



AGRiliq

Smart Science

Smart Stockfeeds



AGRiliq

The *smart* way to feed your livestock!

The patented **AGRiliq** range of high density protein and energy supplements is ideal for inclusion in cattle and sheep feedlots, dairy rations, and as a base for paddock feeding.

These concentrates are combined protein and energy supplements based on non-protein nitrogen, and are designed for controlled rumen availability, to ensure maximum feed use efficiency with minimal losses. The chemistry of the **AGRiliq** products allows rumen microbes to maximize utilization of dry fibre.

AGRiliq concentrates are free flowing and can be pumped easily at all temperatures. They are also an easy-to-use carrier for all vitamins and minerals, and rumen modifiers (e.g. Rumensin® and Bovatec®).



AGRiliq Liquid Supplement



AGRiliq Complete Cow Meal

Reasons to feed **AGRiliq** to your livestock!!

- ✓ **Energy and Protein** – **AGRiliq** provides a balanced and cost effective delivery of energy and protein.
- ✓ **Improved Feed Conversion Rates** – **AGRiliq** has been scientifically proven to significantly improve feed conversion rates.
- ✓ **Good Nutrition** – **AGRiliq** offers a convenient means of providing a complete diet for your livestock. AGR Industries nutritionist is available to provide free nutritional advice on how to achieve the best results for your livestock.
- ✓ **Vitamins and Minerals in Solution** – **AGRiliq** is a convenient carrier of Vitamins and Minerals in solution.
- ✓ **Blends with Hay, Silage etc.** – **AGRiliq** is easy to blend with hay, silage and other dry stockfeed ingredients in a mixer.
- ✓ **Stimulates Appetite** – **AGRiliq** feeds the rumen microbes and boosts the rumen microbial population.
- ✓ **Improved digestion of dry fibre** – **AGRiliq** will help your livestock digest dry grass.

- ✓ **Flows in Cold Weather** – unlike other molasses based liquid supplements **AGRiliq** will remain readily flowable at low temperatures.

- ✓ **No Dust** – **AGRiliq** products are easy to handle and will not create dust.

- ✓ **Safety** – Unlike other competing products which contain Urea, **AGRiliq** will not harm your animals (when used in accordance with the manufacturer’s directions).

- ✓ **Dry blends are available** – **AGRiliq** solid formulations can be supplied. Please refer to the “Dry Formulations” section of this brochure or ask you agent for more details.

- ✓ **Performance** – AGR Industries are a science based company and therefore we are cautious when making claims about the performance of our products. However, our customers have reported the following benefits when using **AGRiliq** stockfeed products:
 - Dairy – higher milk protein content and milk production; and cost effective maintenance of milk production and milk protein content under dry conditions with reduced availability of quality pasture.
 - Beef cattle – better weight gain for less feed consumed; and improved livestock health.
 - Stud cattle – improved fertility, excellent weight gain
 - Sheep – superior daily weight gain.

The **AGRiliq** product range Liquid Formulations

AGRiliq is available in 8 standard **liquid** formulations. Customised blends can be made for specific requirements.

- **AGRiliq Basic.** The high energy base ingredient for all of the **AGRiliq** products. Urea has been reacted into more complex non-protein nitrogen (NPN) molecules which match the needs of the rumen microbes.
- **AGRiliq Extra.** A high protein (98% on a DM basis) formulation with added minerals where half of the protein value comes from the complex NPN molecules, and half comes from extra urea.
- **AGRiliq Sheep.** There are 2 versions of **AGRiliq** Sheep, for feedlot situations, and for paddock feeding. The Paddock product uses **AGRiliq** Basic, while the Feedlot product is based on **AGRiliq** Extra with added urea where the feed rate can be better controlled. Both products have added phosphorus, vitamins A, D and E and lasalocid, and the appropriate blend of minerals for sheep.
- **AGRiliq Cattle.** **AGRiliq** Cattle also comes in 2 forms, one designed for feedlots, and the other for paddock feeding. The Cattle Paddock product is **AGRiliq** Basic with appropriate levels of added Phosphorus, Vitamins A, D and E and monensin, and the minerals, while the Cattle Feedlot product is based on **AGRiliq** Extra with added urea.

- **AGRiliq Dairy.** As with the Cattle and Sheep formulations above, **AGRiliq Dairy** comes in 2 protein levels, **AGRiliq Dairy 56** formulated from **AGRiliq Basic** and **AGRiliq Dairy 92** formulated from **AGRiliq Extra**, to meet the needs of dairy production with the required blend of minerals and vitamins. It does not contain added rumen modifiers.

Care should be taken in paddock feeding situations, to monitor consumption by animals to ensure optimum efficiency, as consumption will vary with changing paddock conditions.

	Basic	Extra	Sheep		Cattle		Dairy 56	Dairy 92
			Paddock	Feedlot	Paddock	Feedlot		
Dry Matter (%)	69.7	73.2	70.3	73.4	69.2	73.3	68.5	71.8
Specific Gravity (kg/litre)	1.32	1.36	1.34	1.34	1.35	1.35	1.35	1.35
Energy (MJ/kg DM)	14.25	14.70	13.1	11.5	12.8	11.3	13.0	11.5
Crude Protein (% as fed)	42.3	72.1	43.5	70.6	38.0	65.5	38.6	66.4
Urea (%)	0.0	12.2	0.0	11.2	0.0	11.0	0.0	11.2
Salt (% as NaCl)	4.15	3.6	3.75	3.3	3.67	3.26	3.72	3.31
Calcium (%)	0.43	0.37	0.39	0.50	0.38	0.49	0.39	0.35
Phosphorus (%)	0.04	0.04	0.51	0.45	1.01	0.71	1.13	1.01
Magnesium (%)	0.30	0.26	0.27	0.24	0.66	0.50	0.30	0.27
Sulphur (%)	0.14	0.15	0.26	0.23	0.75	0.63	0.32	0.28
Iron (mg/kg)	149	131	137	121	134	119	136	121
Manganese (mg/kg)	27.7	106	895	788	149	502	221	196
Copper (mg/kg)	7.5	61.4	6.8	6.0	57.4	370.1	223.9	198.7
Cobalt (mg/kg)	0.00	7.67	27.74	24.45	1.77	29.19	23.01	20.43
Zinc (mg/kg)	7.9	247	840	740	220	1218	892	792
Selenium (mg/kg)	0.20	1.98	2.94	2.61	1.52	3.85	5.54	4.92
Iodine (mg/kg)	0.00	6.00	22.39	19.59	1.52	19.50	8.86	7.88
Monensin (mg/kg)	0	0	0	0	0	590	0	0
Lasalocid (mg/kg)	0	0	748	659	0	0	0	0
Vitamin A (kIU)	0.0	0.0	280.6	247.0	40.6	194.0	223.4	198.3
Vitamin D (kIU)	0.0	0.0	56.3	49.6	4.0	38.5	44.3	39.3
Vitamin E (mg/kg)	0.0	0.0	141.0	124.3	10.4	350.2	282.4	250.7

In addition to the 8 standard liquid products, formulations can be made to suit your particular requirements, and in consultation with your Nutritionist.

Dry Formulations

There is also a **dry feed** *AGRiliq* product range, which includes the Complete Cow and Complete Sheep products. These dry products are based on blends of protein meals and contains a minimum 30% protein in a form that maximizes function and encourages utilization of dry grass and hay.

These products are a complete source of essential vitamins and minerals, which can be fed ad lib to animals in open troughs.

The suggested feeding rate for the dry feed is 2 kg/head/day for cattle, and 100 to 200 grams/head/day for sheep. Use these products as directed by your Nutritionist.



AGRiliq Dry Formulation – Product Analysis

(Indicative analysis only – actual analysis may vary slightly and depends on available protein meal ingredients)

	Complete Cow	Complete Sheep
Dry Matter (%)	86.8	87.0
Energy (MJ/kg As Fed)	11.4	11.5
Energy (MJ/kg Dry Matter)	13.2	13.2
Protein (% As Fed)	30.8	31.8
Non Protein Nitrogen %	1.0	1.2
Urea(%)	2.2	2.5
Salt (as NaCl)	1.17	1.18
Calcium (%)	1.65	1.65
Phosphorus(%)	0.66	0.61
Magnesium (%)	0.38	0.33
Sulphur (%)	0.27	0.19
Iron (mg/kg)	91	91
Manganese (mg/kg)	159	216
Copper (mg/kg)	73.94	1.21
Cobalt (mg/kg)	5.82	4.87
Zinc (mg/kg)	384	195
Selenium (mg/kg)	0.82	0.52
Iodine (mg/kg)	3.87	3.93
Monensin (mg/kg)	118	-
Lasalocid (mg/kg)	-	132
Vitamin A (kIU)	38.7	49.4
Vitamin D (kIU)	7.7	9.9
Vitamin E (mg/kg)	30.9	24.9

Please note that custom blends of **AGRiliq** using your preferred feed or protein meal can be formulated to suit your particular requirements, and in consultation with your Nutritionist.

Using **AGRiliq** Products

AGRiliq products are simple to use, pre-formulated with the correct ratio of vitamins and minerals for your livestock.

AGRiliq products are very stable over a wide range of conditions*

- Can be stored for up to 6 months
- Are not effected by high temperatures
- Binds dusty premixes and commodities
- Can easily be pumped into mixing wagons, or sprayed over straw.

* Products containing ionophores, such as Rumensin® and Bovatec® should be agitated as per manufacturer's instructions.

AGRiliq liquid products can be stored in molasses tanks, poly or plastic containers.

AGRiliq products taste and smell like salty molasses and are very palatable to stock.

A suggested rate for dairy cattle is 0.5 kg/head/day as a mixer with silage or other protein meal, to complement pasture feed for improving butter fat and true milk protein content.

The suggested range for inclusion in a feed ration for beef cattle is 0.5 to 1.0 kg/head/day. The concentrates can be included in grain rations at a rate of 4 %, or sprayed over straw at a rate of 30 litres per tonne, to promote weight gain.

For lambs, the **AGRiliq** usage rate can range between 20 and 160 grams/head/day. **AGRiliq** can be included in grain rations at a rate of 3 %, or 23 litres per tonne of straw. The sheep products can be

used to maximize body weight and frame size, and improve fat scores.

AGR recommend that the usage of **AGRiliq** products should be discussed with your Nutritionist, or with AGR's Nutritionist in order to achieve the best result for your livestock in your situation.

As **AGRiliq** Liquid Formulations are very palatable and highly concentrated, **AGR does not generally recommend ad-lib feeding of AGRiliq liquid products due to risk of over-consumption.** **AGRiliq** may be fed ad-lib when poured over fibre or meal and fed in accordance with AGR's recommended procedures

Testimonials

From a nutritionists point of view AGRiliq offers a great deal of flexibility, is an ideal way to increase the animals protein intake with minimal rumen issues and delivers cost effective improvements in both milk volume and components.

Kris Bray, Dairy Nutritionist, Barham, Victoria

The cattle are utilising the feed a lot better, resulting in better weight gain for less feed consumed.

Neal Davis, Redlands, Charters Towers, Queensland.

*Minlacowie & Wingfield Droughtmaster sale bulls were this year fed with the complete cow supplement and a much smaller than usual grain ration and forage hay. The bulls performed exceptionally well with excellent weight gains. **Minlacowie Lexington sold for the sale topping price of \$100,000.** Weighing in at 1106kg.*

Spann Family, Biloela QLD.

More detail regarding the above testimonials as well as additional testimonials can be downloaded from www.agrst.com.au

The **AGRiliq** Story

AGR Science & Technology Pty. Ltd. (trading as AGR Industries) is a technology development company, which has been involved in agricultural product development since 1999. AGR's General Manager and Principal Scientist have considerably longer experience in this field.

AGR first developed cost-effective stockfeeds based on starch products in 2003. This experience led on to the further development and invention of new and more effective non-protein nitrogen feeds.

In 2005, this development culminated in AGR winning an Australian Government NIDP Grant from the Department of Agriculture Forestry and Fisheries to commercialise its invention, which has now grown into the **AGRiliq** range of products.

AGRiliq's development has benefited from the close involvement of AGR's own research chemist, Dr. Nick Calos and also the professional nutritional services of Jim Wade, the Principal of Wade Agricultural Consultants, who has more than 20 years of broad ranging experience, from managing feedmills to designing successful animal diets.

Extensive research on the biochemistry of **AGRiliq** has been carried out (and is ongoing) at Adelaide University, Griffith University, and the University of New England.

This research intends to quantify some of the benefits of **AGRiliq** already identified, including safety, maximum feed utilisation efficiency with minimal losses, and allowing rumen microbes to better digest dry fibre.

How to Order.

AGRiliq liquid formulations are available through your local agent in 1 tonne containers or via bulk delivery to on farm tank storage.

AGRiliq dry formulations are available in 1 tonnes bulka bags, 30 kg bag or bulk.

For prices, general enquiries and placement of orders please contact our agent:

For more information

For technical and nutritional advice on how **AGRiliq** can produce best results for your livestock please contact your local **AGRiliq** agent.

More information on AGR Industries and **AGRiliq** is available at www.agrst.com.au.

Vendor's Declaration

AGRiliq products do not contain restricted animal materials, herbicides, pesticides, harmful chemical compounds, materials, or pathogens.



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