

Grist

Why size matters and how we adjust it



Advancing Poultry Performance

Grist – why size matters and how we adjust it

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1. Introduction

Optimising flock performance

As specialist poultry feed suppliers, we produce over 500 different poultry diets, designed to optimise the performance of your flock at every stage of its life.

Ensuring that the raw ingredients that make up the poultry feed are consistent and of the highest quality is our number one priority.

However, there are many other elements that need to be right when producing high quality poultry feed such as its colour, smell and the grist or particle size - the focus of this ebook.

“I would like to thank you for your assistance over the past year, and in particular your attention to detail giving me a first class flock.”

— Mark Saunders,
East Combe Farm.



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2. Why grist size matters

Grist has a significant effect on weight gain

Studies have shown that grist size and correct feed presentation can have a significant effect on the weight gain of the growing bird, as well as the amount of feed consumed by the laying bird.

- Birds prefer a grist comfortable for their beak and oral cavity size.
- Different sized particles are more easily digestible in the gut.
- Varied grist promotes increased foraging and encourages the birds to eat well.

Variety in size is important, but if the grist is too small it makes the feed dusty, causing a number of problems, such as hold-ups in the bins preventing the food coming down.

Dust particles will blow around and get lost in the wind and, unsurprisingly, the hens are not that keen on eating dust so the feed will go to waste!



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3. Presentations

Getting the grist formulation right

Finding the optimum grist presentation for each stage of your flock's development is a key element to optimising your birds performance. There are 3 main options:

Crumb

Crumbs are fed to young birds, so the particle size needs to be small and relatively uniform, so as to provide all the necessary nutrition in each particle.

Pellets

Easy to manage, store and deliver, pellets are the most common feed type for young birds and broilers. Fine ground mash is mixed with steam, then textured through a pellet press to produce uniformly sized, compact cylinders of ingredients. Pellets fed to laying birds can encourage over-eating, and is not recommended for commercial laying flocks.

Mash

Mash is a phrase that covers a variety of particle sizes. It is loose and unprocessed, and the particle size will range from 0 to 3mm. The variety in the size of particles within the mash ensures that the birds enjoy eating the highly nutritional food provided for them.



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4. Adjusting grist size

Finding the optimum grist for each stage of your flock's development

At Wynnstay Humphrey Feeds & Pullets we take grist very seriously and it is one of the reasons our customers stay with us. Decisions on grist size are taken collaboratively, with input from our customers, field consultants and experienced manufacturing team.

The key elements that affect grist size are:

- Raw ingredients
- Grinding and screening
- Magnets and beater blades
- Continuous monitoring



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5. Raw materials

Ingredients vary in size by their very nature

The ingredients that make up the feed are critical, and can have a direct impact on grist size.

The ingredients in some feed manufacturers' diets can vary, depending upon time of year, the variability in analysis, in the commodity pricing and type of raw materials available that make up the feed.

At Wynnstay Humphrey Feeds & Pullets we try to achieve uniformity but different ingredients are, by their very nature, of different sizes; for example, should barley be used in place of wheat, the grist size will vary as the barley kernel is slightly smaller than wheat.



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6. Grinding and screening

Combining motor speed with a variety of screens to deliver specific grists

Our mill is designed to grind the ingredients to one of 18 different grist settings so that we can provide birds with consistent feed, tailored specifically for individual bird needs.

Within the grinder, there is a screen which is divided into quarters. Within each quarter are different sized holes. These different sized holes are used to produce different sizes of grist.

The grinder has a variable speed motor with a selection of screens to deliver specific grists. The specific grist instructions are hard coded into each of the 500+ diets that we produce, to ensure optimal suitability for purpose.



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7. Monitoring

Managing grist quality and consistency

Using real time reporting information, the amount of each raw ingredient present in every ration is closely monitored and controlled. Performance graphs are reviewed on a regular basis by all members of the manufacturing team, enabling them to keep a very close eye on production.

Samples are taken, checked and tested on a continual basis.

We also use a high-powered magnet to check and remove any miniscule metal fragments that may have sheared off the grinder screens. The beater blades themselves are regularly weighed to ensure they do not become unbalanced, which has a negative effect on the consistency of the grinding process.



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In summary

Finding the optimum grist for each stage of your flock's development is a key element to optimising performance.

The Wynnstay Humphrey Feeds & Pullets team are highly skilled poultry specialists who will work with you on your farm to ensure that you have the right feed for the right birds, which is presented in the optimal grist that they want to eat.

If you would like to find out more about how we can supply a nutritionally balanced feed for your flock, keep your birds healthy and optimise production, then please email us at enquiries@feedsandpullets.co.uk or call us on 01962 764510 or 01691 828512.



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