

## Practice abstract #4.6

# Generic Food Safety Assessment System when changing crop management



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When crop management system changes, food safety may be affected. Food safety risks can be eliminated, introduced or remain unchanged. It is therefore relevant to assess these effects when changing a system.

Crop management changes include any change in crop production e.g. introduction of a new crop, starting intercropping, changing irrigation practices, use of new/ different plant protection products etc.

### Generic Food Safety Assessment System

A generic systematic approach has been developed to assess potential food safety hazards (new/decreased/ increased) resulting from changes in a crop management system. 'Change' is the key, meaning the food safety hazards in the old and new situation are compared. Recording of the findings and actions is thus essential.

This generic assessment can be applied e.g. when changes are introduced or yearly.

All changes are evaluated for chemical, microbiological, physical, and allergens risks. A standard format is used to allow easy and transparent review.

## Examples of hazards in changing crop systems:

### Chemical hazards

Chemical hazards from the use of plant protection products (PPP), fertilizers, mycotoxins, plant alkaloids, heavy metals etc. need to be evaluated. For example, shifting from sole cropping oats to intercropping lupin and oats may lead to the introduction of toxic alkaloids in oats.

### Microbiological hazards

Microbiological hazards can, for example, occur if surface water is used for irrigation in place of freshwater. Measures need to be implemented on farm or in the later stage to eliminate this risk.

### Physical hazards

Physical hazards such as stones or wooden sticks may, for example, be introduced when a different type of harvesting is used.

## Allergen risks

Gluten allergens will be removed from the farm when wheat is no longer grown. On the other hand, lupin allergens are introduced when starting to lupin cultivation.

### Conclusion

All actors in the food production chain must be (made) aware of the possible food safety risks when crop management changes. The developed generic food safety assessment system can help to identify potential hazards and required control measures to prevent or minimize these hazards.

### About CROPDIVA

CROPDIVA wants to put 6 underused arable crops back in the fields: oats, hull-less barley for human consumption, triticale, buckwheat, faba beans and lupins.

27 European partners are joining forces to enhance agrobiodiversity in Europe. They will achieve this by focusing on crop diversity and creating local value chains.



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