

**CHRUPKA** —muesli for alpacs is an innovative textured compound feed with a unique structure and composition to maximise growth rates and improve alpas health and vitality. CHRUPKA is a muesli-type feed, unique on the Polish market, produced with the aid of four feed upgrading technologies:

**Extrusion -** processing of plant-based raw materials based on hydrobarothermal treatment to induce desirable physical and chemical modifications. The combined effect of water, steam, temperature, pressure and mechanical stresses in the processing of feed materials results in beneficial changes in the structure of proteins, fats, starch and the fibre contained in the extrudates.

**Micronisation** - exposure of plant materials to IR radiation with a wavelength of 1.8-3.4  $\mu$ m. The process excites the molecules that make up the material, causing them to vibrate. The vibration of the molecules creates friction, which contributes to a rapid increase in temperature and vapour pressure inside the feed material's particles. Similarly to extrusion, the process improves the digestibility of nutrients and helps eliminate anti-nutritional compounds.

**Micronization (milling)** - reduction of the diameter of feed material particles to the order of micrometres.

The process, which is used in many areas of science and industry, significantly increases the availability and assimilation of nutrients.

**Granulation** – treatment of the plant material with hot steam leading to partial gelatinisation of starch, which has a positive effect on digestibility. An additional advantage of the process is homogeneity of the resulting feed.



4 technologies \_\_\_\_

# CHRUPKA - muesli for alpacas

type feed designed specifically for alpacas, providing balanced nutrition to meet their protein, vitamin, and micronutrient requirements. The formulation is based on the nutritional needs of alpacas, combined with the extensive expertise of LIRA, customers, and collaborating veterinarians. Chrupka is a highly palatable feed formulated to improve the nutritional intake of alpacas reared in Poland.

#### **OPTIMUM COMPOSITION**

The production utilizes the finest raw materials and advanced technological processes, ensuring exceptional quality:

### **Golden Protein**

A valuable source of protected protein, rich in sulfur-containing amino acids.

#### **Extrusion**

A specialized grain processing method that enhances the digestibility and palatability of feed while minimizing the risk of metabolic diseases.

#### o-MEGA L

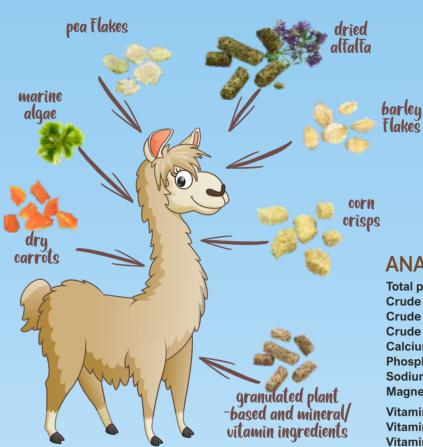
Extruded linseed combined with pectins promotes healthy structure of fleece and supports reproductive performance.

# **Chelates**

Minerals in their organic form to improve mineral bioavailability.

#### Alfalfa

A valuable source of protein and vitamins



# **COMPOSITION:**

Alfalfa: Golden Protein: corn crisps (extruded corn): infrared-micronized barley flakes; infraredmicronized pea flakes: extracted sovbean meal: monocalcium phosphate; calcium carbonate; o-MEGA L: dry carrots: magnesium oxide: sodium bicarbonate; calcareous marine algae; sodium chloride.

# **FEEDING SCHEDULE:**

Young animals: 200 g/day

Lactating females: 250-400 g/day

Adult animals: 200 g/day



# **ANALYTICAL INGREDIENTS:**

Flakes

Total protein	%	18.50
Crude fat	%	4.00
Crude fibre	%	15.00
Crude ash	%	14.50
Calcium	%	2.00
Phosphorus	%	1.20
Sodium	%	0.30
Magnesium	%	0.70
Vitamin A	IU	25,595
Vitamin D3	IU	8,800
Vitamin E	mg	80.00
Vitamin B1	mg	32.00
Vitamin B2	mg	6.00
Vitamin B6	mg	24.00
Vitamin B12	mg	8.00
Biotin	mg	160.00
Niacin	mg	24.00
Calcium D-pantothenate	mg	12.00
Folic acid	mg	0.80
Manganese	mg	125.00
Mn chelate	mg	180.00
lodine	mg	3.20
Copper	mg	32.00
Cu chelate	mg	24.00
Iron	mg	170.00
Zinc	mg	180.00
Zn chelate	mg	390.00
Cobalt	mcg	60.00
Selenium	mcg	2,030.00

# Why choose CHRUPKA?

- CHRUPKA reduces the incidence of diarrhoea, flatulence and mortality rates. On account of highly digestible ingredients more nutrients are absorbed in the small intestine and less 'feed' for bacteria passes into the large intestine.
- CHRUPKA markedly reduces production costs. It reduces the period of feeding calves with expensive milk replacers and allows producers to make an earlier switch to cheaper bulky feeds.
- CHRUPKA accelerates rumen development. A very high absoption rate of starch and its transformation into volatile fatty acids stimulate the development of the rumen very effectively.
- CHRUPKA stimulates early solid feed intake. Since the product is highly palatable and rich in simple sugars and emulsified fat, it is readily ingested.







