CERES Policy

Buffer Zones Between Organic and Conventional Fields

1	**Aims**	Establish clear rules for buffer zones between organic and conventional fields, in order to reduce pesticide residues in organic food and increase consumers' trust.
2	**Background**	There is large evidence, that organic products are far less contaminated by pesticide residues than conventional food. A number of cases occur, however, where pesticide residues are found in organic food. Such cases may undermine the trust in organic certification and the development of the organic markets. Frequently, such residues originate from drift. In many cases, they have been detected in products imported from countries where spraying equipment is poor and integrated pest management (IPM) standards are not always properly applied on neighbouring conventional fields. In order to reduce these problems in the future, we find it necessary to develop guidelines for organic farmers, CERES inspectors and certification staff. Producers must be responsible for the organic integrity of their product in a wider sense, beyond their own non-application of prohibited substances. In addition, buffer zones can and should be used to increase agro-ecosystem biodiversity, especially through hedgerows or diverse flowering plants.
3	**Normative framework**	**EU Regulation:** Reg. (EC) 889/08, Art. 63: **Control arrangements and undertaking by the operator:** *" 1. When the control arrangements are first implemented, the operator shall draw up and subsequently maintain: (...)* *(c) the precautionary measures to be taken in order to reduce the risk of contamination by unauthorised products or substances…"* **NOP:** *"§ 205.2: Buffer zone: An area located between a certified production operation or portion of a production operation and an adjacent land area that is not maintained under organic management. A buffer zone must be sufficient in size or other features (e.g., windbreaks or a diversion ditch) to prevent the possibility of unintended contact by prohibited substances applied to adjacent land areas with an area that is part of a certified operation.* *§ 205.202: Any field or farm parcel from which harvested crops are intended to be sold, labelled, or represented as "organic," must:* *(c) Have distinct, defined boundaries and buffer zones such as runoff diversions to prevent the unintended application of a prohibited substance to the crop or contact with a prohibited substance applied to adjoining land that is not under organic management."* **JAS:** Notification 1605, Art. 4(1): *"The necessary measures shall be taken in fields, so as to prevent prohibited substances from drifting and flowing from the surrounded areas..."* Questions and Answers on the Japanese Agricultural Standards for Organic Agricultural Products and Organic Processed Foods, MAFF, Jan. 2006: Answer to Q 51: *"Measures to compartmentalize are necessary in order to prevent prohibited substances from drifting and flowing. Each judgment is left to each*

		registered certifying body, because situations differ depending on field conditions. Criteria include: providing a distance between organic and conventional fields; dividing fields by roads; establishing windbreak nets, maintaining a buffer zone by cultivating crops at the boundary; maintaining a boundary to prevent rainwater flowing from conventional fields into the organic field." Answer to Q 53: *"Each registered certifying body judges whether or not proper measures are taken to prevent agricultural chemicals from drifting into the fields, given the geographical condition, the wind direction and how aerial spraying is applied. This is true of the fields outside the aerial chemical spraying area because spraying might be applied nearby."* Answer to Q 57: *"Influences of drifting or flowing of agricultural chemicals into fields depend on geographical conditions of the fields and weather conditions in the areas. If fields for organic production are confirmed to be affected by drifting or flowing of agricultural chemicals other than those listed on Table 2 of the JAS for organic agricultural products, the products in the relevant fields are not organic agricultural products."*
4	**Terms, clarifications, abbreviations**	**Pesticides:** all plant protection products not listed in Annex II (EU Regulation), the National List (NOP) or Notification 1605 (JAS).
5	**Policy**	
5.1	**In which situations buffer zones are required:** • Where pesticides are sprayed on neighbour fields. Drift risk depends on spraying frequency, type and concentration of pesticides, spraying equipment, wind direction, distance, and vegetation. • On slopes, when significant amounts of fertilisers or pesticides can be introduced to the organic field through surface runoff. In other situations, buffer zones are usually not necessary. To make it clear: buffer zones need <u>not</u> to be established just because the neighbour field is not certified, or because conventional fertilisers are used on the neighbour field, in case that there is no real risk of pollution.	
5.2	**What can be used as a buffer zone (in order of preference):** 1. Hedgerows (if possible with diverse native shrubs and trees) 2. Flower stripes (if possible with diverse species that flourish during a long period) 3. Spontaneous vegetation or non-food crops, roads or other non-cultivated areas 4. Food crops other than certified (e.g. cassava on the edge of organic bananas) 5. Certified food crops destined for conventional market. In this case, separate conventional harvest and sale must be adequately documented. In case of slopes with risk of runoff of pesticide or fertiliser residues (see 5.1), runoff diversions (ditches) have to be established.	
5.3	**Width of buffer zones, according to different drift risks. The following is a general guideline in order to assure, that different operators are treated in a similar way. The concrete measures to be taken in order to comply with the standards quoted above, will be agreed with the operator, taking into account the specific situation.**	

Type and management of conventional neighbour field	Minimum width of buffer zone with … vegetation	
	low growing*	high growing*
Without external input or only fertiliser use	-	-
Field or vegetable crop with manual knapsack sprayer.	1 - 2 m**	Hedgerow or 3 rows of high growing annual plants (sunflower, maize) – must exist before spraying season
Field or vegetable crops with tractor pulled field crop sprayer in good technical shape and adequately managed.	2 – 4 m	Hedgerow or 6 rows of high growing annual plants (sunflower, maize) – must be established before spraying season
Field or vegetable crop with poor equipment or poor handling for spraying	4 – 8 m	Hedgerow or 6 rows of high growing annual plants (sunflower, maize) – must be established before spraying season
Fruit orchards with high pressure motor sprayer	10 – 20 m	2 m wide, 2 m high dense hedgerow
Aerial spraying	30 – 100 m	At least 5 m high hedgerow plus 20 m wide space. Or 15 m high tress complemented by lower bushes, to form a high and dense hedgerow, at least 3 m wide.

* low and high growing vegetation: less or more than 80 cm high, respectively

** range according to predominating wind direction and spraying intensity.

5.4	**Assessment:** The farmer establishes drift risk and designs necessary buffer zones. The inspector checks, whether risk assessment and buffer zones are adequate.	
5.5	**Non-spraying agreement:** As an alternative (but also additionally) to buffer zones, organic producers can sign non-spraying agreements with their conventional neighbours. In this case, the neighbours must not spray the adjacent stripe to the organic field, according to the width of buffer zones established above. The organic farmer is responsible for supervising the fulfilment of the agreement. Written agreement and supervision protocols must be available during inspections.	
5.6	**Scattered fields:** In regions with extremely scattered smallholder field property, implementation of buffer stripes may not be possible. In these cases, agreements with neighbours have to be much more detailed and stricter, and pesticide residue testing has to be intensified.	
6	**Access to this policy**	• This policy is available to all interested public • It must be handed out to all CERES certification and inspection personnel • It must be submitted to all operators interested in organic crop certification
7	**Related documents**	• CERES Policy on Pesticide Residue Interpretation • CERES Policy on Maximum Field Size and Hedgerows