



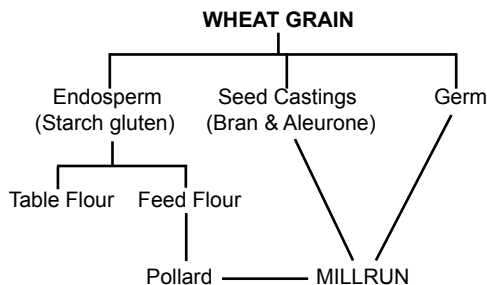
### PRODUCT DESCRIPTION

Millrun is a by-product from the milling of wheat for flour production.

Millrun is the most common by-product of flour manufacturing available for livestock feeding. It consists of the bran, aleurone, germ and pollard fractions.

The wheat seed consists of various layers. The outermost layer is the bran fraction and under this is the aleurone layer. The germ, which is at the base of the seed, is high in fat, fat-soluble vitamins (A, D, E, K) and minerals. Under the aleurone layer, and constituting most of the seed mass, is the endosperm composed of thin walled cells packed with starch intermixed with gluten.

The objective during the milling process is to remove as much as possible of the starch and gluten from the bran, aleurone and germ fractions. The following diagram illustrates the composition of the various wheat mill by-products.



### DIRECTIONS FOR USE

- Millrun is very palatable and can be used in feeds for pigs, poultry, cattle, sheep, goats and horses.
- Since it is bulky and high in fibre it is not recommended for use in diets for very young stock.
- Millrun's bulk could limit its use in feeds using automatic feeding equipment where 'bridging' in feed bins can result. Levels up to 15 percent will not usually cause these problems but this may vary depending on the characteristics of the feed bin.
- Millrun has been reported to contain a factor that reduces the incidence and severity of gizzard erosion in poultry.

### SUGGESTED MAXIMUM INCLUSION RATES IN TOTAL DIET

| SPECIES  | INCLUSION RATES |
|----------|-----------------|
| PIGS     |                 |
| Starter  | Nil             |
| Grower   | 20%             |
| Finisher | 25%             |
| Breeder  | 30%             |
| POULTRY  |                 |
| Broiler  | 10%             |
| Layer    | 15%             |
| CATTLE   | 50%             |
| HORSES   | 50%             |
| SHEEP    | 50%             |

REF: (Evans. M, 1985)

### TYPICAL NUTRITIONAL ANALYSIS

|             |       |   |       |
|-------------|-------|---|-------|
| PROTEIN     | %     | : | 15.00 |
| CALCIUM     | %     | : | 0.10  |
| PHOSPHORUS  | %     | : | 0.80  |
| METHIONINE  | %     | : | 0.22  |
| LYSINE      | %     | : | 0.60  |
| CRUDE FIBRE | %     | : | 7.00  |
| ME RUMINANT | MJ/kg | : | 11.00 |
| DE HORSE    | MJ/kg | : | 12.00 |
| DE PIG      | MJ/kg | : | 12.00 |
| ME POULTRY  | MJ/kg | : | 8.00  |

### STORAGE

[Cool, shaded, dry conditions, away from vermin.](#)

### PACK SIZE

25kg woven polypropylene bags.