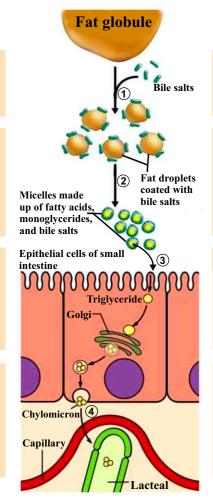




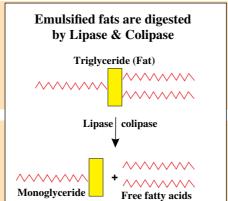
A Unique Organic Poultry Feed Supplement.

Fat digestion and absorption occur in several steps and involve breakdown into droplets, emulsification, hydrolysis by pancreatic lipase and mixed micelle formation and, the movement of micelles towards gut epithelium and removal of end-products.

Major component in Fats is triacylglycerol, which is a molecule of glycerol plus three FA. During digestion, two of the Fatty Acids molecules from the triglyceride are removed, leaving a mono-glyceride and two FA, which are the absorbable units of fat.



- 1. Bile salts emulsify large fat globules (physically break them up into smaller fat droplets).
- 2. Digestion of fat by the pancreatic enzyme lipase yields free fatty acids and monoglycerides. These then associate with bile salts to form micelles which ferry them to the intestinal mucosa.
- 3. Fatty acids and monoglyceride leave micelles and diffuse into epithelial cells. There they are recombined and packaged with other FABP to from chylomicrons.
- **4.**Chylomicrons containing fatty substances are extruded from the epithelial cells and enter lacteals. They are then carried away from the intestine in lymph to the rest of the body.



Strategies to improve lipid utilization in poultry diets –

- 1) Use of Oil with Nano sized Oil droplets.
- 2) Use of Oil containing high proportions of unsaturated Fatty Acids.

# **LIDOMEAL** is a Blend of Technologies:

- Nano sized particles of PUFA. (Poly Unsaturated Fatty Acids)
- Colloidial solution.
- Nano sized particles of USFA, embedded in the matrices of amino acids.
- Encapsulation with FDA approved biopolymer.

#### **Contents:**

Each Litre contains NMPS PUFA 160 gms Nanometre droplets of Linseed oil.

## **Properties:**

Average particle size – 300 to 550 nm pH - 2-3

## **Product Highlights:**

- A highly Bio assimilable, organic product from Linseed (Flaxseed) source.
- Nano sized droplets in the range of 300 to 550 nm, will ensure near 100% absorption even in younger chicken.
- LIPOMEAL is a concentrated source of omega 3 fatty acids from Linseed oil.
- LIPOMEAL contains Poly Unsaturated Fatty Acids from Linseed (Flaxseed) oil source.

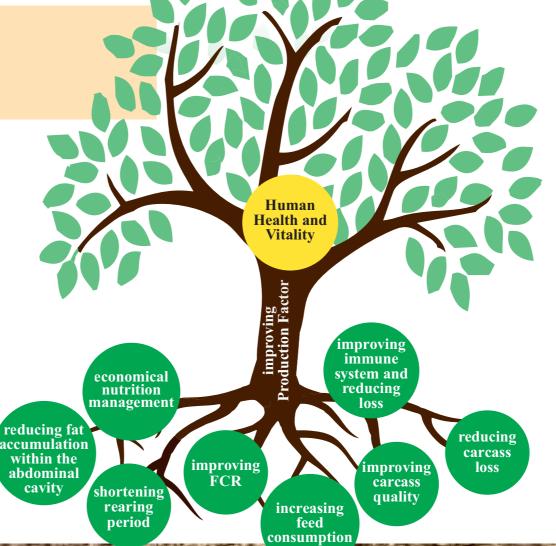
#### **Benefits:**

- Nano sized droplets aid in faster digestion.
- Improves muscle weight in meat type birds.
- Boosts daily weight gain in meat type birds.
- Reduces Skeleton: Muscle ratio, increases Meat: Bone ratio.
- Improves FCR and meat quality.
- Alleviates thermal stress.
- Encourages retention of fat soluble Vitamins.
- Enhances availability of Omega-3 in egg and meat.

### **Usage:**

2-3 Ltr per Metric Tonne of feed. (Mix small quantities of **LIPOMEAL** with any ingredient before adding to the main mixture, i.e. need to make a premix before mixing in feed.)

(1 Litre **LIPOMEAL** will replace 15 litres of Soya oil.)



# **Specifications of Linseed oil:**

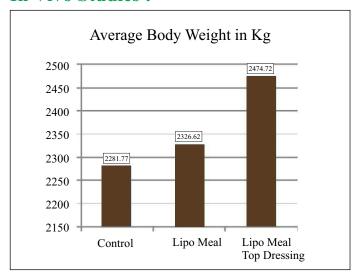
Free Fatty Acids : < 2% Peroxide Value : < 5 meg Iodine Value : 170 to 190 Gross Energy : < 8840 Kcal/Ltr

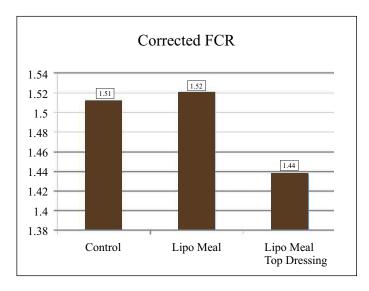
# **Typical Fatty Acid Profile of Linseed oil:**

C 16:0 Palmitic acid < 05.5% C 18:0 Stearic acid < 03.9% C 18:1 Oleic acid (Omega 9) < 16.2% C 18:2 Linoleic acid (Omega 6) < 15.2% C 18:3 Linolenic acid (Omega 3) < 59.1%

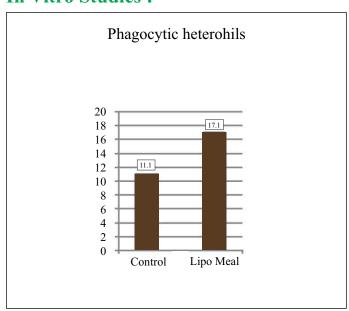
# Trials on Commercial Broilers with 100% replacement of Soya Oil with Lipo Meal; and as Top dressing.

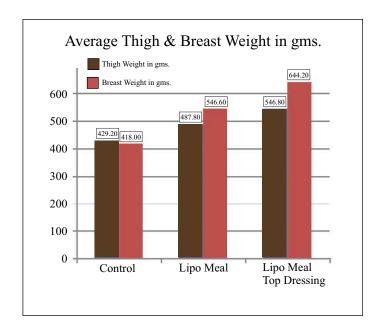
#### In Vivo Studies:





#### In Vitro Studies:





Store in cool, dry & dark place. Not for Medicinal use-for use in Animals only. Not for Human use. For Growth, Maintenance, Productivity and Performance. Feed Supplement for Prophylactic use in Animals only. Shake well before use.



Marketed By:

#### ROOTS BIOTECH PRIVATE LIMITED

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