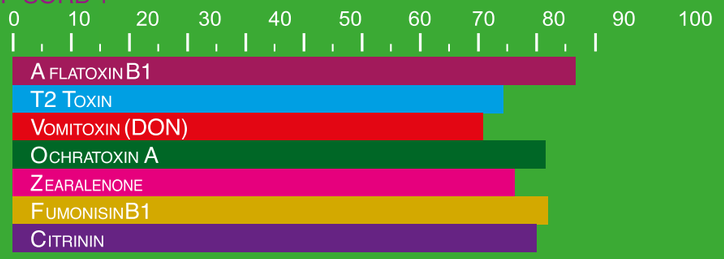
IMPACT OF MYCOTOXINS ON DIFFERENT ANIMALS

	Signs	Aflatoxin B1	Ochratoxin D	Fumonisin B1	Zearalenone	T2 Toxin	Vomitoxin (DON)
POULTRY	Refusal to feed; mucosal and skin lesions; stomach lesions; diarrhea				+	+	+
	Thymus atrophy; extremities and stomach muscle dystrophy	+			+	+	+
	Immunosuppression; fatty, affected and enlarged liver	+	+	+	+	+	+
	Increased water consumption	+	+				
	Renal lesions and hypertrophy	+	+	+			
	Ovarian cyst, delayed puberty, embryonic mortality	+			+		
	Feathering pathology; decreased hatchability	+				+	+
	Low quality shell	+				+	+
	Reduced growth and egg production	+			+	+	+
	Blood and tissue inclusions in eggs					+	+
PIGS	Refusal of feed, vomiting, lesions and necrosis of mucous membranes					+	+
	Liver lesions and necrosis	+	+	+			
	Immune system suppression	+	+	+		+	
	Pulmonary edema			+			
	Lesion and inflammation of kidneys, increased water consumption	+	+				
	Infertility; ovarian cyst; uterine hypertrophy; redness vaginal prolapse; testicular hypertrophy in inseminators				+		
	Joint dysplasia				+	+	+
	Diarrhea					+	+
CATTLE	Loss of appetite, refusal to feed	+			+	+	
	Gastrointestinal lesions; gastroenteritis				+		
	Intestinal bleeding	+	+		+		
	Mastitis; diarrhea	+				+	
	Decreased growth		+				
	Reduced milk productivity	+	+	+		+	
	Sterility of inseminators; absence of ovulation cycles in cows				+		
	Reduced ovulation; vaginitis; disorders of uterine structure; ovarian cyst			+			
	Abortions	+		+			
	Early calf death	+					
	Diarrhea	+			+	+	
	Lameness					+	

THE LEVEL OF ABSORPTION OF PF-SORB +

Aflatoxin B1	≥ 97,0 %
T2 Toxin	≥ 84,0 %
Vomitoxin (DON)	≥ 81,1 %
Ochratoxin A	≥ 92,0 %
Zearalenone	≥ 86,0 %
Fumonisin B1	≥ 92,0 %
Citrinin	≥ 90,0 %



Partners of Primefeed LLC are provided with mycological (yeast and molds count/fungi isolation and identification), as well as toxicological research (complex determination of mycotoxins in one sample or each mycotoxin separately) services.

Application

To ensure optimal feed quality, improve digestibility by regulating the digestive canal microflora, which increases the productivity of animals and birds.

Dosing: feed additive is introduced into feed, depending on how much feed is affected by mycotoxins, during its preparation, by uniform mixing as follows: 1.0-3,0 kg/t poultry; 3.0-5.0 kg/t piglets up to 5-6 weeks; 1.0-3.0 kg/t for fattening pigs and sows;

1,0-3,0 kg/t dry and dairy cows , calves, heifers, bull-calves;

HOLDER OF REGISTRATION CERTIFICATE No. AB-07773-04-18 dated 27.07.2018 AND MANUFACTURER:
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PF-Sorb+

EFFECTIVE COUNTERACTION TO MYCOTOXINS

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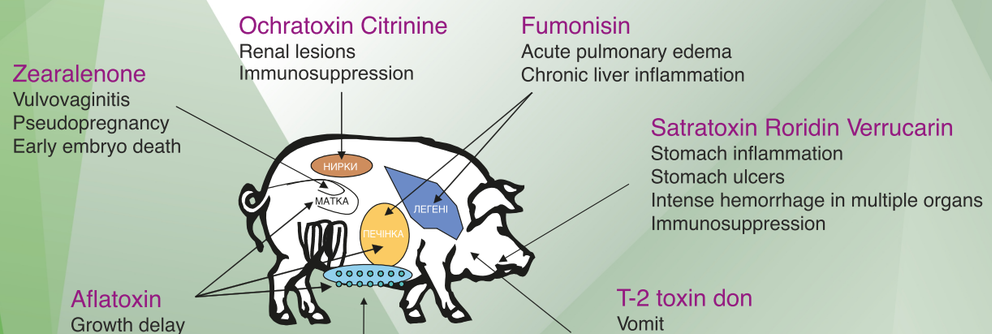
Feed toxicity control is a key factor in the health and performance of animals and poultry. Usually, toxicity issues start being solved with delay, when animals are already experience clear signs and clinical symptoms of poisoning, increased mortality and decreased performance. A complete study of feed toxicity by all indicators is time-consuming, and a large number of factors affects the reliability of such analysis. Practices applied to determine the overall toxicity of feed in rabbits, mice or infusoria do not give an accurate answer about the nature of feed toxicity.

Mycotoxins present in feed may originate from plants affected by toxicogenic fungi on the field before or after harvesting, as well as during drying or storage. Metabolic by-products of fungi in moldy feeds penetrate animal bodies through the gastrointestinal tract, causing a negative impact on their health and performance.

Factors affecting fungal growth and mycotoxin reproduction:
Internal factors - the activity of water and its pH
External factors - temperature, relative humidity, oxygen access, crop type, insects or mechanical damage and storage conditions.
The toxicity of individual mycotoxins with regard to the species of animals and birds depends on the breed, sex and age.



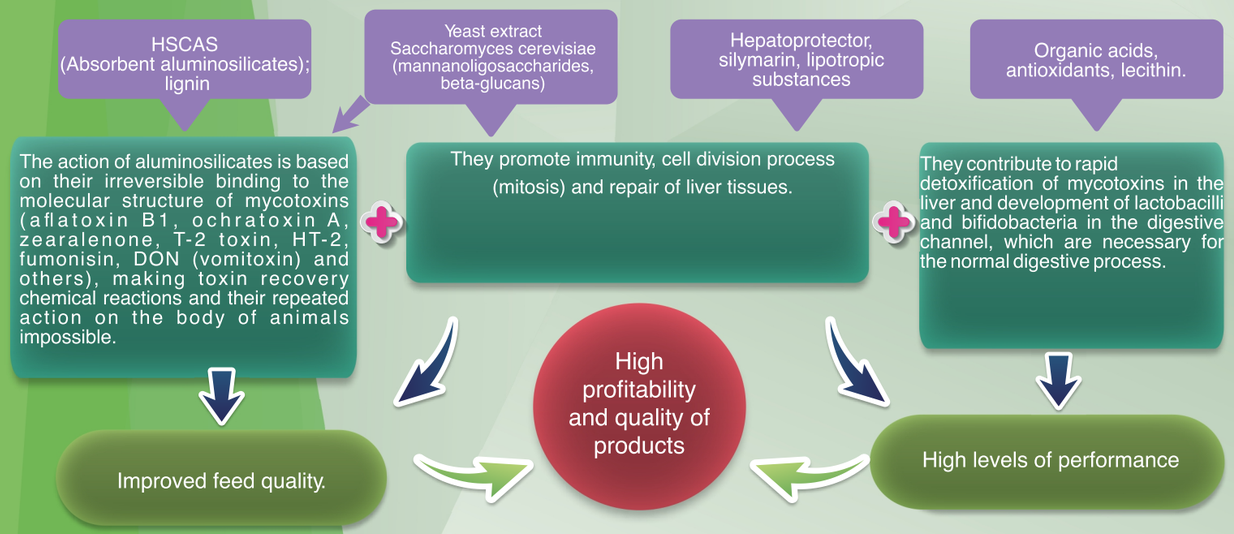
PF-SORB + ADSORBENT MIX FOR FARM ANIMALS AND POULTRY

Qualitative and quantitative composition

1 kg contains active substances:

HSCAS adsorbent alumosilicates	650 g
Saccharomyces cerevisiae yeast extract (mannanoligosaccharides, beta-glucans)	200 g
Hepatoprotector, silymarin, lipotropic substances	100 g
Excipients: organic acids, antioxidants, anti-blocking agents and othersup to	1000 g

Pharmacological action



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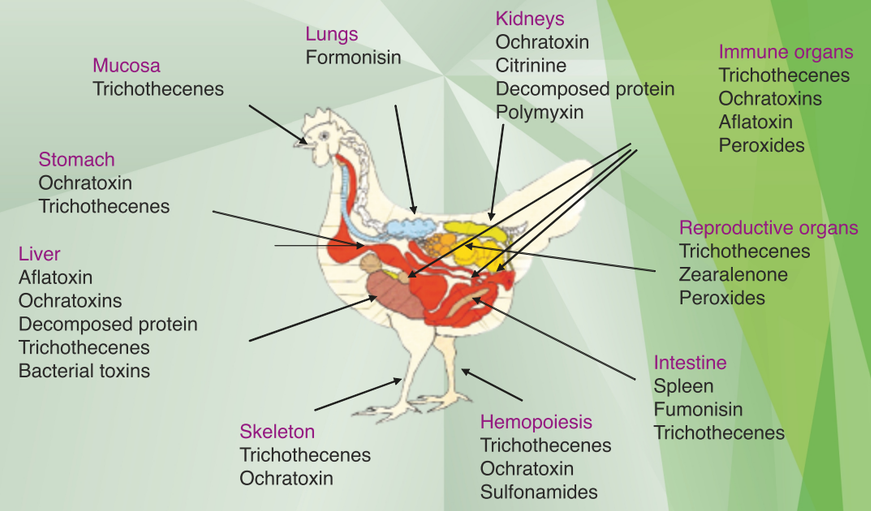
Highly productive poultry crosses are very sensitive to toxins. Mycotoxins, bacterial toxins, oxidation cause metabolic disorders and damage to the digestive system, liver, kidney, hematopoietic, reproductive, immune, nervous, endocrine systems.

"TARGET ORGANS" OF TOXINS



LIVER AND KIDNEYS ARE COMMON TARGET ORGANS AFFECTED BY TOXICOSIS

LESIONS OF LIVER AND URIC ACID DIATHESIS

HEPATOSIS AND ASCITES

“BLACK COMBS”

ASCITE

“BLACK MESO”

CHRONIC MYCOTOXICOSIS

Toxins in sub-toxic doses (before the obvious symptoms of poisoning), along with technological stress factors, cause metabolic disorders, weaken the immune system, impair product quality, production performance and cause economic damage to poultry farms.

- Poor need and absorption of feed, diarrhea;
- Decreased % of eggs, increased breakage and snicks;
- Poor feathering and uniformity of the herd;
- Issues with reproduction and incubation;
- Increased % of rejected carcass due to hemorrhage;
- Increased veterinary costs;
- Syndromes of "nervous bird", "pale bird", "fatty liver", "blue carcass";
- Immunosuppression.

IMMUNOSUPPRESSION.

Mycotoxins inhibit the function of the immune organs, resulting in the following effects:

- Disrupted vaccination programs;
- Low heterogeneous vaccine antibodies;
- Acute post-vaccination reactions.

Immunosuppression results in the increased susceptibility of poultry to salmonellosis, coccidiosis and secondary infections, E. Coli, Staphylococcus, Streptococcus, etc.

Hemorrhage.
Under the action of rancid oil and trichothecenes, the permeability of vessels increases, thus deteriorating the process of blood circulation.

Rick-like changes in the area of bone growth. Trichothecenes, ochratoxin cause disorders of mineral metabolism.