

## My Ambition for Soya Free Chicken Feed

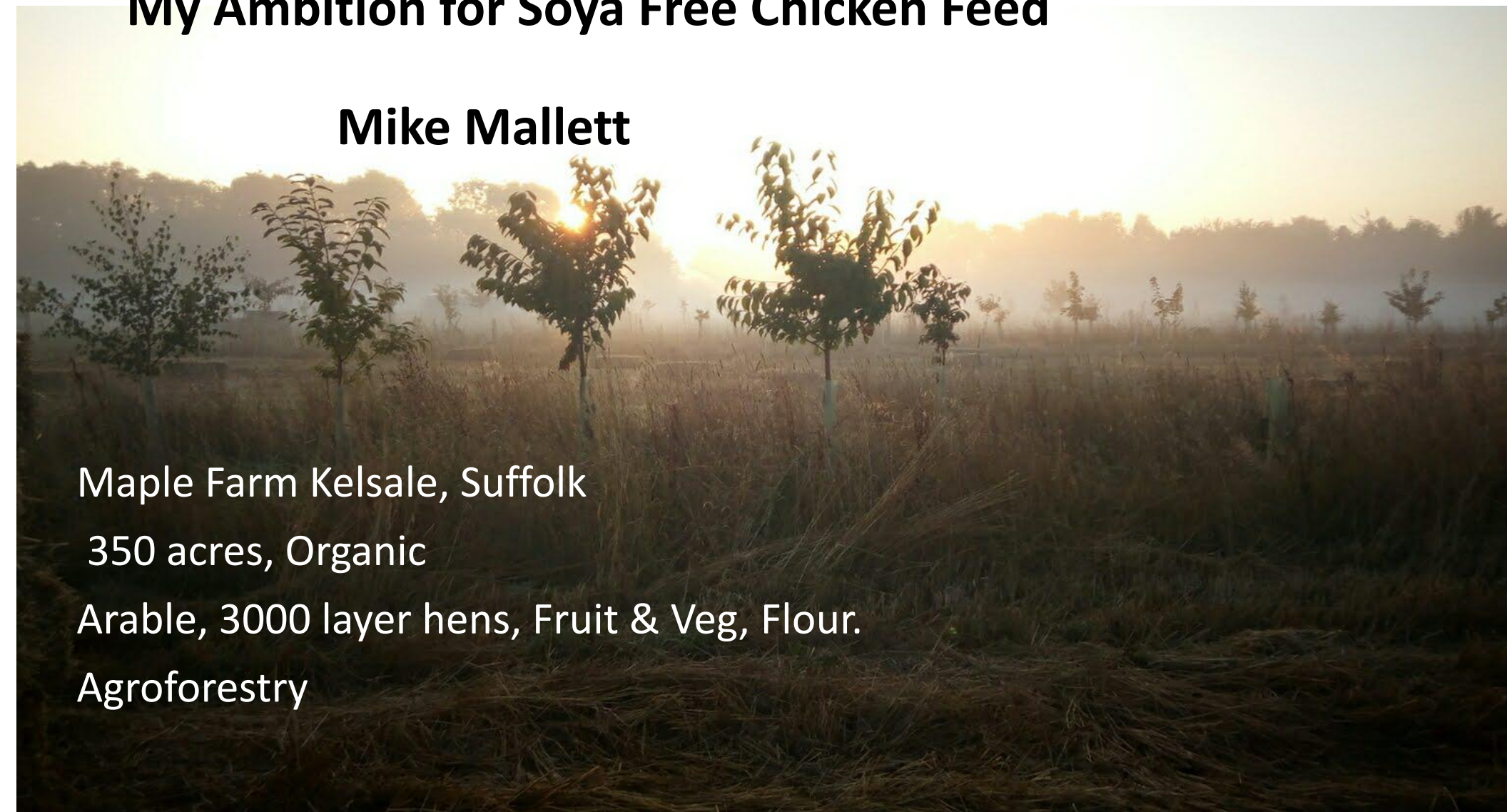
**Mike Mallett**

Maple Farm Kelsale, Suffolk

350 acres, Organic

Arable, 3000 layer hens, Fruit & Veg, Flour.

Agroforestry



Maple Farm's Flour Mill  
Flour for retail.  
Bran & Middlings used in hen feed.





Organic Soya Expeller  
Typically 44% Crude Protein

Typical Modern egg Layer  
Weighs 2-2.2 kg  
Lays 300+ eggs in a year  
Eats 130g feed per day

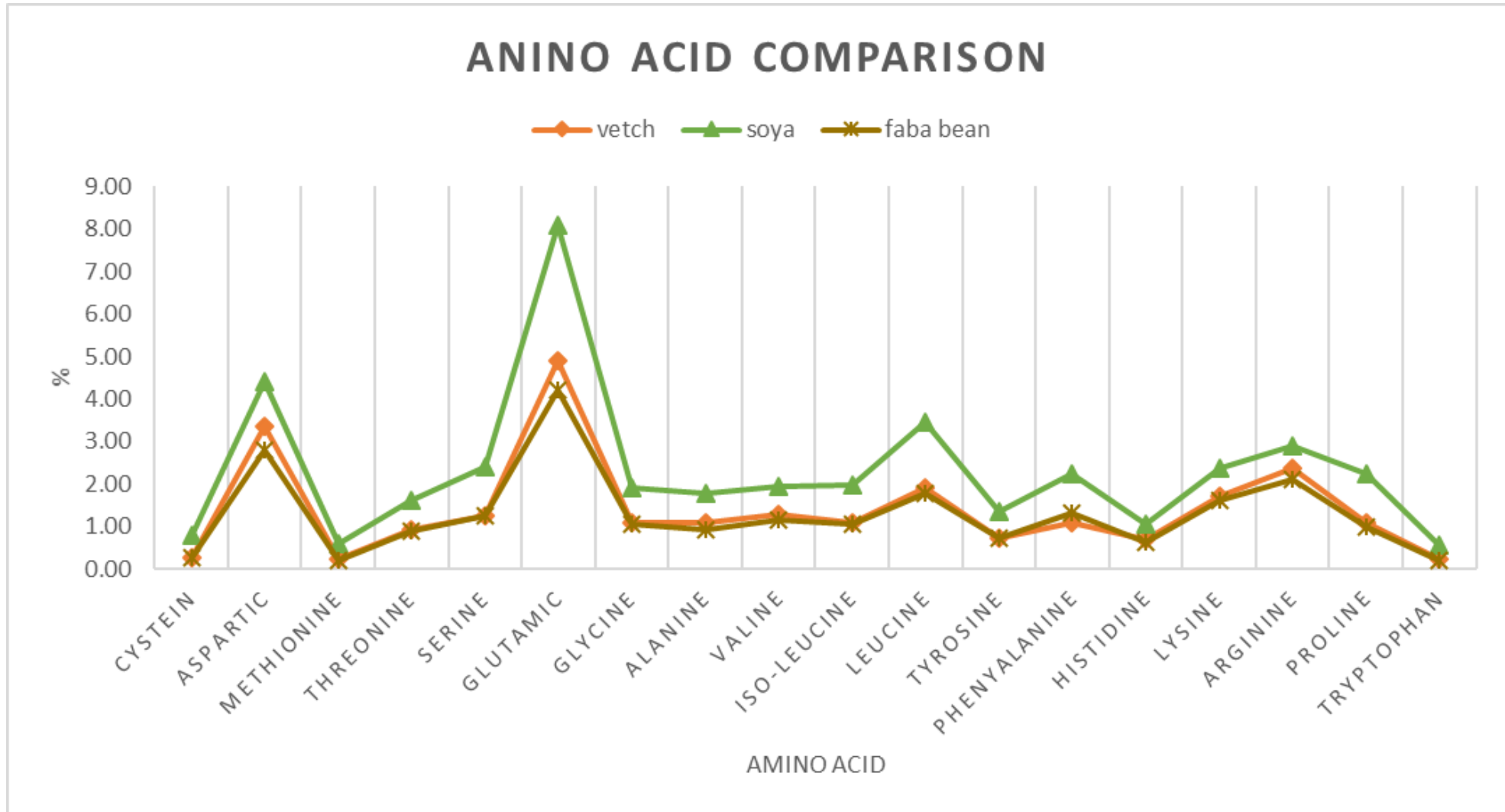




Layer Mash



# Soya, Vetch and Faba Bean Comparison



# Farmer & Stock-Breeder Year Book 1950

Layers Mash options includes;

- Oats
- Barley
- Wheat
- Grass meal
- Fish meal
- Pea meal
- Bean Meal
- Bran
- Brewers Grains
- Middlings
- Maize Meal
- Cod liver oil
- Dried Yeast



with meal then obtained... rate of 10 to 12] per cent to any balanced mixture of concentrates for cows in milk or dry or for fattening cartle.

(j) **DRIED GRASS** varies in feeding value according to the stage of growth and composition of the herbage when cut. The best quality made from short leafy herbage may have 16 to 20 per cent crude protein (or even more) and be equal in feeding value to the average dairy cake; it can be fed at the rate of 4 lb. per gallon. As the grass matures, so the dried grass made from it falls off in feeding value until the lower grades may be little better than really good hay.

clover or lucerne hay should be given in the maintenance ration or additional minerals should be added to the diet. A suitable home-made mineral mixture is 2 parts crushed salt, 2 parts finely crushed limestone and 1 part sterilised feeding bone flour and add 2 to 3 lb. of this mixture to each 1 cwt. of concentrates.

(h) Cows yielding six gallons daily or more should receive special attention. The bulky foods in their ration should be reduced and additional, easily digestible, concentrates given, together with a mineral mixture.

### TYPICAL POULTRY RATIONS

**EXPANSION** of general farm poultry flocks has led to the increased use of home grown foods for poultry mashes. The home compounded mashes are either used to supplement those purchased or to form the whole of the balanced mash requirements of the expanded flock.

Some purchased foods are, however, necessary, e.g., fish or meat and bone meal, for home produced protein foods such as peas, beans, milk or linseed are not usually available in sufficient quantity.

In making up mashes from home-produced foods there are three important factors to consider—fibre, bulkiness and protein content.

Oats and barley tend to be very fibrous (especially poor samples of the former) and these should be finely ground when used in mashes. Wheat on the other hand, should be coarsely ground. Bulky foods such as potatoes or swill must not be fed in excessive quantities for the physical limitations of the digestive system of poultry will prevent sufficient food being consumed to provide the necessary nourishment.

Protein foods must be added according to the requirements of the class of stock, for insufficient protein results in stunted chickens and growing stock, as well as poor egg production from adult birds. Excess protein puts a strain on the excretory system and may cause a breakdown of the kidneys. Grit should be available to all classes of poultry from day olds to adult birds. A mixture of flint, limestone and shell in suitable sizes should be used. Whilst it is possible to make up a fairly satisfactory chick mash from mainly home produced foods, the difficulty of purchasing foods such as maize or dried milk make it advisable to use miller compounded chick mash for at least the first two weeks if it can be obtained.

**SUGGESTED MASH FORMULAE:** (Parts by weight).

Chick Mash Parts by weight	All Mash	With Chick Grain (cut wheat and maize grits).
Bran .. .. .	1	1
Middlings ..	1	1
Grass Meal ..	1	1
Coarse ground ..	1	1
Wheat .. .. .	4	4
Fine ground Oats ..	2	1
Fish Meal .. ..	1	1
Dried Yeast ..	1	1
Maize Meal ..	1	1
Cod Liver Oil ..	1 pint to each 100 lb	1 pint to each 100 lb (first mix this with the bran or middlings).

**Growers Mash to be fed with a grain feed.**

Fine ground Oats	2	2	2
Fine ground Barley	2½	2	3
Coarse ground Wheat	3½	2½	2½
Grass Meal ..	½	½	½
Fish Meal or Meat and Bone Meal	½	½	½
Pea or Bean Meal	1	1	—
Middlings ..	—	1½	—
Brewers Grain ..	—	—	1½
Cod Liver Oil ..	—	—	1 pint to 100 lb of mash.

**Layers Mash**

	Summer			Winter		
Fine ground Oats	2	1½	2	1½	1½	1½
Fine ground Barley	2	2	2½	2	2	2
Coarse ground Wheat	2	4	1½	—	3	—
Grass Meal ..	—	½	—	½	½	½
Fish or Meat and Bone Meal	1	1	1	1	1	1
Pea or Bean Meal	—	1	—	—	—	1½
Brewers Grains	1½	—	—	—	—	—
Bran .. .. .	—	—	1	1	—	—
Middlings ..	1½	—	2	2	1½	2½
Dried Yeast ..	—	—	—	—	—	—
Maize Meal ..	—	—	—	2	—	—
Cod Liver Oil ..	—	—	—	—	—	—
	1 pint to 100 lb mash					

**Laying Battery Mash (All mash fed)**

Fine ground Oats	1½	1½
Fine ground Barley	2	2½
Coarse ground Wheat	4½	3½
Fish Meal ..	½	½
Grass Meal ..	½	½
Middlings ..	—	1
Pea or Bean Meal	—	—
Cod Liver Oil ..	—	—
	1 pint to each 100 lb mash	

A good dredge corn mixture (finely ground) can be used to replace the oats and barley in the above mixtures. When potatoes are added to the above balanced mashes, additional protein is necessary e.g., to each 40 lb of cooked potatoes added to growers mash ½ lb. of fish or meat and bone meal should be added and for layers 1 lb. of fish meal to the same quantity of potatoes.

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Vetch (*Vicia Sativa*)

Field Bean (*Vicia Faba*)



- Field Beans Typically 26% protein  
Use in Monogastric feed limited by tannins and Trypsin Inhibitors
- Vetch a 26% protein Pulse Crop
- Commonly grown as a companion crop and green manure
- Both crops require processing to realise full potential
- There is poor voluntary intake of unprocessed vetch seeds due to antinutritional factors including Trypsin Inhibitors. There is also Y-Glutamyl-B-Cyanoalanine which can be toxic to poultry.





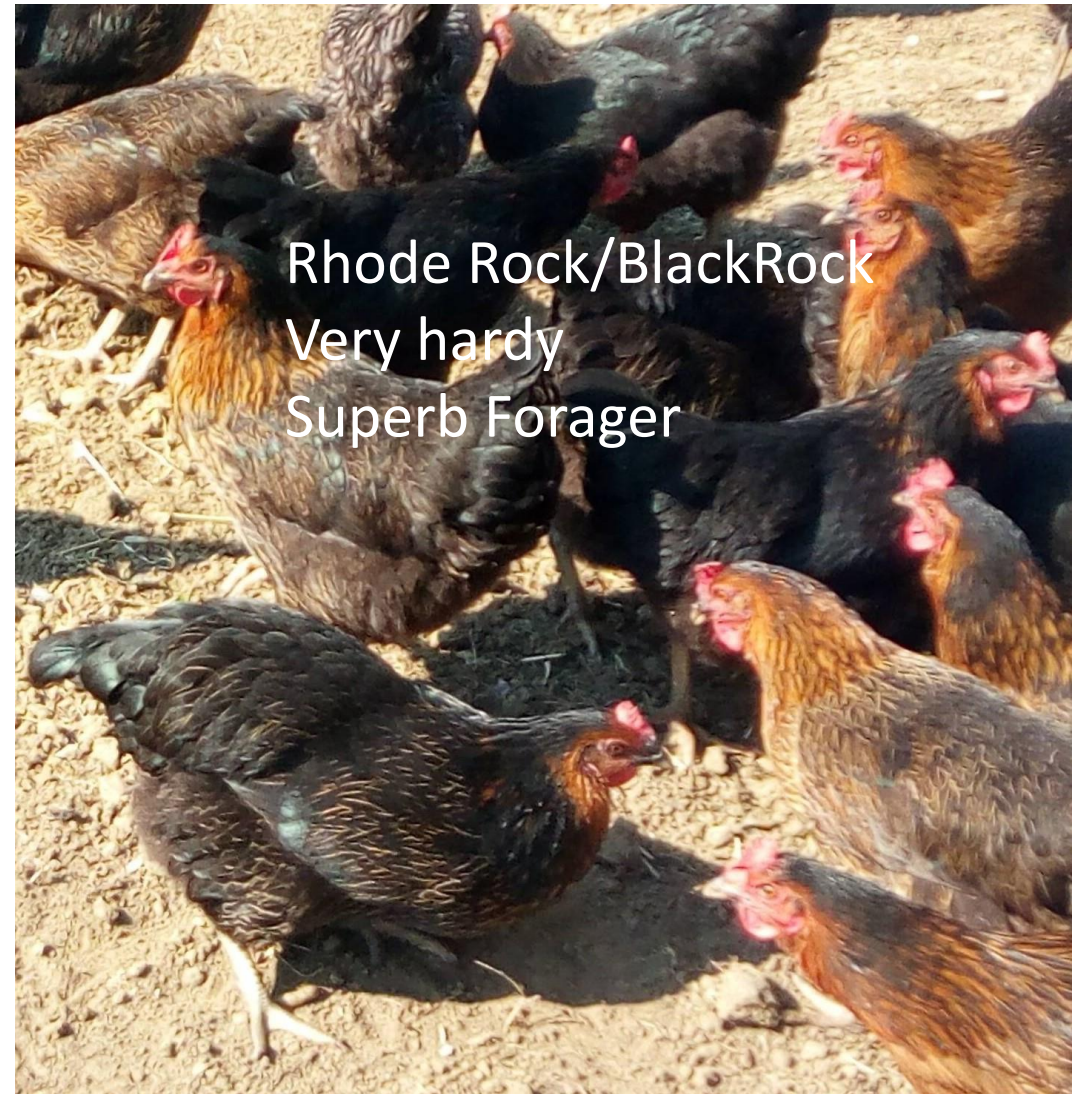
Mealworm Larvae & Pupa.



Darkling Beetles



**Insects**  
**The New Livestock**



Pasture based system  
Small flocks of 300  
Mobile sheds  
Moved regularly  
Year round access to  
pasture  
Low stocking density

