

Feed: **Corn**

Notes: **Mycotoxin average values**

Parametri: **AFB1-ZEA-DON-FUM**

AFATOXIN B1 (IAC Fluorescence) mcg/kg	2021	2022	
Samples:	98	450	↑↑
% Positive samples > 0,5:	26%	56%	
Mean (Positive samples):	3,2	5,0	
Maximun value:	10,8	59,0	
In Cornsilages, Corn Ears e Chopped green Corn. Data on dry sample.			

AFATOXIN B1 (E.L.I.S.A.) mcg/kg	2021	2022	
Samples:	115	209	↑↑
% Positive samples > 0,5:	40%	53%	
Mean (Positive samples):	6,6	20,7	
Maximun value:	68,0	105,7	
In grained or flour corn. Data on "as received"			

The number of controls has enormously increased and all the indices show an increase in the presence of Aflatoxin in corn: the doubling of Positive Samples in silage seems to indicate greater diffusion but not with the same increase of the toxin; in the grain there is the same diffusion but with a clear increase in the average value.

ZEARALENONE (E.L.I.S.A. +SPE) mcg/kg	2021	2022	
Samples:	81	98	↓↔
% Positive samples > 25:	51%	20%	
Mean (Positive samples):	93	94	
Maximun value:	247	213	
In Cornsilages, Corn Ears e Chopped green Corn. Data on dry sample.			

ZEARALENONE (E.L.I.S.A.) mcg/kg	2021	2022	
Samples:	60	65	↔↔
% Positive samples > 25:	15%	20%	
Mean (Positive samples):	84	72	
Maximun value:	185	160	
In grained or flour corn. Data on "as received"			

In silage and grain, the number of controls remained constant: in silage we note a drop in Positives but with the same average values, to indicate less diffusion but greater concentration, if present. In the grain, the presence indices of Zearalenone seem unchanged.

DEOXYVALENOL (E.L.I.S.A. +SPE) mcg/kg	2021	2022	
Samples:	110	121	↓↓
% Positive samples > 40:	70%	33%	
Mean (Positive samples):	467	302	
Maximun value:	3039	2707	
In Cornsilages, Corn Ears e Chopped green Corn. Data on dry sample.			

DEOXYVALENOL (E.L.I.S.A.) mcg/kg	2021	2022	
Samples:	123	105	↓↑
% Positive samples > 40:	59%	38%	
Mean (Positive samples):	343	425	
Maximun value:	1333	1568	
In grained or flour corn. Data on "as received"			

In silage and grain, the number of controls has remained constant: the data suggest a drop in the presence of Deoxyvalenol for 2022 in these matrices. The increase of the Average of the Positives in the grain shows, however, that if present, it can also be important values.

TOTAL FUMONISINS (E.L.I.S.A.) mcg/kg	2021	2022	
Samples:	66	76	↓↑
% Positive samples > 250:	97%	79%	
Mean (Positive samples):	3639	4615	
Maximun value:	16596	19945	
In Cornsilages, Corn Ears e Chopped green Corn. Data on dry sample.			

TOTAL FUMONISINS (E.L.I.S.A.) mcg/kg	2021	2022	
Samples:	59	94	↔↑
% Positive samples > 250:	93%	85%	
Mean (Positive samples):	4013	7021	
Maximun value:	10345	42046	
In grained or flour corn. Data on "as received"			

Fumonisin seem to have a significant increase in 2022: in silage, even though their presence is decreasing, they have on average higher values elevated. In the grain, the increase is clear. In other years we observed a similar trend between Aflatoxins and Fumonisin in corn: the increase in the presence of AB1 is accompanied by an increase in FUM (NB: these toxins are produced by different moulds).

*The results refer to samples that arrived at the laboratory only in the period 1st August - 5th October 2021 and 2022: not all the samples refer to the year of production. The production area is unknown but mostly in Northern Italy.