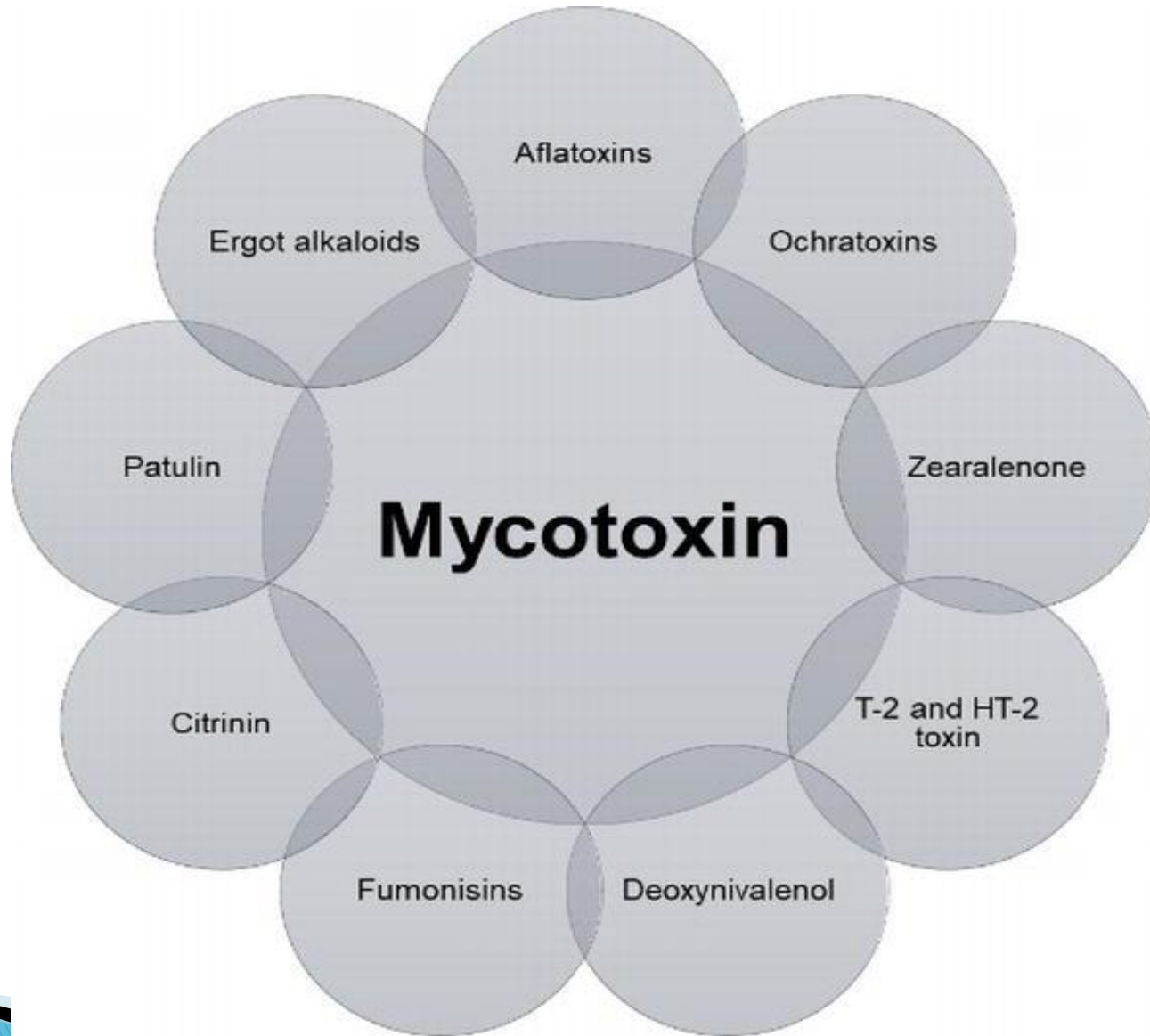


Major Mycotoxins السموم الفطرية الرئيسية



1-Aflatoxins

Aspergillus flavus

A. parasitic

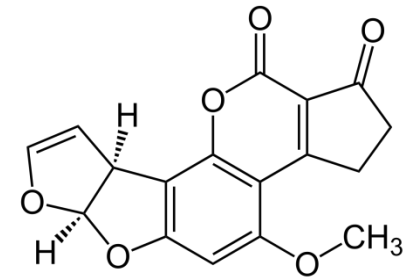
A. spp.

Types:

(B1,B2,G1,G2 ,M1.M2.....etc

B1 (Toxigenec strains)

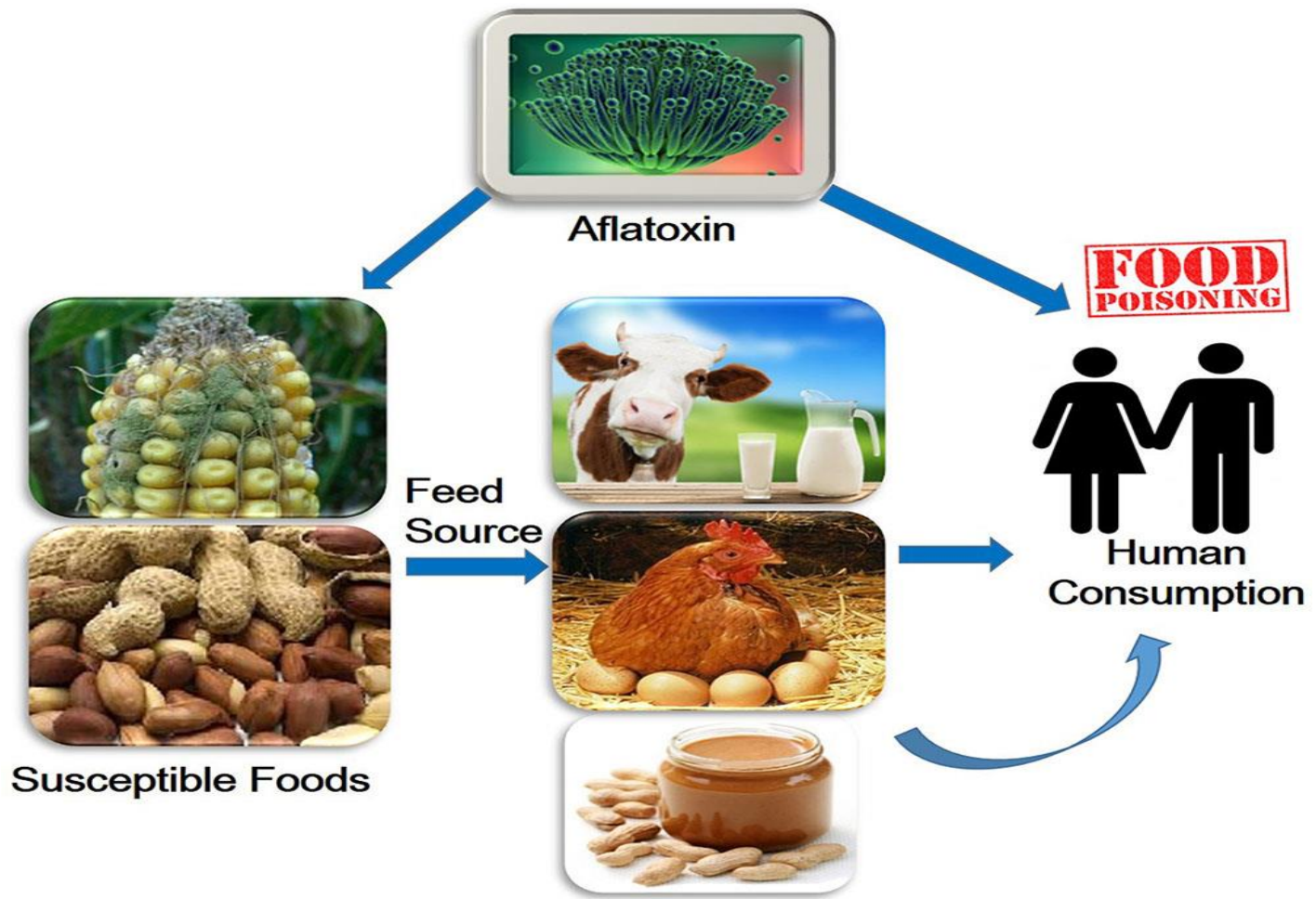
M1 (hydroxylated form)

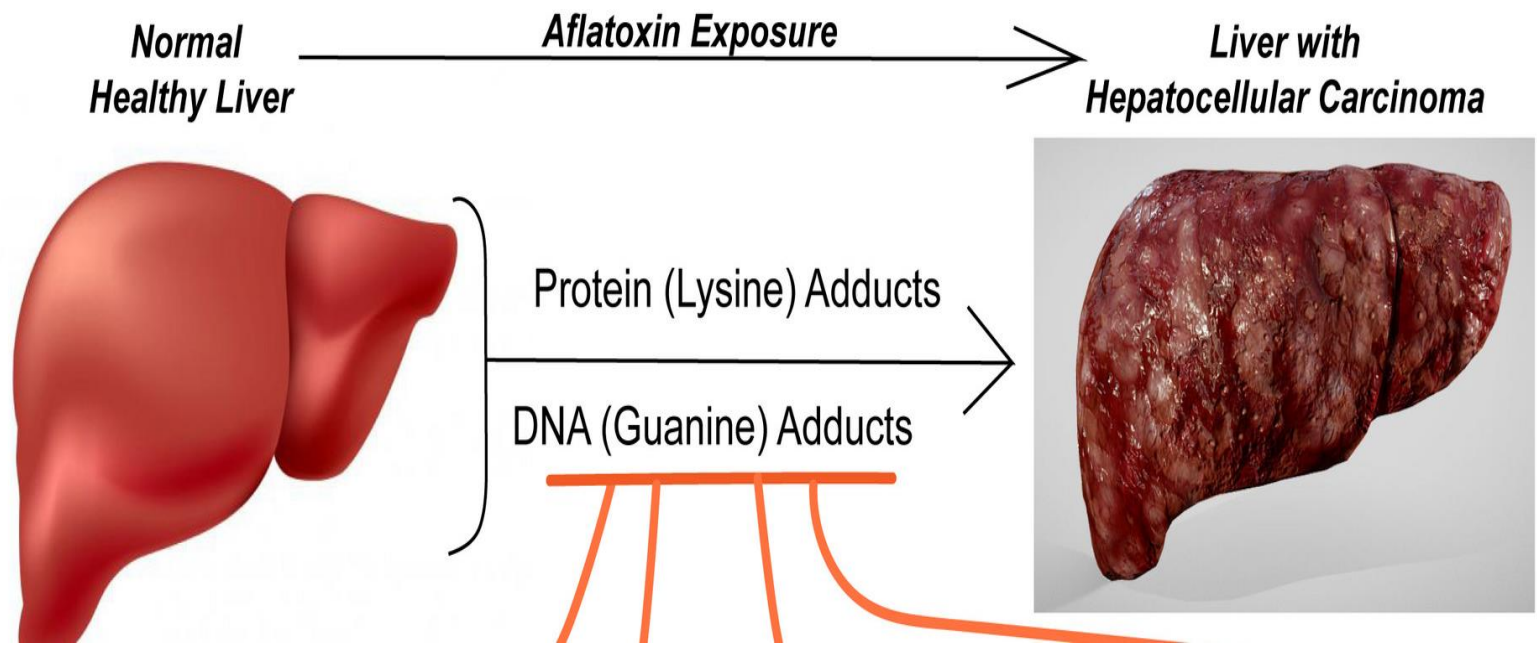


Afla-toxi-cosis :

Acute or chronic







الفطريات الكامنة في الأطعمة الجافة مادة مسرطنة تسبب سرطان الكبد

مادة مسرطنة خطيرة
تنمو في الأطعمة الجافة

الأفلاتوكسين
(Aflatoxin)



الأطعمة الجافة كالحبوب مثل: المكسرات،
الفاصوليا، الخبز الجاف، البيض المجفف، التوم
المجفف، السمك المجفف، الربيان المجفف

إن تناول الأطعمة الملوثة بالفطريات والمفن سوف يسبب
إلتهاب الكبد المزمن الذي قد يوصل إلى حد الإصابة بتليف
الكبد



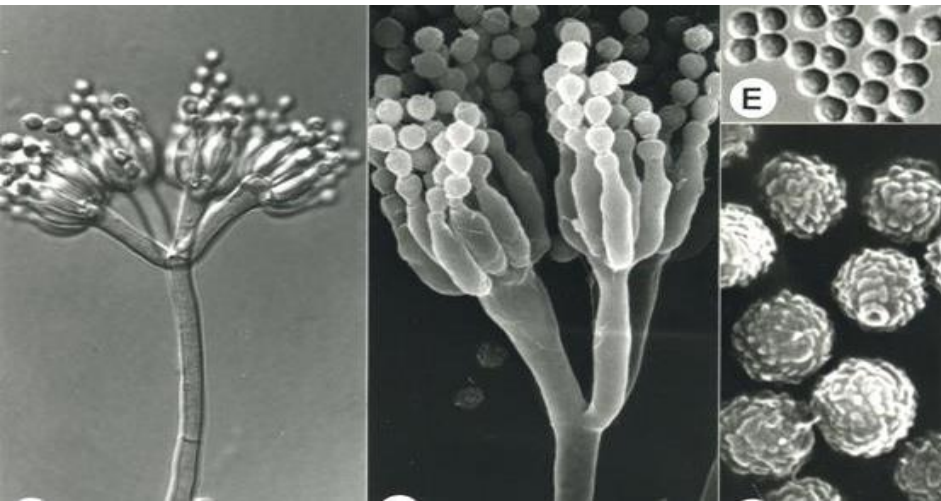
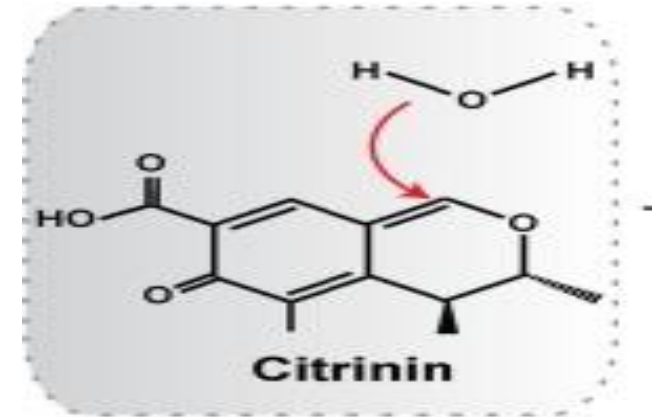
2-Citrinin

Penicillium citrinum ▶

Penicillium spp ▶

Aspergillus oryzae ▶

Monascus sp. ▶





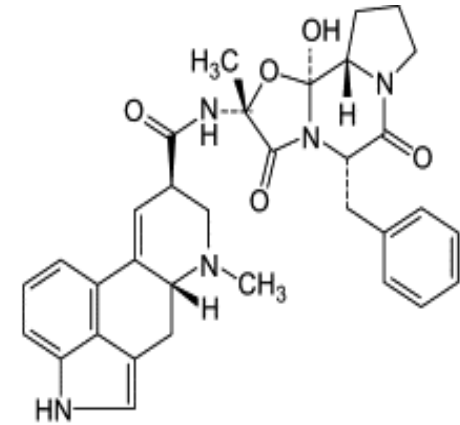
3-Ergot alkaloids

Claviceps sp.(sclerotia)

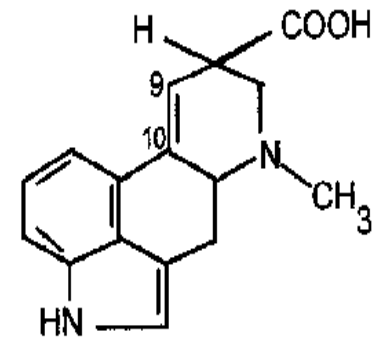
Types:

Ergot-amine

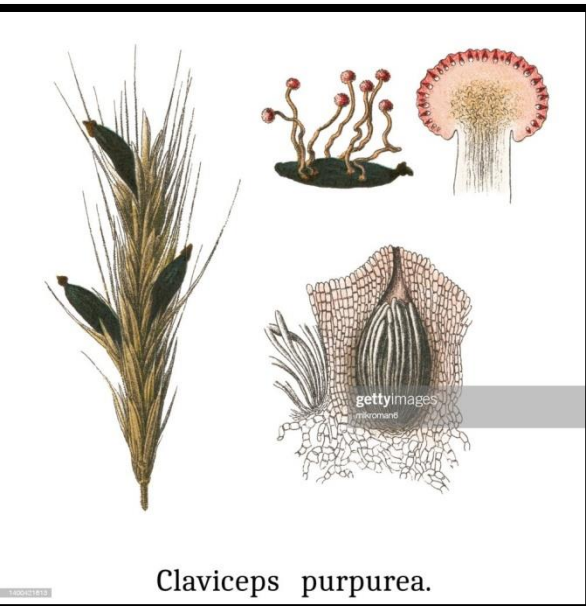
Ly-sergic acid



Ergotamine



Lysergic acid



Claviceps purpurea.



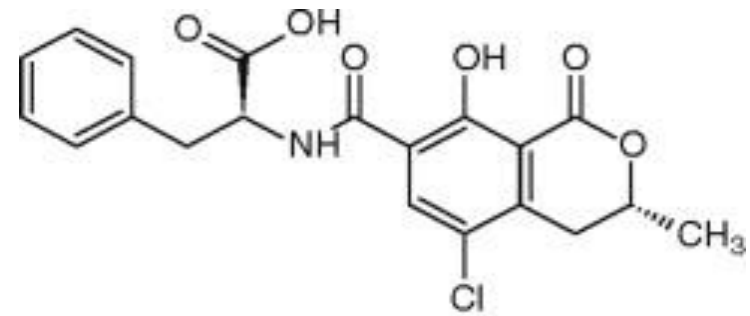
4-Ochratoxin A

A. ochraceus

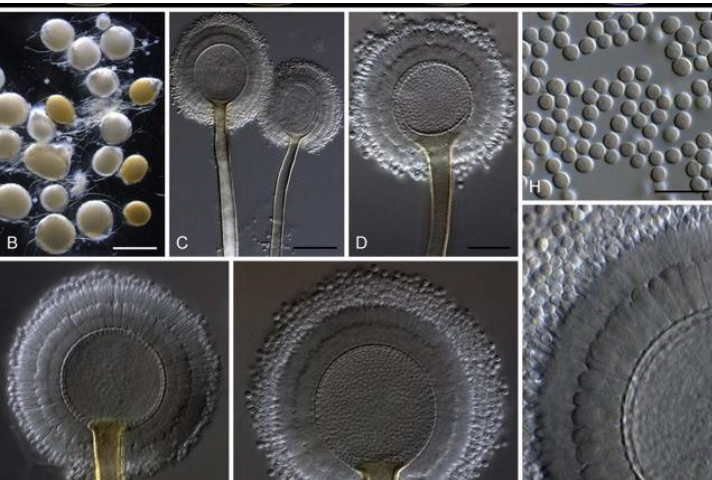
A. niger

A. spp.

P. verrucosum



Ochratoxin A



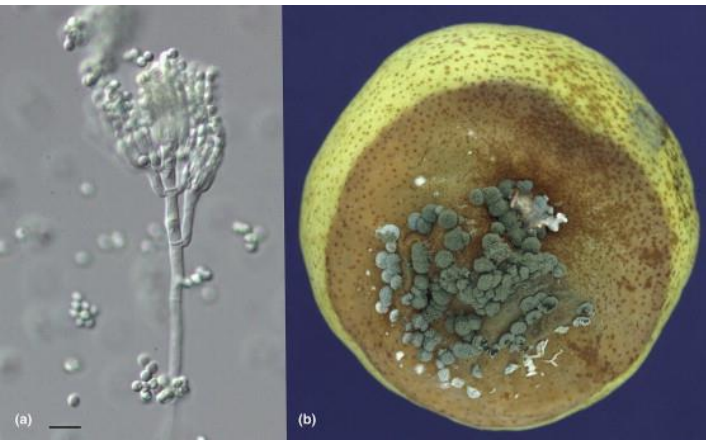
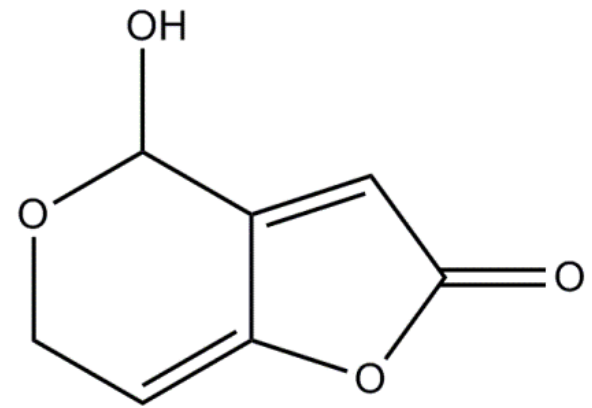


5-Patulin

P. Patulum

P. spp.

A. sp.



PATULIN ACCUMULATION

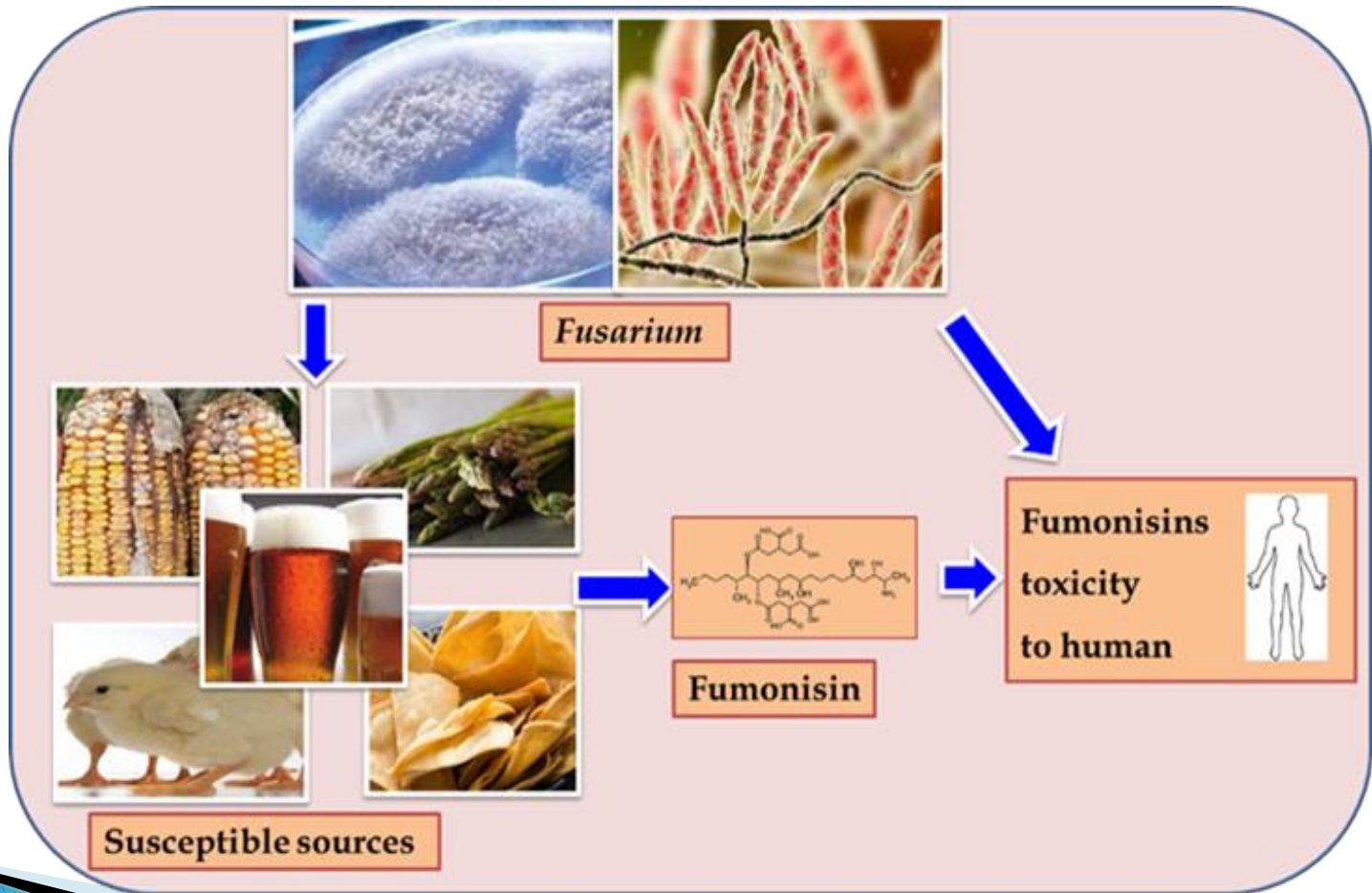


CONTAMINATED APPLES ARE PROCESSED



CONTROL OF LIMITS





7-Trichothecenes

Trichoderma sp.

Trichothecium sp.

Fusarium sp.

Stachybotrys sp.

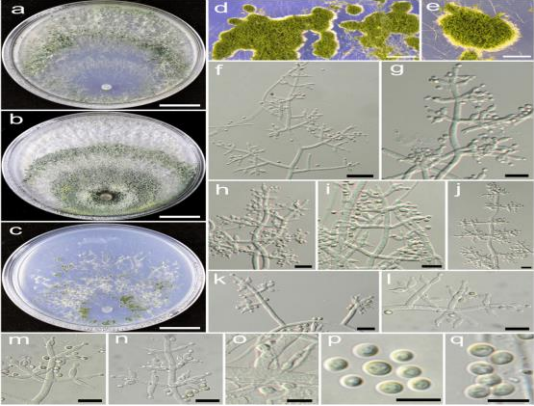
Types:

Nivalenol(*Fusarium* sp.)

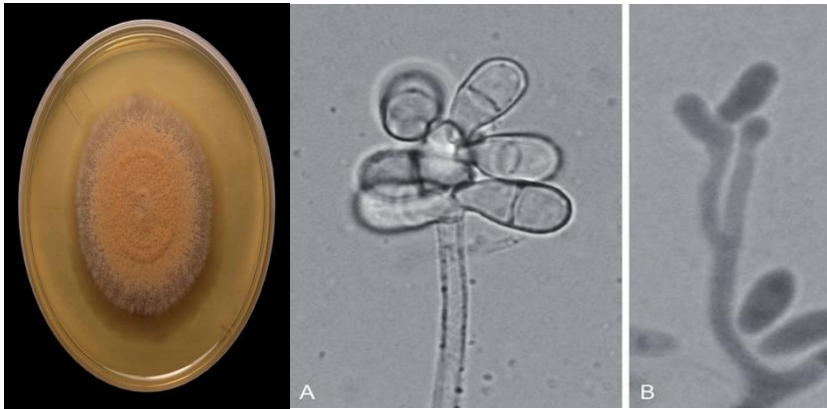
Macrocyclic (*Trichothecium* sp.)

Satratoxins H(*Stachybotrys* sp.)

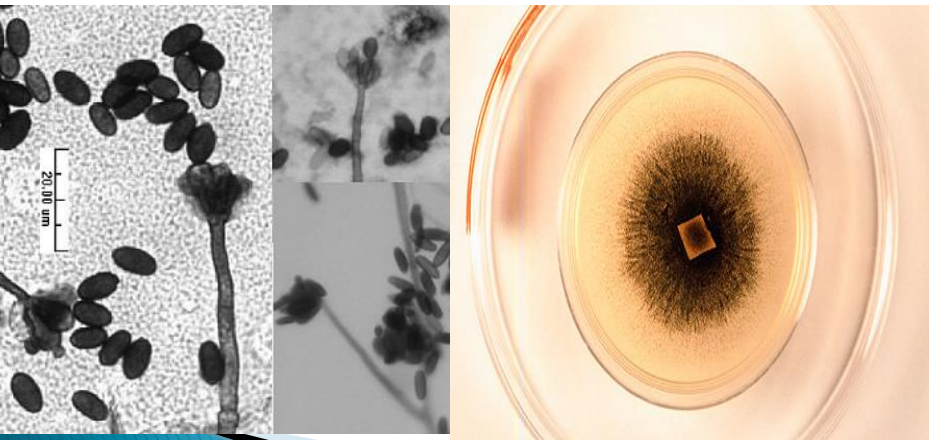




Trichoderma



Trichothecium sp



Stachybotrys sp



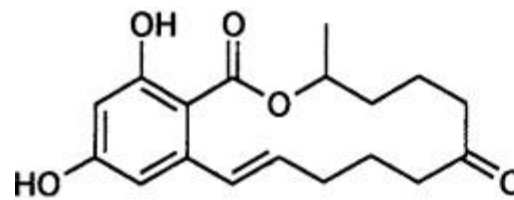
8-Zearalenone

Fusarium graminearum

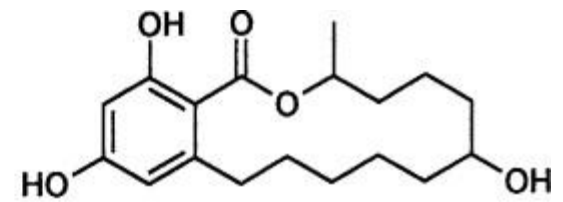
F. spp.

Types:

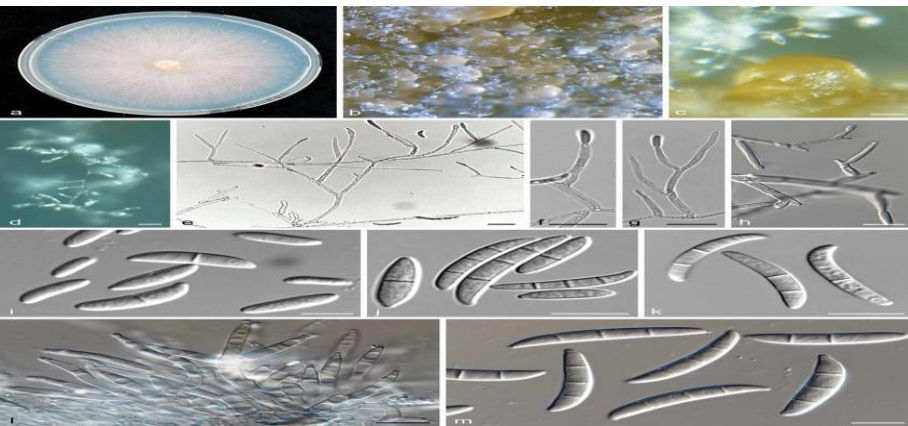
Zearalenol



zearalenone



zearalanol



Mycotoxins in Crops: Zearalenone

Mycotoxins are chemicals produced by fungi that are harmful to humans and animals. These chemicals can contaminate food and feed, posing a number of significant safety concerns.

Zearalenone is a mycotoxin produced primarily by the fungus *Fusarium graminearum*, the same fungus that produces deoxynivalenol (DON).



Zearalenone mimics the reproductive hormone estradiol and can cause a wide variety of **reproductive problems** in animals including periods of infertility, low birth weights and reduced litter size.

High humidity and low temperatures typically favor the production of zearalenone.

