart from carrot and cabbage, you see nasturtium, parsley and celery, which we classify as 'herbs'. May be you would not expect that the chickens will eat things with such a flavour! Well, of course they have to get used to the taste, but my chickens actually like it!

There are several ways to supply the greenfeed. You can hang some cabbage for instance down from the roof at a height that the chickens can just reach it. Or you can give the whole leaves down in the litter. Both ways are perfect to give your chickens some 'pecking' exercise. (Helps prevent boredom!). But in terms of nutrition, you are best giving the green food chopped and mixed with the meal, proportionally 1:4. It will break-up the structure of the meal, so that the mangers will be completely emptied. This method assures the best assimilation in the bowels. More-over, the cutting frees distinct substances which have a positive effect on fat digestion.

I chop the greenfeed in an 'old' electric chopper. As soon as it has become routine, it is only a few minutes work.

Not only the grown up poultry benefits from these greenfeeds, but young pullets as well. Richly varied feed is a great nutritious addition and of real importance for development into beautiful fancy fowl. Healthy and vital pullets are the basic of your hobby!

Herbs

Herbs are totally different from the common 'greenfeed'. The alternative, experimental or complementary medicinal use of herbs is called: Fytotherapy. There are many different kinds of herbs, for instance Basil, Mugwort, Nettle, Lemon Balm, Dill, Common Yarrow, Calendula, Chamomile, Chervil, Lavender, (Spear)Mint, Oregano, Common Dandelion, Parsley, Rosemary, Sage, Celery, St-Johnswort, Thyme, Lady's mantle, Plantain and many others.

Photo right: Here you see nasturtiums (*Tropaeolum majus*) on the menu. Not a bad choice; leaves, flowers and even seeds are entirely edible. This herb has a certain anti- (pathogen) bacterial effect. Herbs like this must be given in small amounts only. Bon apétit!



These herbs all have their own specific effects. Which ones you could choose to use depends on the wanted result. Just surf around on the internet and you will be surprised what you can learn. Look around in the amazing world of herbs; there is more to find than you would expect! For instance you can learn that Common Tansy really works against worms. Use a little bit of the leaves for only a few times a year. This herb contains the poison 'thujon', which is an effective wormer, special for roundworms and tapeworms. In small amounts it is not toxic for poultry, but it is to worms! Don't be afraid to use it; chemical wormers are far more toxic!

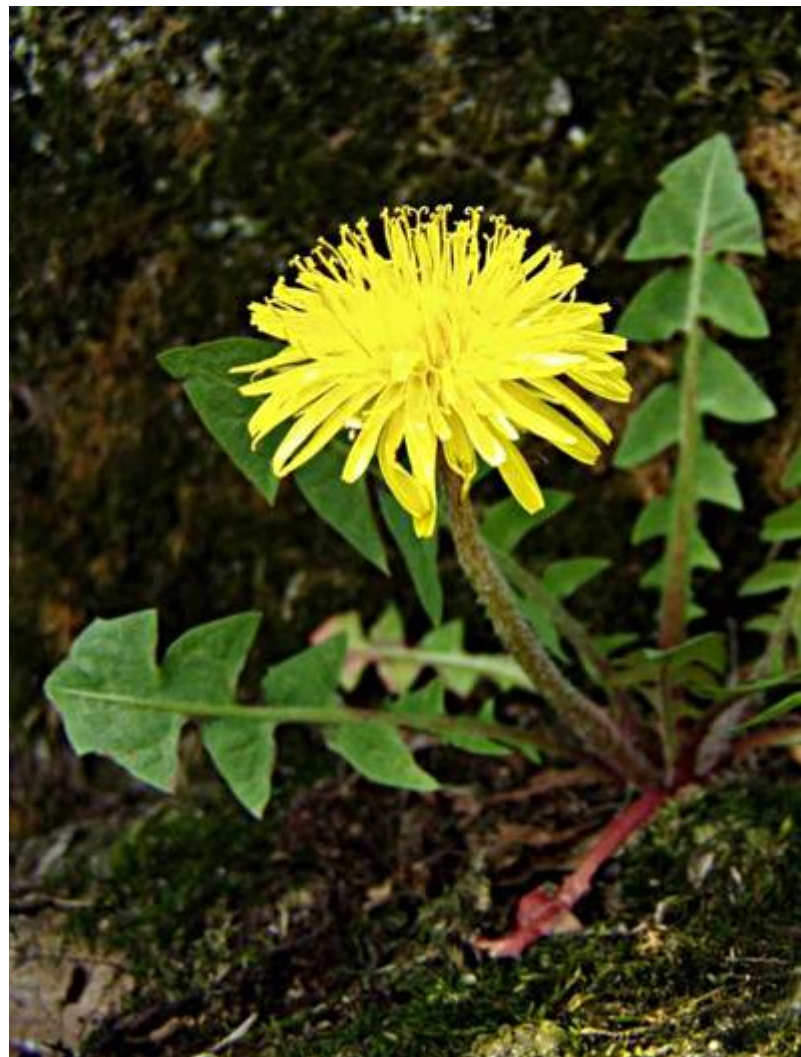


Together with the leaves of the fern, the leaves of the common tansy are used against lice and mites. Just strip the leaves and mix it with the litter in the sleeping pen. And as long as you are busy, put some lemon balm there as well. Not only it smells very well, but also keeps the mosquitoes away.

Photo left: common tansy (Tanacetum)

What do you achieve by giving these greenfeeds and herbs? There is no doubt that the chickens like it very much, as obvious from the eagerness while eating it. Except from that, bowel function, metabolism and defence system will function in an optimal way. And that will guarantee that your chickens will flourish and be less susceptible to disease. When the opportunity is given, you can get out what is naturally inside. There is no need to feed this every day; two or three times a week is already a real improvement on grain alone.

**Photo right: Common dandelion. See also in the article 'Various'.
Photo courtesy of Jean-Louis Cheype**



Of course you don't select the hens and cocks which are destined for breeding at the end of the season, nor at the moment of combining the

breeding pairs, but selection must have started already at hatch. Apart from the specific breed characteristics, you should select on vitality. Often mentioned problems, like poor layer-capacity, breeding problems like 'dead in shell', lots of 'illness' while growing up, can be minimized or ruled out in this way. Of course there are breeders who will say this is all nonsense, as they never have troubles like this with their poultry. I still would say: give it a try! You will be surprised to learn how this kind of feeding can make your chickens even more beautiful and stronger. Not in two weeks time, but after a reasonable time you certainly will notice the difference, for instance in the number of hatched breeding eggs. And inner health can also be seen on the outside. So your 'excellent' can become a 'superior', by may be beautiful, broad feathers with very intensive colour and shine. Besides, and this maybe the most important: your chickens will thank you by laying eggs and each egg will be even healthier and tasteful then before. Reactions on this article can be sent to redactie@aviculture-europe.nl

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Wyandotte hen, gold blue laced. Foto: Archives Aviculture Europe

