



perfect

gut conditioner and microbial optimiser for young animals, particularly in high stress environments.

promotes healthy growth - naturally

kiotechagil

Performance in aquaculture&agriculture



perfect in poultry

Prefect supports the rapid development of a healthy gut microflora in young birds, which is necessary to maximise flock performance and profitability. Achievement of superior early weights, uniformity and immunocompetence are all essential.

In addition to assisting this health growth

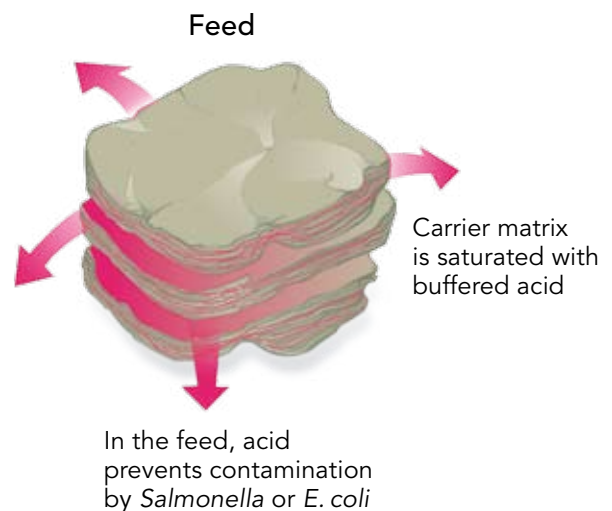
- Prefect is ideal as part of *Salmonella* and *Campylobacter* control programmes
- Prefect is effective against episodes of dysbacteriosis caused by enteropathogenic bacteria such as *E. coli*
- Prefect in combination with management and formulation strategies is effective in reducing the occurrence of *Necrotic Enteritis* associated with clostridia
- Prefect matches the performance of antibiotic growth promoters
- Prefect has no resistance problems, residues or withholding time

mode of action

Prefect is a buffered blend of specific carboxylic acids on a unique mineral carrier system combined with a fructo-oligosaccharide (FOS) source to promote a healthy gut microflora. The product is designed to protect the digestive tract from enteropathogens and encourage the growth of healthy commensal bacteria, necessary to optimise the digestive activity.

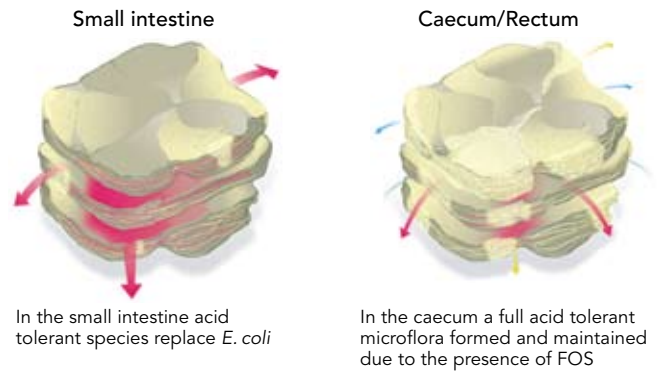
Prefect is based on the same concept as Salkil and Bact-A-Cid with acids blended on a unique carrier matrix in order to protect them. This gives three vital functions:

1. Increases the surface area to enable undissociated acid vapours to diffuse through the feed more easily, enabling better contact by the acids with pathogenic bacteria.
2. Protects the acids from dispersing into the gut lumen where they would normally be metabolised.
3. Enables the slow release of acid along the intestinal tract and provides an inert substrate for the colonisation by acid tolerant bacteria such as *Lactobacillus*, *Bifidobacteria*, *Propionibacteria*, *Butyrivibrio* and *Roseburia*. These bacteria produce lactic acid and other secondary metabolites to maintain a lower pH in the intestinal tract.



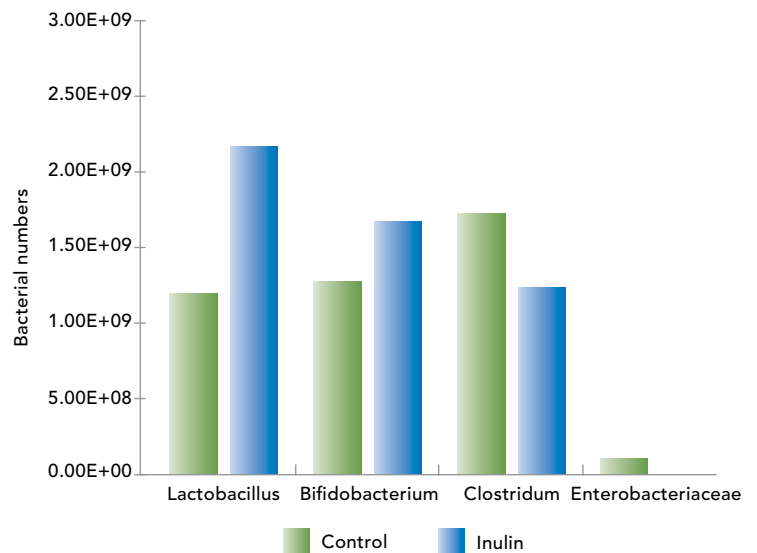
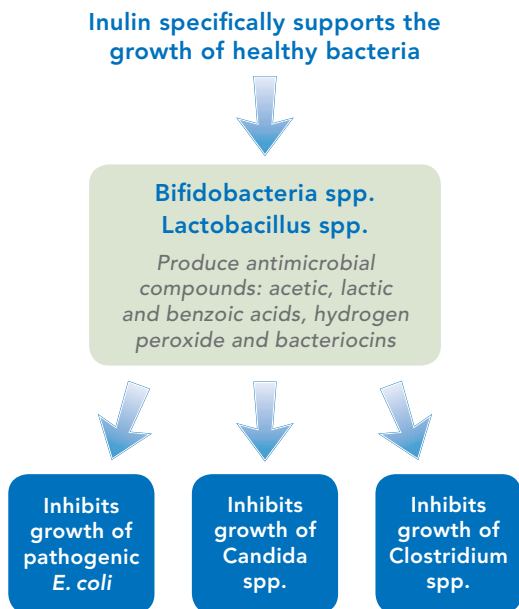
The protected acids are essential to provide a lower pH microenvironment, whilst the mineral carrier provides a support matrix for the development of an acid tolerant intestinal microflora.

Fructo-oligosaccharides are naturally occurring complex sugars, which are not metabolised by the host animal or many of the potential pathogens that can colonise the immature gut. FOS are important in the hindgut where due to normal digestive processes there may be a deficit of fermentable carbohydrate to support a healthy gut microflora.



Lactobacillus : Carbohydrate	→	Lactic Acid
Propionibacteria : Lactic Acid	→	Propionic acid Acetic acid
Butyrvibrio Roseburia : Cellulose fibres	→	Butyric acid Acetic acid

The Effect of Inulin (FOS) on Bacterial Selection



Additionally Prefect contains butyric acid which is a colonocyte nutrient contributing to maintenance and growth of the intestinal villi as well as inhibiting the growth of several species of potential pathogenic bacteria in the gut. Its major benefits are:

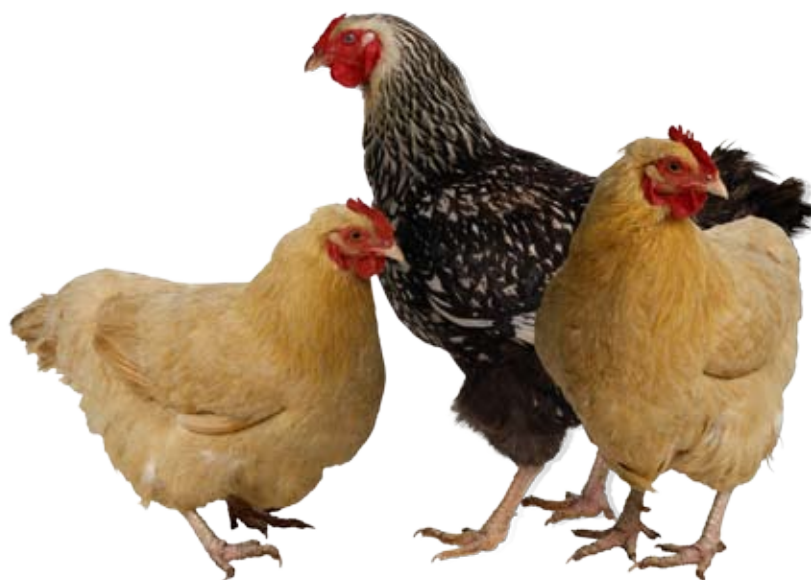
- to improve ileal villi length by up to 30%
- help regenerate damaged villi and so contributes to the establishment of maximal nutritional absorption.

These features give Prefect a broader range of activities than conventional "acidifiers" and benefit the producer by matching the performance enhancing effects normally attributable to antibiotic growth promoters.

Prefect is a "gut conditioner" optimising digestive performance by protecting feed from post processing colonisation by enteropathogens and encouraging the establishment of a healthy gut microflora and villi structures.

**Protected acid on a carrier + FOS + Butyrate = Prefect = Biosecurity + Growth Enhancement
=> Higher profitability**

trial results



1 Free range broilers

	Prefect*	Avilamycin	Prefect**	Avilamycin
No. of birds at start	5700	5700	11000	11000
Days to market	56	56	60	60
Mortality %	1.85	4.23	2.01	2.31
Final weight (kg)	2.390	2.415	2.40	2.40
FCR	2.360	2.388	2.18	2.18
EPEF	177.49	173.17	–	–

Prefect matches the FCR achieved with Avilamycin but achieves a lower % age mortality.

*3kg/t
**3kg/t grower; 2kg/t finisher

2 Commercial broiler

	Prefect*	Mannan Oligosaccharide**	Historic data
Number of birds	24000	2400	–
Days to market	44	44	44
Mortality %	4.0	4.70	5.76
Liveweight (kg)	2.14	2.16	2.20
FCR	1.83	1.90	1.96
EPEF	255	247	240

*3kg/t starter; 2kg/t grower/finisher
++ Manufacturers recommended rate

	Prefect*	Essential Oils and Spices**
Birds placed	152015	148124
Days to market	40-41	40-41
Mortality %	5.64	6.25
Av. Liveweight (kg)	2.01	1.76
FCR	1.82	2.01
Efficiency Factor	260	197

*3kg/t starter; 2kg/t grower/finisher
++ Manufacturers recommended rate

Prefect achieved both lower mortality and improved FCR compared to MOS and historical data used as control, as well as an essential oil and spice product.



trial results continued

3 Pullet Replacement Trial

24720 Hy-line birds were randomly separated into 2 groups and housed in identical barn housing.

Up to week 5 of the trial both groups received identical feed except the PREFECT group had 3kg/t over the ration. From 5 weeks until completion at 15 weeks the control birds received a super booster feed, formulated to achieve target performance. The treatment group received feed formulated to a lower specification and cost but continued to receive PREFECT at 3kg/t:

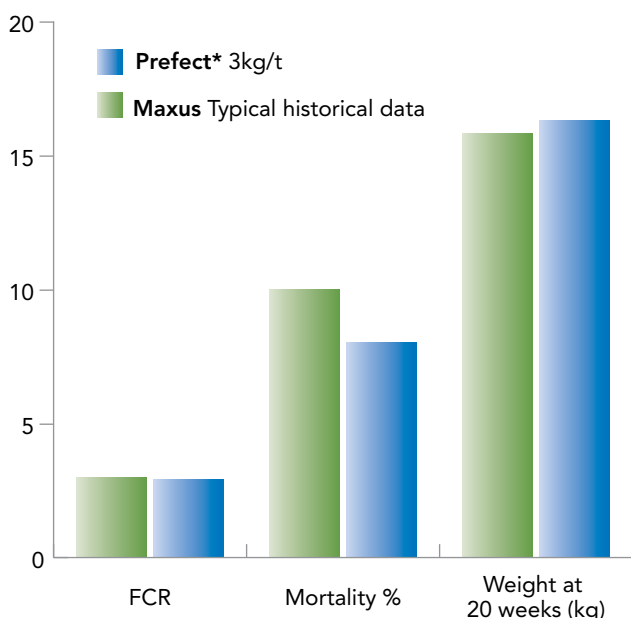
Nutrient	Super Booster Grower	Grower + Prefect
Protein	17.00	15.50
Energy (MJ/kg)	11.75	11.30
Lysine (%)	0.79	0.65
Methionine (%)	0.38	0.32
Oil (%)	3.00	2.70

The cost of the Super Booster ration at the time was USD 16.00/t higher than the ration cost with PREFECT. Cumulative mortality and bodyweight were similar for both groups.

The PREFECT group consumed less feed (5.144kg/bird) to achieve the same bodyweight as the control group on the Super Booster diet (5.271kg/bird).

The cost benefits due to PREFECT were equivalent to 1.52 tonnes of feed achieved through a combination of lower feed formulation costs and lower feed intakes.

4 Turkey Trial



The trial was to confirm that PREFECT could be use in place of Avilamycin (Maxus). 3500 birds were used for the trial from day old to 20 weeks.

Although no control houses were available trial data was compared with previous data and improvements observed, particularly in mortality, in common with other trials comparing Prefect with Avilamycin.





packaging and storage

Prefect is packed in 25kg plastic sacks.

Prefect is a granular formulation, which can be introduced in feed without premixing or expensive equipment. It may be used in premixes but it is recommended it is buffered with a soft vegetable ingredient prior to inclusion. Prefect is non-corrosive to milling equipment and safe to handle.

Inclusion level in feed is 2kg/t – 3kg/t.

Distributor:


Performance in **aquaculture**&**agriculture**

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