COMMISSION OF THE
EUROPEAN COMMUNITIES

7029/VI/95 rev.5
22/7/97

Directorate General for Agriculture

VI B II-1

APPENDIX B

GENERAL RECOMMENDATIONS FOR THE DESIGN, PREPARATION AND REALIZATION OF RESIDUE TRIALS

11 References

Annex 1 Sampling

- Instructions for taking a primary sample
- Minimum quantity required for sample
- storage/transportation of sample

Annex 2 Classification of (minor) crops not listed in the Appendix of Council Directive 90 /642

1 Preface

Residue data are required as part of the authorization procedure for plant protection products; this is normally achieved by undertaking supervised trials.

The Guidelines, presented here, offer general advice concerning the design, preparation and realization of residue trials, the recording of experimental data, sampling, storage of samples and their transport.

2 Introduction

In many cases the presence of residues on and in plants and plant products cannot be avoided, even when application has followed recommended procedures and 'Good Agricultural Practice (GAP)' has been observed. trials on residue behaviour are necessary to determine the level of residues and to assess the consequences of these on the health of man and animal. The selective preparation of supervised field trials is necessary in order to take account of the wide range and diversity of available techniques and methods which include those used to select, treat and analyse samples. The data obtained serve to define Maximum Residue Levels, and to ensure consumer protection. The evaluation of residue data in keeping with uniform guidelines helps to eliably assess residue behaviour and ensures that such data are mutually comparable. It also assist in the setting of Maximum Residue Levels thus facilitating international trade in food products. Residue trials rely upon knowledge gained from studies of breakdown, transformation and metabolism of plant protection products and from studies of their uptake, translocation and mode of action.

Supervised field trials are designed in such a way, that while they comply with the constraints of 'Good Agricultural Practice', the highest likely residue levels are being considered. Residue levels can be affected by the quantity applied, the time of application, the pre-harvest interval, climatic conditions, the formulation of the product and the application method. The residues are subject to translocation, dilution (increase in the mass of plant tissue through growth) and to breakdown, or as the case maybe, to transformation (metabolism).

In addition, persistence on or in the plant is influenced by the physico-chemical properties of the active substance.

In addition to the mode of application defined in the submission for authorization, account should be taken of the de facto methods routinely used in agriculture.

3 Definition of terms (Within the meaning of these Guidelines)

Field of use:
Use of the plant protection product (for instance field use, protected crops etc.)

Mode of application:
Use of the plant protection product on specified crops or agricultural commodities, against identified harmful organisms, purpose of use, timing of application, rate of application, number of applications etc.

Area of application:
For instance in agriculture, horticulture, viticulture, home garden situations, forestry and cultivation of hops.

Harvest level:
Residue level at time of harvest.

Residue decline studies:
Residue trial which, as a rule, consists of five sampling stages, two of which are frequently set to coincide with the time of application and the harvest respectively. The recommended Pre-harvest Interval must be declared in every case.

Shortened residue decline studies:
Residue trial comprising fewer than five (in most cases three) sampling stages.

Worst case test conditions (realistic worst case):
Test conditions which in predictable circumstances will accomodate even the highest residues which may reasonably arise (maximum number of applications, use of the maximum quantity, minimum pre-harvest/withholding interval) when applications are made in accordance with the GAP.

Use category:
Designed to function as insecticide, herbicide or fungicide for instance.

Mode of action:
For instance through contact action, systemic effect, respiratory poison.

4 **Good Laboratory Practice**

Good Laboratory Practice (GLP) is concerned with the organisational guidance and conditions which attend the planning, implementation and surveillance of investigations. It also invigilates the keeping of records and the presentation of investigation protocol.

Compliance ensures that protocols are followed, correct records and documentation are kept and that studies are internationally acceptable.

Directive 91/414/EEC contains provisions concerning the application of GLP to residue studies.

5 **Design of residue trials**

5.1 General observations

The objectives of these studies are:

a) to quantify the highest likely residue level in treated crops at harvest or outloading from store following the proposed good agricultural practice (GAP),
and
b) to determine, when appropriate, the rate of decline of plant protection product deposits.

They must be designed and implemented so as to record even the worst case residue levels which might be encountered when applying the product according to the critical GAP (irrespective of an expected or actual attack by harmful organisms; see chapter 3: "Worst case test conditions"). They therefore differ fundamentally from field studies designed to assess the efficacy of products against target organisms.

The design of residue trials should take into account the proposed mode of application, the sampling procedure and the residue analysis. The setting of Maximum Residue levels and of Pre-harvest Intervals will call for results based on several trials carried out in different localities and under different geo-climatic conditions. These residue trials, performed using officially reported formulations, should be carried out in accordance with the proposed Good Agricultural Practice (GAP).

5.2 Number of trials

Sufficient data must be generated and submitted to confirm that patterns determined hold for the regions and the range of conditions, likely to be encountered in the regions concerned for which its use is to be recommended.

When establishing a supervised trial programme, normally factors such as climatic differences existing between production areas, differences in production methods (e.g. outdoor versus glasshouse uses), seasons of production, type of formulations etc should be taken into account.

In general, for a comparable set of conditions, trials should be carried out over a minimum of two growing seasons. All exceptions should be fully justified.

The precise number of trials necessary is difficult to determine in advance of a preliminary evaluation of the trial results. Minimum data requirements only apply where comparability can be established between production areas, e.g. concerning climate, methods and growing seasons of production etc. Assuming all other variables (climate etc) are comparable, a minimum of eight trials representative of the proposed growing area is required for major crops. For minor crops normally four trials representative of the proposed growing area are required.

Due to the inherently higher level of homogeneity in residues arising from post-harvest treatments or protected crops, trials from one growing season will be acceptable. For post-harvest treatments, in principle a minimum of four trials are required, carried out preferably at different locations with different cultivars. A set of trials has to be carried out for each application method and store type unless the worst case residue situation can be clearly identified.

The number of studies per growing season to be performed can be reduced if it can be justified that the residue levels in plants/plant products will be lower than the limit of determination.

Where a significant part of the consumable crop is present at the time of application half of the supervised residue trials reported should include data to show the effect of time on the level of residue present (residue decline studies) unless it can be justified that the consumable crop is not affected by the application of the plant protection product under the proposed conditions of use.

Detailed instructions concerning specific contingencies may be found elsewhere or in specific Guidelines for individual crops (see document 7525/VI/95)).

5.3 Site selection, site requirements

Residue trials which are carried out in open fields, should generally include data from four different sites in the same growing season. For applications under glass, a single season is usually adequate since the geographic distribution of trial sites is immaterial. Specific conditions which affect cultivation (heated glasshouse, cold glasshouse, hydroponics) should be taken into consideration.

Trials on cultivated plants performed in regions where these plants are the dominant crop, should reflect the main types of agricultural practice.

Furthermore, the sites should allow the design of trials to reflect forseeable likely variations in weather conditions, different types of soil and the special characteristics of each crop.

The size of the area used in the trial will vary from crop to crop. It should be large enough for application of the plant protection product to reflect routine use and so that representative samples can be obtained. The experimental plots should be large enough to avoid contamination during mechanical sampling/harvesting.

This should also apply to control plots which should be sited in the immediate vicinity of the treated area so that cultivation and cropping take place under, as far as possible, identical conditions but avoiding contamination by spray drift etc. Where treated and control plots are close, measures should be taken to avoid unintentional contamination (e. g. covering crop).

Duplicate trials carried out at the same site are useful but experience shows that intra-site variations in residue levels are smaller than inter-site variations in levels.

5.4 Conditions for growth and cultivation

The conditions under which growth and cultivation take place including weather can significantly influence the residual behaviour of a plant protection product. These data are therefore indispensable for the evaluation of results.

5.4.1 Selection of varieties

The design of trials should take account of all characteristics of a given variety which may have an influence on the uptake of the active substance and upon the formation of residues. As far as possible, the common varieties of a crop should be investigated.

5.4.2 Field of use

Outdoor application is not comparable with other fiels of use. Thus for instance, the climatic conditions in protected crops (such as under glass, under plastic cover, inside climatic chambers or in stores), which differ from those prevailing outdoors, usually lead to higher residues compared to outdoor use. Consequently each field of use merits a comprehensive separate investigation unless the worst case residue situation can be clearly identified.

6 **Application of plant protection product**

6.1 Amount of plant protection product used

Residue trials should be based on the highest approved or proposed rate of application consistent with Good Agricultural Practice in the region where concerned. The quantity used is expressed in terms of amount of product and active substance per unit surface area and, where appropriate, the concentration at which it is dispersed is also given. As for high crops, like apple trees or tomato plants, the height of plants should also be taken into account, i.e. where appropriate the used amount of active substance should be calculated based on the height of trees, leaf walls, etc. rather than per unit surface area only. The height as basis for calculating the amount of active substance used is to be recorded. Where products/active substances with enhanced vapor pressure are dispersed (eg. as aerosols) in enclosed spaces (under glass, under foil, in stores, etc.) data concerning the amount of active substance per unit volume should also be given.

Trials in which multiples (e. g. double) of the practical recommended rate of application are used are not necessary.

6.2 Amount of water used

The volumes of water used routinely may differ in certain cases which has to be taken into account. Where routine application calls for a specified volume of water, the investigation must adhere to it closely. The volume of water applied per unit surface area should be recorded.

6.3 Preparation of the spray solution and application of the plant protection product

When preparing the spray-solution precise attention should be paid to the specified dose level. It is also important to use the appropriate spraying equipment which should be in good working order. Exceeding the rate of application through overlapping swaths or adventitious dripping at turning points, as well as under-dosing because of drifting, should be avoided. The same principles, appropriately adapted, apply to other methods of application such as atomizing or scattering.

Given that as a rule the surface area committed to trials is small, insufficient attention paid to the factors mentioned may considerably worsen the inherent statistical variation.

The trial area should be large enough so that these variations are as small as possible.

Whenever possible the apparatus used should correspond to the equipment used in Good Agricultural Practice. Only the formulated product which is the subject of the authorization procedure, or at least, a very similar formulation, should be used.

6.4 Number of applications and time interval between successive applications

In the course of a single growing season of a crop, many plant protection products may need to be used several times against one or more harmful organisms. Residue trials should therefore reflect the proposed critical GAP (number of applications, interval between applications).

To cover the worst case residue situation the application of the same active substance present in different products against other harmful organisms which may attack the same crop has to be considered; where relevant the design of the trial should also take this into account..

Example: Application of the same active substance as a seed dressing and as a spray in cereals.

6.5 Timing of application

In order to test the residue behaviour of a plant protection product the presence of the harmful organism of interest is of little consequence. The timing of the application of the plant protection product will in many instances be pre-determined. On the other hand, the harmful organism may remain vulnerable over a relatively extended period of time.

It should also be remembered that the stage of development of a crop plant also affects residue behaviour. The pre-harvest interval, secretion of wax and differential growth rates, among others, will also affect residue behaviour.

6.6 Application of additional plant protection products

Should it become necessary to use additional plant protection products which are not the subject of residue trials, the additional plant protection products should be chosen from among those which do not affect analysis of residues, and secondly, these agents should be applied to both the control- and the experimental plots.

7 **Records of plant growth and development**

For reliable appraisal of residue behaviour of plant protection products in and on plants, knowledge of the vegetative stage is often indispensable. In certain instances the timing of application of the plant protection product will depend on when the cultivated plant flowers, as for instance in the case of spraying before flower buds open, - when in flower and after petal fall in fruit growing, or as in spraying against insects which attack rape with products harmful to bees. Sowing time, or alternatively, planting time may indicate whether a given variety may be harvested early or late. The differential growth rates involved may affect residue behaviour to a different extent. Access to data defining the start and end of flowering is important for deciding whether, and if so, to what extent fruit and other harvest products are likely to have been affected by the spray solution. These considerations also bear upon the comparabilty of crops. At all events, the date of the harvest is indispensable since it may significantly affect the residue situation.

For crops with extended harvest periods records on harvest should include beginning and end of harvest.

8 Records of weather conditions

Precipitation, irrigation, wind and temperature can decisively influence the behaviour of residues in and on plants, particularly just after application. Such factors must therefore be appropriately recorded while the trial is in progress. This requirement is best accomodated directly at the trial site, for instance, by deploying a mobile weather station.

Information on weather immediately after application and on the day of application are most important, however for the time thereafter detailed and comprehensive records of weather data are not called for in the context of trials which may extend over longer periods. In such cases it will suffice to record precipitation and temperature averaged over days, weeks or months, depending upon the length of the growth season. Nevertheless special attention should be accorded to the period intervening between application and harvest.

9 Records of soil conditions

Where the plant protection product is to be applied directly to soil, soil classification data must be supplied. These should include as a minimum information on type of soil, pH-value and organic carbon content.

These data are also important for products not applied directly to the soil and may provide information on the behaviour of the residues.

10 Samples

10.1 Test and control samples

A distinction is to be made between test- and control samples. From practical experience it is possible to provide quantified advice with regard to timing and frequency of gathering test samples. Analogous instructions relating to control samples are of a rather general kind. Control samples serve to establish values for blanks and to find a measure for the recovery and sensitivity of the analytical method chosen for the given substance under investigation.

Samples of plant tissue from plants grown under different conditions should not be used for reference purposes, since differing growth conditions and changes in the identity and quantity of plant constituents may interfere with chemical analysis. A control sample should be collected in parallel with and at the same time as the test sample, with special emphasis to the day O and normal harvest samples.

It is not always possible to obtain matching crop material from commercial sources which is free of residues and of interfering contaminants. Transport and storage may also induce changes in plant material which can affect test results.

When the maturity, or any other property, of the plant product changes significantly within the interval in which samples are gathered, control samples collected solely during harvesting and at the time of the last application will no longer suffice. It then becomes necessary to obtain an untreated sample for at least one of the intervening stages. The conditions of the experimental and of the control samples should be comparable.

10.2 Contamination of samples

Whatever the circumstances, sample contamination must be avoided. The following points should therefore receive special attention:

1. Control samples should always be collected ahead of test samples.
2. Only clean sampling tools and packing should be used.

3. Contamination transfered from hand or from clothing should be avoided by washing and, if necessary, by cleaning or changing the latter before the next sampling.
4. The transport of samples together with the plant protection product must be avoided, as indeed one must avoid any contact between samples and tools and/or packaging intended for use with plant protection products.
5. Damage to the sample material of the goods in transit must also be avoided.
6. Only non-contaminating packaging material should be used.

10.3 Sampling

In this context a distinction is to be made between field-, laboratory- and analytical samples. Since these samples are meant to reflect the residue situation over the entire treated surface area, sample collecting should be delegated to trained personnel familiar with the design of the test and competent to gather samples which represent the average value. Sampling, after all, involves taking account of the factors which affect residue levels (such as the uneven distribution of residues in and on the crop).

10.3.1 Field samples

A field sample is all the material collected at the same time from various parts of the experimental plot. The sample may be gathered in keeping with a variety of procedures (the entire stand in a part of the area, individual whole plants or parts of plants). Of importance is that the sample should reflect the situation in the experimental plot. Detailed instructions will be found elsewhere.

Voluminous or heavy loads may with advantage be divided in the field into homogenuous subsamples before being dispatched to the residue laboratory. Care should be taken to ensure that such subsamples are truly representative and that possible contamination or spoilage through decay are avoided. Apart from superficial cleansing, i.e. removal of any extraneous matter, no intrusive cleaning should be attempted. In the case of root crops recovered with soil, where light brushing is not sufficient to remove soil, rinsing under cold running water should be used.

At this juncture it shall suffice to point out that special contingencies arise when representative samples are to be collected from stored material after post-harvest use (in grain silos, for instance).

Where it becomes necessary to collect a sample on the day of the last application, sampling should take place as soon as the spray deposit has dried on. As a rule this should be possible within at most three hours after application. Variations from this should be recorded.

10.3.2 Laboratory samples

The laboratory sample is a representative sub-sample of the field sample. It should weigh at least 500 to 1000 g.

10.3.3 Analytical samples

The analytical sample is taken from the laboratory sample, which is to be submitted to analytical procedures. It is obtained by removing a representative sub-sample from the laboratory sample.

Detailed provisions on the portion of the product to which the MRL applies (and which is analysed) are contained in the Annex to Council Directive 90/642/EEC of 27 November 1990 on the fixing of maximum levels for pesticide residues in and on certain products of plant origin, including fruit and vegetables.

For plants or plant products with inedible skin (such as citrus, banana, kiwi, pineapple) a separate analysis of flesh and skin should be performed on some samples in order to provide data on the distribution of residues between flesh and skin.

10.3.4 Labelling of samples

Every sample must be clearly labelled with waterproof typing before dispatch. This helps to avoid those errors which may be traced back to the mixing up of samples

10.3.5 Storage and dispatch of samples

As soon as samples are labelled and packed they are put into storage at -18°C , or, alternatively sent directly to the residue laboratory. In the case of short periods of storage and transportation (generally max. 24 hours), samples may be stored and dispatched in a cool dark place. Deep-frozen material should be protected from thawing by appropriate means. This can for example be achieved by adding an adequate amount of dry ice to the container or by use of a deep freezer truck.

After sampling samples should undergo analysis with as little delay as possible, and in any event, before significant physical or chemical changes have taken place. Accordingly all plant material and sample extracts destined for analysis and which will not be analysed within generally 24 hours should be kept frozen (down to at least -18 °C) while awaiting analysis. In the case of deep-frozen field samples care should be taken to ensure that the deep-freeze conditions are not compromised on route to analysis. It should also be remembered that even when deep-frozen the active substance may continue to degrade, a process only slowed down by deep-freezing. Appropriate measures and investigations such as spiking control samples with the active compound and/or its metabolites will confirm the stability or reveal the labile state of the residue. Changes in the residue during the storage period must at all events be recorded.

More details on storage conditions are contained in document 7032/VI/95.

11 **References**

J. A. R. Bates und S. Gorbach, 1982:
Recommended Approaches to the Production and Evaluation of Data on Pesticide Residues in Food, Pure & Appl. Chem. 54, pp 1361- 1450 (1982)

Guidelines on Pesticide Residue Trials to Provide Data for the Registration of Pesticides and the Establishment of Maximum Residue Limits, Food and Agriculture Organization of the United Nations, Rome, 1986

J.-R. Lundehn, W. Pestemer, K. Schinkel und J. Siebers, 1988:
Prüfung des Rückstandsverhaltens von Pflanzenschutzmitteln in Nachbaukulturen (Nachbaurichtlinie), Richtlinie der Biologischen Bundesanstalt für Land- und Forstwirtschaft Teil IV, 3-10, Mai 1988, Saphir Verlag, 3171 Ribbesbüttel

P. Beutel, H. Frehse, B. Krebs, H. Morgenthaler, H. J. Scheuermann und G. Timme, 1992:
Rückstandsversuche - Teil I: Prüfungen an Pflanzen, Teiler IA und IB, Industrieverband Agrar e.V. (IVA), 2. Auflage 1992

P. Beutel, H. Frehse, B. Krebs, H. Mörgenthaler, H.J. Scheuermann and G. Timme, 1992:
Residue Studies - Part I: Studies with plants Parts IA and IB, Industrieverband Agrar e.V. (IVA), 1st English impression 1992"

J.-R. Lundehn, M. Blacha-Puller, R. Hans, K. Hohgardt, H. Parnemann, J. Siebers und A. Wilkening, 1989:
Prüfung des Rückstandsverhaltens - zu analysierende Erntegüter, Richtlinie der Biologischen Bundesanstalt für Land- und Forstwirtschaft Teil IV, 3-8, April 1989, Saphir Verlag, 3171 Ribbesbüttel

Deutsche Forschungsgemeinschaft (DFG), 1989:
Rückstandsanalytik von Pflanzenschutzmitteln - Methodensammlung der Arbeitsgruppe Analytik, 1. - 10. Lieferung, VCH Verlagsgesellschaft, Weinheim 1989

Codex Alimentarius Commission:
Guide to Codex Recommendations Concerning Pesticide Residues, Part 5, Recommended Methodes of Sampling for the Determination of Pesticide Residues, Joint FAO/WHO Food Standards Programme, Rome

ANNEX 1

SAMPLING

Contents

Introduction

Method of sampling - general requirements

Method of sampling - specific requirements covering

- Instructions for taking a primary sample
- Minimum quantity required for sample
- Storage/transportation of sample

for the following crops:

1 Fruit and nuts (except peanuts)

Pome fruit
Stone fruit (large)
Stone fruit (small)
Berries
Berries
Grapes
Citrus fruit
Tropical and subtropical fruit (edible skin)
Tropical and subtropical fruit (edible skin)
Tropical and subtropical fruit (inedible skin)
Tropical and subtropical fruit (inedible skin)
Tropical and subtropical fruit (inedible skin)
Tree Nuts
Tree Nuts

2 Vegetables

Potatoes
Root and tuber vegetables
Root and tuber vegetables
Root and tuber vegetables
Bulb vegetables
Bulb vegetables
Bulb vegetables
Bulb vegetables
Brassicas
Brassicas
Brassicas
Brassicas
Leaf vegetables
Leaf vegetables
Leaf vegetables
Stem vegetables

Stem vegetables
Stem vegetables
Stem vegetables
Legume vegetables (fresh)
Pulses
Fruiting vegetables (edible skin)
Fruiting vegetables (edible skin)
Fruiting vegetables (edible skin)
Fruiting vegetables (inedible skin)
Fruiting vegetables
Fungi

3 Sugar beet

4 Grasses

Cereals (except rice and maize)
Rice
Maize
Sugar-cane

5 Fodder crops

Fodder legumes and fodder grasses
Fodder beet

6 Seeds/beans

Oilseeds
Oilseeds
Oilseeds
Oilseeds
Oilseeds

7 Herbs and spices, tea

Herbs
Tea
Hops

8 Tobacco

Sampling

Introduction

The best way of securing information on the behaviour of agrochemical residues would be to analyze the total yield of a plot. Since this is not feasible, representative field samples have to be taken.

Method of sampling

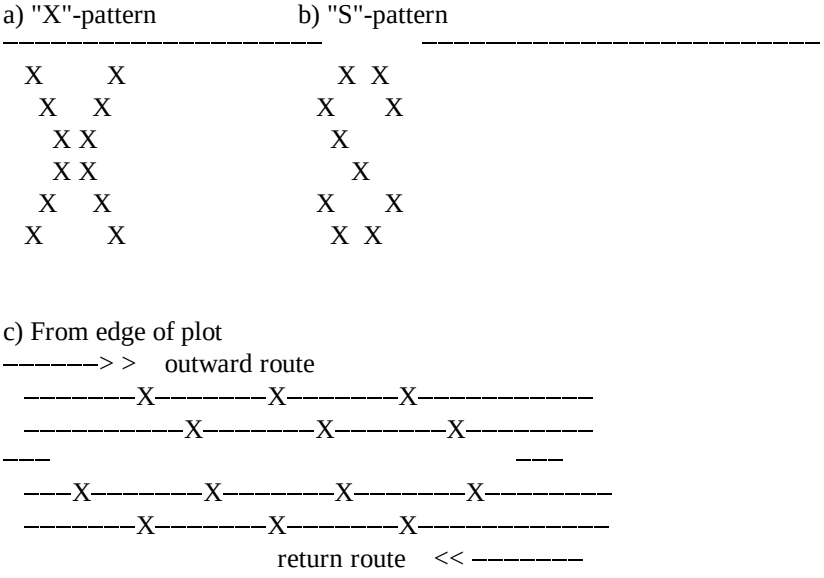
General

When selecting sampling locations and/or sampling methods, it is important to take into account all factors (e.g. plant morphology, differences in plant growth, method of application) which might affect the distribution of residues both in the individual plants and in the trial plot as a whole. The best approach for a particular plot can be decided only by an adequately trained person familiar with the kind of data required and in a position to interpret them.

The material for field samples (individual plants, parts of plants or all growth over a sub-area) can be selected as a rule by one of several methods:

- at random, e.g. use of random numbers for the subplots of the total plot with free choice of the sampling places within the respective sub-plot.
- systematically, e.g. in the case of field crops, along an "X"- or an "S"-pattern (Fig. 1 a + b) or - more suitable for narrow plots - starting from the edge of the plot (Fig. 1 c).
- selectively from predetermined locations; e.g. - in the case of fruit-trees - exposed or leaf-sheltered fruit taken from all regions of the tree (top, bottom, inside, outside), to ensure that all fruit have an equal chance of being sampled.

Fig. 1: Systematic sampling methods



Group: Pome fruit
Produce: Apples, pears, quinces, medlars

RAW PRODUCT Minimum size					PROCESSED PRODUCT	
Sample material	Field sample (immature)	Lab. sample (immature)	Field sample (mature)	Lab. sample (mature)	Sample material	Minimum size Lab. sample
Fruit	12 units min. 1 kg	1 kg	12 units min. 2 kg 5-7 kg 5-7 kg 2 kg 2 kg	1 kg	 Fr. juice Pomace Purée Canned	 1 l 0.5 kg 0.5 kg 0.5 kg

Sampling

If necessary, pick a larger number of fruits, so as to obtain a sample of sufficient weight. Pick fruits from at least 4 trees. Walk round the tree selecting fruits from all parts of the tree, top and bottom, exposed and covered by foliage. Pick fruit from both sides of the rows but not within a metre of the end of the row. The number or quantity of fruits picked is based on the amount of fruit on the tree, i.e. pick more fruit from heavily-laden parts of the tree. Pick both large and small fruits where appropriate, but not so small or damaged that they are unsaleable (exception: if samples of immature fruit are to be taken for a residue decline study).

Storage/transportation

In the case of short periods of storage and transportation (generally 24 hours), samples may be stored and dispatched under cool dark conditions. Otherwise, store or transport in a deep-frozen state.

Group: Stone fruit (large)
Produce: Apricots, nectarines, peaches, plums

RAW PRODUCT Minimum size					PROCESSED PRODUCT	
Sample material	Field sample (immature)	Lab. sample (immature)	Field sample (mature)	Lab. sample (mature)	Sample material	Minimum size Lab. sample
Fruit	24 units min. 1 kg	1 kg	24 units min. 2 kg 5-7 kg 2 kg 2 kg 2 kg	1 kg	 Fr. juice Canned Jam Purée	 1 l 0.5 kg 0.5 kg 0.5 kg

Sampling

If necessary, pick a larger number of fruits, so as to obtain a sample of sufficient weight. Pick fruits from at least 4 trees. Walk round the tree selecting fruits from all parts of the tree, top and bottom, exposed and covered by foliage. The number or quantity of fruits picked is based on the amount of fruit on the tree, i.e. pick more fruit from heavily-laden parts of the tree. Pick both large and small fruits where appropriate, but not so small or damaged that they are unsaleable (exception: if samples of immature fruit are to be taken for a residue decline study).

Storage/transportation

In the case of short periods of storage and transportation (generally 24 hours), samples may be stored and dispatched under cool dark conditions. Otherwise, store or transport in a deep-frozen state. Where possible, separate the stones of the fruit from the flesh before deep-freezing. The weight ratio of stone and flesh must be recorded for each sample.

Group: Stone fruit (small)
Produce: Cherries, mirabelles

RAW PRODUCT Minimum size					PROCESSED PRODUCT	
Sample material	Field sample (immature)	Lab. sample (immature)	Field sample (mature)	Lab. sample (mature)	Sample material	Minimum size Lab. sample
Fruit	1 kg	0.5 kg	1 kg 5-7 kg 2 kg 2 kg	1 kg	 Fr. juice Canned Jam	 1 l 0.5 kg 0.5 kg

Sampling

Pick fruits from at least 4 trees. Walk round the tree selecting fruits from all parts of the tree, top and bottom, exposed and covered by foliage. The quantity of fruits picked is based on the amount of fruit on the tree, i.e. pick more fruit from heavily-laden parts of the tree.

Storage/transportation

In the case of short periods of storage and transportation (generally 24 hours), samples may be stored and dispatched under cool dark conditions. Otherwise, store or transport in a deep-frozen state. Where possible, separate the stones of the fruit from the flesh before deep-freezing. The weight ratio of stone and flesh must be recorded for each sample.

Group: Berries
Produce: Currants, raspberries, blackberries, bilberries and other small berries

RAW PRODUCT Minimum size					PROCESSED PRODUCT	
Sample material	Field sample (immature)	Lab. sample (immature)	Field sample (mature)	Lab. sample (mature)	Sample material	Minimum size Lab. sample
Fruit	0.5 kg	0.3 kg	0.5 kg 5-7 kg 2 kg 2 kg 2 kg	0.5 kg	 Fr. juice Canned Jelly Jam	 1 l 0.5 kg 0.5 kg 0.5 kg

Sampling

Pick fruit from 12 different surfaces or at least 6 bushes. Walk round the bush selecting fruits from all parts, top and bottom, exposed and covered by foliage. Where berries are cultivated in rows, pick fruit from both sides of the rows but not within a metre of the end of the row. The quantity of fruits picked is based on the amount of fruit i.e. pick more fruit from heavily-laden parts of the plants.

Storage/transportation

In the case of short periods of storage and transportation (generally 24 hours), samples may be stored and dispatched under cool dark conditions. Otherwise, store or transport in a deep-frozen state. Caps and stems must be removed before freezing except currants where fruits with stems must be frozen.

Group: Berries
Produce: Strawberries, gooseberries

RAW PRODUCT Minimum size					PROCESSED PRODUCT	
Sample material	Field sample (immature)	Lab. sample (immature)	Field sample (mature)	Lab. sample (mature)	Sample material	Minimum size Lab. sample
Fruit	1 kg	0.5 kg	1 kg 2 kg 2 kg	1 kg	 Canned Jam	 0.5 kg 0.5 kg

Sampling

Pick fruit from 12 different plants or at least 6 bushes. Walk round the bush selecting fruits from all parts, top and bottom, exposed and covered by foliage. Where strawberries are cultivated in rows, pick fruit from both sides of the rows but not within a metre of the end of the row. The quantity of fruits picked is based on the amount of fruit on the plant or bush, i.e. pick more fruit from heavily-laden parts. Pick both large and small fruits where appropriate, but not so small or damaged that they are unsaleable (exception: if samples of immature fruit are to be taken for a residue decline study).

Storage/transportation

In the case of short periods of storage and transportation (generally 24 hours), samples may be stored and dispatched under cool dark conditions. Otherwise store or transport in a deep-frozen state. Crowns (calix)/stems should be removed before freezing.

Group: Grapes
Produce: Wine grapes, table grapes

RAW PRODUCT Minimum size					PROCESSED PRODUCT	
Sample material	Field sample (immature)	Lab. sample (immature)	Field sample (mature)	Lab. sample (mature)	Sample material	Minimum size Lab. sample
Fruit	12 bunches min. 0.5 kg	0.5 kg	12 bunches min. 1 kg ca. 20 kg ca. 20 kg ca. 20 kg	1 kg	Juice Young wine Bottled wine	1 l 1 l 1 l

Sampling

Pick bunches or grapes from at least 4 vines so as to obtain a sample of sufficient weight. In order to obtain sufficient starting material for the manufacture of juice and wine, bunches of grapes must be picked from approx. 30 vines. Take samples from all parts of the vine, top and bottom, exposed and covered by foliage. Pick bunches from both sides of the rows but not within a metre of the end of the row. The quantity of fruits picked is based on the amount of fruit on the vine, i.e. pick more fruit from heavily-laden parts of the vine.

Storage/transportation

In the case of short periods of storage and transportation (generally 24 hours), samples may be stored and dispatched under cool dark conditions. Otherwise, store or transport in a deep-frozen state.

Group: Citrus fruit
Produce: Oranges, lemons, clementines, mandarins, grapefruit, tangelos, tangerines etc.

RAW PRODUCT Minimum size					PROCESSED PRODUCT	
Sample material	Field sample (immature)	Lab. sample (immature)	Field sample (mature)	Lab. sample (mature)	Sample material	Minimum size Lab. sample
Fruit	12 units min. 1 kg	0.5 kg	12 units min. 2 kg 5-7 kg 2 kg 2 kg	1 kg	 Fr.Juice Canned Marmelad	 1 l 0.5 kg 0.5 kg

Sampling

If necessary, pick a larger number of fruits, so as to obtain a sample of sufficient weight. Pick fruits from at least 4 trees or bushes. Walk round the tree or bush selecting fruit from all parts, top and bottom, exposed and covered by foliage. The quantity of fruits picked is based on the amount of fruit on the tree or bush, i.e. pick more fruit from heavily-laden parts of the tree or bush. Pick both large and small fruits where appropriate, but not so small or damaged that they are unsaleable (exception: if samples of immature fruit are to be taken for a residue decline study).

Storage/transportation

In the case of short periods of storage and transportation (generally 24 hours), samples may be stored and dispatched under cool dark conditions. Otherwise, store or transport in a deep-frozen state.
In case of immature fruit, analyse the whole fruit. In case of mature fruit, separate the peel/rind from the flesh before deep-freezing and analyse peel and pulp seperately. The weight ratio of peel and flesh must be recorded for each sample. By doing this, the applicant obtains data on the peel/pulp distribution.

The residue is calculated on the basis of the whole fruit.

Group: Tropical and subtropical fruit (edible skin)
Produce: Olives

RAW PRODUCT Minimum size					PROCESSED PRODUCT	
Sample material	Field sample (immature)	Lab. sample (immature)	Field sample (mature)	Lab. sample (mature)	Sample material	Minimum size Lab. sample
Fruit	1 kg	0.5 kg	1 kg 2 kg 5 kg	0.5 kg	 Olives, processed Raw oil Refined oil	 1 kg 0.5 l 0.5 l

Sampling

Pick fruit from at least 4 trees. Walk round the tree selecting fruits from all parts of the tree, top and bottom, exposed and covered by foliage. The quantity of fruits picked is based on the amount of fruit on the tree, i.e. pick more fruit from heavily-laden parts of the tree.

Storage/transportation

In the case of short periods of storage and transportation (generally 24 hours), samples may be stored and dispatched under cool dark conditions. Otherwise, store or transport in a deep-frozen state. Where possible, separate the stones of the fruit from the flesh before deep-freezing. The weight ratio of the stone and flesh must be recorded for each sample.

Group: Tropical and subtropical fruit (edible skin)
Produce: Dates, figs

RAW PRODUCT Minimum size					PROCESSED PRODUCT	
Sample material	Field sample (immature)	Lab. sample (immature)	Field sample (mature)	Lab. sample (mature)	Sample material	Minimum size Lab. sample
Fruit, fresh	0.5 kg	0.5 kg	1 kg 5 kg	0.5 kg	Fruit, dried	0.5 kg

Sampling

Pick fruit from at least 4 trees. Walk round the tree selecting fruits from all parts of the tree, top and bottom, exposed and covered by foliage. The quantity of fruits picked is based on the amount of fruit on the tree, i.e. pick more fruit from heavily-laden parts of the tree.

Storage/transportation

In the case of short periods of storage and transportation (generally 24 hours), samples may be stored and dispatched under cool dark conditions. Otherwise, store or transport in a deep-frozen state. Where possible, separate the stones of the dates from the flesh before deep-freezing. The weight ratio of the stone and flesh must be recorded for each sample.

Group: Tropical and subtropical fruit (inedible skin)
Produce: Avocados, guavas, mangoes, papayas, pomegranate, kiwis, litchis, passion-fruit

RAW PRODUCT Minimum size					PROCESSED PRODUCT	
Sample material	Field sample (immature)	Lab. sample (immature)	Field sample (mature)	Lab. sample (mature)	Sample material	Minimum size Lab. sample
Fruit	12 units min. 1 kg	0.5 kg	12 units 5-7 kg 2 kg	1 kg	 Fr. juice Canned	 1 l 0.5 kg

Sampling

If necessary, pick a larger number of fruits, so as to obtain a sample of sufficient weight. Pick fruit from at least 4 trees. Walk round the tree or bush selecting fruits from all parts, top and bottom, exposed and covered by foliage. The number or quantity of fruits picked is based on the amount of fruit on the tree or bush, i.e. pick more fruit from heavily-laden parts of the tree or bush. Pick both large and small fruits where appropriate, but not so small or damaged that they are unsaleable (exception: if samples of immature fruit are to be taken for a residue decline study).

Storage/transportation

In the case of short periods of storage and transportation (generally 24 hours), samples may be stored and dispatched under cool dark conditions. Otherwise, store or transport in a deep-frozen state. For fruit containing stones separate where possible the stones of the fruit from the flesh before deep-freezing.
In case of immature fruit, analyse the whole fruit. In case of mature fruit, separate the peel/rind from the flesh before deep-freezing and analyse peel and pulp seperately. The weight ratio of peel and flesh must be recorded for each sample. By doing this, the applicant obtains data on the peel/pulp distribution.

The residue is calculated on the basis of the whole fruit.

Group: Tropical and subtropical fruit (inedible skin)
Produce: Pineapple

RAW PRODUCT Minimum size					PROCESSED PRODUCT	
Sample material	Field sample (immature)	Lab. sample (immature)	Field sample (mature)	Lab. sample (mature)	Sample material	Minimum size Lab. sample
Fruit	12 u	1 kg	12 units 5-7 kg 5-7 kg	1 kg	 Fr.juice Canned	 1 l 0.5 kg

Sampling

Pick fruit from all parts of the plot; do not harvest from the ends of rows.

Storage/transportation

In the case of short periods of storage and transportation (generally 24 hours), samples may be stored and dispatched under cool dark conditions. Otherwise, store or transport in a deep-frozen state. Remove and discard the crown.

In case of immature fruit, analyse the whole fruit. In case of mature fruit, separate the peel/rind from the flesh before deep-freezing and analyse peel and pulp seperately. The weight ratio of peel and flesh must be recorded for each sample. By doing this, the applicant obtains data on the peel/pulp distribution.

Group: Tropical and subtropical fruit (inedible skin)
Produce: Bananas

RAW PRODUCT Minimum size					PROCESSED PRODUCT	
Sample material	Field sample (fully developed, but unripe)	Lab. sample (fully developed, but unripe)	Field sample (mature)	Lab. sample (mature)	Sample material	Minimum size Lab. sample
Fruit	24 units min. 1 kg	0.5 kg	24 units 2 kg	1 kg	Flesh, dried	0.5 kg

Sampling

Pick 2 fingers from the top, middle and bottom hand of 4 mature sets of fruit. If necessary, pick a larger number of immature fruits, so as to obtain a sample of sufficient weight. Pick both large and small fruits where appropriate, but not so small or damaged that they are unsaleable (exception: if samples of immature fruit are to be taken for a residue decline study).

Storage/transportation

In the case of immature bananas and short periods of storage and transportation (max. 1 week), samples may be stored and dispatched under cool dark conditions. In the case of mature bananas and long periods of storage and transportation, store or transport in a deep-frozen state. Separate the skin from the flesh before freezing. If bananas are to be processed, transport in a fresh immature state only. Skin and flesh must be analysed. The weight ratio of skin and flesh must be recorded for each sample.

Group: Tree Nuts
Produce: Walnuts, hazelnuts, almonds, pecan nuts, sweet chestnuts

RAW PRODUCT Minimum size					PROCESSED PRODUCT	
Sample material	Field sample (immature)	Lab. sample (immature)	Field sample (mature)	Lab. sample (mature)	Sample material	Minimum size Lab. sample
Nuts	1 kg	0.5 kg	1 kg 5 kg	0.5 kg	 Raw oil Refined oil	 0.5 l 0.5 l

Sampling

Harvest nuts from all parts of the tree or bush, top and bottom, exposed and covered by foliage. The quantity of nuts picked is based on the amount of nuts on the tree or bush, i.e. harvest more nuts from heavily-laden parts of the tree or bush.

Storage/transportation

In the case of short periods of storage and transportation (generally 24 hours), samples may be stored and dispatched under cool dark conditions. Otherwise, store or transport in a deep-frozen state. Remove the shell from the flesh before freezing and analysis.

Group: Tree Nuts
Produce: Coconuts

RAW PRODUCT Minimum size					PROCESSED PRODUCT	
Sample material	Field sample (immature)	Lab. sample (immature)	Field sample (mature)	Lab. sample (mature)	Sample material	Minimum size Lab. sample
Nuts	12 units	1 kg	12 units	1 kg		
			5 kg		Raw oil	0.5 l
					Refined oil	0.5 l
			5 kg		Coconut milk	0.5 l

Sampling

Harvest at least 12 mature coconuts from 4 trees.

Storage/transportation

Remove receptacles before transporting. In the case of short periods of storage and transportation (generally 24 hours), samples may be stored and dispatched under cool dark conditions. Otherwise, store or transport in a deep-frozen state. Where possible, separate the shell and flesh of the fruit before deep-freezing. Remove the shell and collect the flesh and milk before freezing. The weight ratio of flesh, shell and milk has to be recorded for each sample.

Group: Potatoes

RAW PRODUCT Minimum size					PROCESSED PRODUCT	
Sample material	Field sample (immature)	Lab. sample (immature)	Field sample (mature)	Lab. sample (mature)	Sample material	Minimum size Lab. sample
Potato	24 units min. 0.5 kg	0.5 kg	24 units min. 2 kg 30-40 units 30-40 units	1 kg	French fries Potatoes, steamed	0.5 kg 0.5 kg

Sampling

If necessary, harvest a larger number of potatoes, so as to obtain a sample of sufficient weight. Harvest potatoes from 6 plants distributed throughout the plot, with the exception of a 0.5 m wide strip round the edge of the plot and the ends of the rows. Destroy foliage, since it is not used as animal fodder.

Storage/transportation

In the case of short periods of storage and transportation (generally 24 hours), samples may be stored and dispatched under cool dark conditions. Otherwise, store or transport in a deep-frozen state, removing any soil before deep-freezing.

Group: Root and tuber vegetables
Produce:Beetroot, Jerusalem artichoke, sweet potatoes, celeriac, parsnips, horseradish, salsify, radishes,

RAW PRODUCT Minimum size					PROCESSED PRODUCT	
Sample material	Field sample (immature)	Lab. sample (immature)	Field sample (mature)	Lab. sample (mature)	Sample material	Minimum size Lab. sample
Plant	12 units min. 0.5-1 kg	0.5 kg				
Leaf			1 kg	0.5-1 kg		
Root, tuber			12 units min. 2 kg 3 kg	1 kg	Canned	0.3-0.5 kg

Sampling

If necessary, harvest a larger number of plants, roots or tubers, so as to obtain a sample of sufficient weight. Take samples from the entire plot, with the exception of a 0.5 m wide strip round the edge of the plot and the ends of the rows. When taking harvest samples, if necessary separate into leaves and roots or tubers. Destroy the foliage unless it is to be used for animal fodder; otherwise bag up leaves and roots separately.

Storage/transportation

In the case of short periods of storage and transportation (generally 24 hours), samples may be stored and dispatched under cool dark conditions. Otherwise, store or transport in a deep-frozen state. Remove any soil from plants, roots or tubers before deep-freezing.

Group: Root and tuber vegetables
Produce: Carrots

RAW PRODUCT Minimum size					PROCESSED PRODUCT	
Sample material	Field sample (immature)	Lab. sample (immature)	Field sample (mature)	Lab. sample (mature)	Sample material	Minimum size Lab. sample
Plant	0.5-1 kg	0.5 kg				
Root			12 units min. 2 kg	1 kg		
			2 kg		Canned	0.5 kg
			2 kg		Cooked veg.	0.5 kg
					Veg. juice	
			5-7 kg			1 l

Sampling

If necessary, harvest a larger number of carrots, so as to obtain a sample of sufficient weight. Take samples from the entire plot, with the exception of a 0.5 m wide strip round the edge of the plot and the ends of the rows. When taking harvest samples destroy the foliage, since it is not used for animal fodder. Remove leaves prior to analysis.

Storage/transportation

In the case of short periods of storage and transportation (generally 24 hours), samples may be stored and dispatched under cool dark conditions. Otherwise, store or transport in a deep-frozen state, removing any soil from plants and carrots before deep-freezing.

Group: Root and tuber vegetables
Produce: Rutabaga (swedes), turnips

RAW PRODUCT Minimum size					PROCESSED PRODUCT	
Sample material	Field sample (immature)	Lab. sample (immature)	Field sample (mature)	Lab. sample (mature)	Sample material	Minimum size Lab. sample
Plant	12 units min. 0.5-1 kg	0.5 kg				
Leaf	12 units min. 1 kg	0.5 kg	12 units min. 2 kg	1 kg		
Root	12 units min. 1 kg	1 kg	12 units min. 2 kg	1 kg		

Sampling

If necessary, harvest a larger number of plants, so as to obtain a sample of sufficient weight. Take samples from the entire plot, with the exception of a 0.5 m wide strip round the edge of the plot and the ends of the rows. When taking harvest samples, separate the leaves from the roots in accordance with the usual practice. Bag up foliage separately, since it is used as animal fodder.

Storage/transportation

In the case of short periods of storage and transportation (generally 24 hours), samples may be stored and dispatched under cool dark conditions. Otherwise store or transport in a deep-frozen state, removing any soil from plants and roots before deep-freezing.

Group: Bulb vegetables
Produce: Spring onions

RAW PRODUCT Minimum size					PROCESSED PRODUCT	
Sample material	Field sample (immature)	Lab. sample (immature)	Field sample (mature)	Lab. sample (mature)	Sample material	Minimum size Lab. sample
Plant	12 units min.1 kg	0.5 kg	24 units min. 2 kg	1 kg		

Sampling

If necessary, harvest a larger number of plants, so as to obtain a sample of sufficient weight. Take samples from the entire plot, with the exception of a 0.5 m wide strip round the edge of the plot and the ends of the rows.

Storage/transportation

In the case of short periods of storage and transportation (generally 24 hours), samples may be stored and dispatched under cool dark conditions. Otherwise, store or transport in a deep-frozen state, removing any soil and roots before deep-freezing.

Group: Bulb vegetables
Produce: Garlic

RAW PRODUCT Minimum size					PROCESSED PRODUCT	
Sample material	Field sample (immature)	Lab. sample (immature)	Field sample (mature)	Lab. sample (mature)	Sample material	Minimum size Lab. sample
Plant Bulb	12 units min.1 kg	0.5 kg	 12 units min. 2 kg	 1 kg		

Sampling

If necessary, harvest a larger number of plants, so as to obtain a sample of sufficient weight. Take samples from the entire plot, with the exception of a 0.5 m wide strip round the edge of the plot and the ends ofthe rows. Young plants are not usually separated into their various components. When taking harvest samples remove foliage and destroy, since it is not used as animal fodder.

Storage/transportation

In the case of short periods of storage and transportation (generally 24 hours), samples may be stored and dispatched under cool dark conditions. Otherwise, store or transport in a deep-frozen state, removing any soil and roots from plants and bulbs before deep-freezing.

Group: Bulb vegetables
Produce: Shallots, onions

RAW PRODUCT Minimum size					PROCESSED PRODUCT	
Sample material	Field sample (immature)	Lab. sample (immature)	Field sample (mature)	Lab. sample (mature)	Sample material	Minimum size Lab. sample
Plant Bulb	12 units min. 0.5 kg	0.5 kg	12 units min. 2 kg	1 kg		

Sampling

If necessary, harvest a larger number of plants, so as to obtain a sample of sufficient weight. Take samples from the entire plot, with the exception of a 0.5 m wide strip round the edge of the plot and the ends of the rows. When taking harvest samples, harvest the entire plant.

Storage/transportation

In the case of short periods of storage and transportation (generally 24 hours), samples may be stored and dispatched under cool dark conditions. Otherwise, store or transport in a deep-frozen state, removing any soil and roots from onions before deep-freezing.

Group: Brassicas
Produce: White cabbage, red cabbage, savoy cabbage, kohlrabi

RAW PRODUCT Minimum size					PROCESSED PRODUCT	
Sample material	Field sample (immature)	Lab. sample (immature)	Field sample (mature)	Lab. sample (mature)	Sample material	Minimum size Lab. sample
Plant	12 units min. 0.5 kg	0.5 kg				
Head			12 units	1 kg	Cooked veg.	0.5 kg
Globe			12 units	1 kg	Cooked veg.	0.5 kg

Sampling

If necessary, harvest a larger number of plants, so as to obtain a sample of sufficient weight. Take samples from the entire plot; do not harvest from a 0.5 m wide strip round the edge of the plot or the ends of the rows. In the case of harvest samples, remove the root stalk in the field.

Storage/transportation

In the case of short periods of storage and transportation (generally 24 hours), samples may be stored and dispatched under cool dark conditions. Otherwise, store or transport in a deep-frozen state, removing any soil and roots from plants and globes before deep-freezing.
Remove decayed leaves. For kohlrabi remove tops.

Group: Brassicas
Produce: Broccoli (sprouting broccoli), cauliflower

RAW PRODUCT Minimum size					PROCESSED PRODUCT	
Sample material	Field sample (immature)	Lab. sample (immature)	Field sample (mature)	Lab. sample (mature)	Sample material	Minimum size Lab. sample
Plant	12 units min. 0.5 kg	0.5 kg				
Inflores-cence	12 units min. 0.5 kg	0.5 kg	12 units	1 kg		
			2 kg		Cooked veg.	0.5 kg

Sampling

If necessary, harvest a larger number of plants, so as to obtain a sample of sufficient weight. Take samples from the entire plot; do not harvest from a 0.5 m wide strip round the edge of the plot or the ends of the rows. In the case of harvest samples, remove the root stalk in the field.

Storage/transportation

In the case of short periods of storage and transportation (generally 24 hours), samples may be stored and dispatched under cool dark conditions. Otherwise, store or transport in a deep-frozen state, removing any soil and roots from plants before deep-freezing.

Group: Brassicas
Produce: Brussels sprouts

RAW PRODUCT Minimum size					PROCESSED PRODUCT	
Sample material	Field sample (immature)	Lab. sample (immature)	Field sample (mature)	Lab. sample (mature)	Sample material	Minimum size Lab. sample
Plant Sprouts	12 units min. 0.5 kg 12 units min. 0.5 kg	0.5 kg 0.5 kg	 12 units min. 1 kg 2 kg	 1 kg	 Cooked veg.	 0.5 kg

Sampling

If necessary, harvest a larger number of plants, so as to obtain a sample of sufficient weight. Take sprouts from 12 plants and from at least two levels of each plant. Take samples from the entire plot; do not harvest from a 0.5 m wide strip round the edge of the plot or the ends of the rows. Harvest both those parts which were protected during spraying and those which were exposed.

Storage/transportation

In the case of short periods of storage and transportation (generally 24 hours), samples may be stored and dispatched under cool dark conditions. Otherwise, store or transport in a deep-frozen state, removing any soil and roots from plants before deep-freezing. Remove decayed leaves.

Group: Brassicas
Produce: Kale, other leaf brassicas

RAW PRODUCT Minimum size					PROCESSED PRODUCT	
Sample material	Field sample (immature)	Lab. sample (immature)	Field sample (mature)	Lab. sample (mature)	Sample material	Minimum size Lab. sample
Plant	12 units min. 0.5 kg	0.5 kg				
Leaf	0.5-1 kg	0.5 kg	2 kg	1 kg		
			2 kg		Canned	0.5 kg
			2 kg		Cooked veg.	0.5 kg

Sampling

If necessary, harvest a larger number of plants, so as to obtain a sample of sufficient weight. Take leaves from at least 12 plants. Take samples from the entire plot; do not harvest from a 0.5 m wide strip round the edge of the plot or the ends of the rows. In the case of harvest samples, only harvest those parts of the plant which are above the ground.

Storage/transportation

In the case of short periods of storage and transportation (generally 24 hours), samples may be stored and dispatched under cool dark conditions. Otherwise, store or transport in a deep-frozen state, removing any soil and roots from plants before deep-freezing. Remove decayed leaves.

Group: Leaf vegetables
Produce: Endives and lettuce

RAW PRODUCT Minimum size					PROCESSED PRODUCT	
Sample material	Field sample (immature)	Lab. sample (immature)	Field sample (mature)	Lab. sample (mature)	Sample material	Minimum size Lab. sample
Plant Head/ Leaf	12 units min. 0.5 kg 1 kg	0.5 kg 1 kg	 12 plants	 1 kg		

Sampling

If necessary, harvest a larger number of plants, so as to obtain a sample of sufficient weight. Take samples from the entire plot; do not harvest from a 0.5 m wide strip round the edge of the plot or the ends of the rows. In the case of harvest samples, only harvest those parts of the plant which are above the ground.

Storage/transportation

In the case of short periods of storage and transportation (generally 24 hours), samples may be stored and dispatched under cool dark conditions. Otherwise, store or transport in a deep-frozen state, removing any decayed outer leaves, roots and soil before deep-freezing.

Group: Leaf vegetables
Produce: Spinach

RAW PRODUCT Minimum size					PROCESSED PRODUCT	
Sample material	Field sample (immature)	Lab. sample (immature)	Field sample (mature)	Lab. sample (mature)	Sample material	Minimum size Lab. sample
Plant Leaf	12 units min. 0.5 kg 1 kg	0.5 kg 0.5 kg	 2 kg	 2 kg	 Canned	 0.5 kg

Sampling

If necessary, harvest a larger number of plants, so as to obtain a sample of sufficient weight. Take leaves from at least 12 plants. Take samples from the entire plot; do not harvest from a 0.5 m wide strip round the edge of the plot or the ends of the rows. In the case of harvest samples, only harvest those parts of the plant which are above the ground.

Storage/transportation

In the case of short periods of storage and transportation (generally 24 hours), samples may be stored and dispatched under cool dark conditions. Otherwise, store or transport in a deep-frozen state, removing any soil and roots before deep-freezing.

Group: Leaf vegetables
Produce: Cress, lamb's lettuce (corn salad), watercress, other small-leaved salad crops

RAW PRODUCT Minimum size					PROCESSED PRODUCT	
Sample material	Field sample (immature)	Lab. sample (immature)	Field sample (mature)	Lab. sample (mature)	Sample material	Minimum size Lab. sample
Plant	0.5 kg	0.5 kg	0.5 kg	0.5 kg		

Sampling

If necessary, harvest a larger number of plants, so as to obtain a sample of sufficient weight. Take samples from at least 12 plants. Take samples from the entire plot. In the case of harvest samples, only harvest those parts of the plant which are above the ground.

Storage/transportation

In the case of short periods of storage and transportation (generally 24 hours), samples may be stored and dispatched under cool dark conditions. Otherwise, store or transport in a deep-frozen state, removing any soil and roots from plants before deep-freezing.

Group: Stem vegetables
Produce: Leeks

RAW PRODUCT Minimum size					PROCESSED PRODUCT	
Sample material	Field sample (immature)	Lab. sample (immature)	Field sample (mature)	Lab. sample (mature)	Sample material	Minimum size Lab. sample
Plant	12 units min. 1 kg	0.5 kg	12 units min. 2 kg min. 2 kg	1 kg	Canned	0.5 kg

Sampling

If necessary, harvest a larger number of plants, so as to obtain a sample of sufficient weight. Take samples from the entire plot, with the exception of a 0.5 m wide strip round the edge of the plot and the ends of the rows.

Storage/transportation

In the case of short periods of storage and transportation (generally 24 hours), samples may be stored and dispatched under cool dark conditions. Otherwise, store or transport in a deep-frozen state, removing any soil and roots before deep-freezing.

Group: Stem vegetables
Produce: Celery

RAW PRODUCT Minimum size					PROCESSED PRODUCT	
Sample material	Field sample (immature)	Lab. sample (immature)	Field sample (mature)	Lab. sample (mature)	Sample material	Minimum size Lab. sample
Plant	12 units min. 0.5 kg	0.5 kg	12 units min. 1 kg min. 2 kg	1 kg	Canned	0.5 kg

Sampling

If necessary, harvest a larger number of plants, so as to obtain a sample of sufficient weight. Take samples from the entire plot; do not harvest from a 0.5 m wide strip round the edge of the plot and the ends of the rows. In the case of harvest samples, take those parts of the plant which are above the ground in the field.

Storage/transportation

In the case of short periods of storage and transportation (generally 24 hours), samples may be stored and dispatched under cool dark conditions. Otherwise, store or transport in a deep-frozen state, removing any soil and roots from plants before deep-freezing.

Group: Stem vegetables
Produce: Asparagus, rhubarb

RAW PRODUCT Minimum size					PROCESSED PRODUCT	
Sample material	Field sample (immature)	Lab. sample (immature)	Field sample (mature)	Lab. sample (mature)	Sample material	Minimum size Lab. sample
Spear/ Stick	12 units min. 1 kg	1 kg	12 units min. 2 kg 2 kg	1 kg	Canned	0.5 kg

Sampling

If necessary, harvest a larger number of sticks/spears, so as to obtain a sample of sufficient weight. Take samples from the entire plot; do not harvest from a 0.5 m wide strip round the edge of the plot or the ends of the rows. In the case of rhubarb, harvest both those parts which were protected during spraying and those which were exposed. Remove leave, roots and adhering soil for rhubarb.

Storage/transportation

In the case of short periods of storage and transportation (generally 24 hours), samples may be stored and dispatched under cool dark conditions. Otherwise, store or transport in a deep-frozen state, removing any soil and roots before deep-freezing.

Group: Stem vegetables
Produce: Globe artichokes

RAW PRODUCT Minimum size					PROCESSED PRODUCT	
Sample material	Field sample (immature)	Lab. sample (immature)	Field sample (mature)	Lab. sample (mature)	Sample material	Minimum size Lab. sample
Flower-head	12 units min. 0.5 kg	0.5 kg	12 units 2 kg	0.5 kg	Canned	0.5 kg

Sampling

If necessary, harvest a larger number of plants or flower-heads, so as to obtain a sample of sufficient weight. Take flower-heads from at least 6 plants; do not harvest from a 0.5 m wide strip round the edge of the plot or the ends of the rows.

Storage/transportation

In the case of short periods of storage and transportation (generally 24 hours), samples may be stored and dispatched under cool dark conditions. Otherwise, store or transport in a deep-frozen state. (...)

Group: Legume vegetables (fresh)
Produce: Peas and beans

RAW PRODUCT Minimum size					PROCESSED PRODUCT	
Sample material	Field sample (immature)	Lab. sample (immature)	Field sample (mature)	Lab. sample (mature)	Sample material	Minimum size Lab. sample
Plant without pod	12 units min. 1 kg	0.5 kg	12 units min. 0.5-1 kg	0.5 kg		
Pod, whole	24 units min. 1 kg	0.5 kg	24 units min. 0.5-1 kg	0.5 kg		
			2 kg			
			2 kg		Canned	0.5 kg
					Cooked	0.5 kg
Seeds, green					veg.	
			1 kg			
			2 kg	1 kg		
			2 kg		Canned	0.5 kg
					Cooked	0.5 kg
					veg.	

Sampling

If necessary, harvest a larger number of plants, so as to obtain a sample of sufficient weight. Take samples from the entire plot; do not harvest from a 0.5 m wide strip round the edge of the plot or the ends of the rows. In the case of immature field samples, take at least 12 plants without roots. Take samples at various heights of the plants in order to reflect different exposure to the spray.

Storage/transportation

In the case of short periods of storage and transportation (generally 24 hours), samples may be stored and dispatched under cool dark conditions. Otherwise, store or transport in a deep-frozen state. If seeds and pods are to be analysed separately, divide the whole pods into seeds and pods before deep-freezing. Record the ratio of fresh pods and peas.

Group: Pulses
Produce: Beans, lentils, peas

RAW PRODUCT Minimum size					PROCESSED PRODUCT	
Sample material	Field sample (immature)	Lab. sample (immature)	Field sample (mature)	Lab. sample (mature)	Sample material	Minimum size Lab. sample
Seeds, dried (...) Straw			1 kg (...) 0.5-1 kg	1 kg (...) 0.5 kg		

Sampling

If necessary, harvest a larger number of plants, so as to obtain a sample of sufficient weight. Take samples from the entire plot; do not harvest from a 0.5 m wide strip round the edge of the plot or the ends of the rows. In the case of crops such as peas or beans, take samples at various heights of the plants in order to reflect different exposure to the spray.

Storage/transportation

In the case of short periods of storage and transportation (generally 24 hours), samples may be stored and dispatched under cool dark conditions. Otherwise, store or transport in a deep-frozen state. If seeds and pods are to be analysed separately, divide the whole pods into seeds and pods before deep-freezing. Record the ratio of fresh pods and peas.

Group: Fruiting vegetables (edible skin)
Produce: Aubergines (eggplants)

RAW PRODUCT Minimum size					PROCESSED PRODUCT	
Sample material	Field sample (immature)	Lab. sample (immature)	Field sample (mature)	Lab. sample (mature)	Sample material	Minimum size Lab. sample
Fruit	12 units min. 0.5 kg	0.5 kg	12 units min. 1 kg	1 kg		

Sampling

If necessary, harvest a larger number of fruits, so as to obtain a sample of sufficient weight. Take fruit from 12 plants. Take harvest samples from the entire plot; do not harvest from a 0.5 m wide strip round the edge of the plot or the ends of the rows. Harvest both those parts which were protected during spraying and those which were exposed.

Storage/transportation

In the case of short periods of storage and transportation (generally 24 hours), samples may be stored and dispatched under cool dark conditions. Otherwise, store or transport in a deep-frozen state. Stems must be removed before deep-freezing.

Group: Fruiting vegetables (edible skin)
Produce: Cucumbers, courgettes/ zucchini/ summer squash, gherkin

RAW PRODUCT Minimum size					PROCESSED PRODUCT	
Sample material	Field sample (immature)	Lab. sample (immature)	Field sample (mature)	Lab. sample (mature)	Sample material	Minimum size Lab. sample
Fruit	12 units min. 0.5 kg	0.5 kg	12 units min. 2 kg 2 kg	1 kg	Canned	0.5 kg

Sampling

If necessary, harvest a larger number of fruits, so as to obtain a sample of sufficient weight. Take fruit from at least 12 plants. Take samples from the entire plot; do not harvest from a 0.5 m wide strip round the edge of the plot or the ends of the rows. Harvest both those parts which were protected during spraying and those which were exposed.

Storage/transportation

In the case of short periods of storage and transportation (generally 24 hours), samples may be stored and dispatched under cool dark conditions. Otherwise, store or transport in a deep-frozen state. Fruits must not be transported in a deep-frozen state if they are to be used in processing studies. Stems must be removed before deep-freezing.

Group: Fruiting vegetables (edible skin)
Produce: Tomatoes, sweet peppers

RAW PRODUCT Minimum size					PROCESSED PRODUCT	
Sample material	Field sample (immature)	Lab. sample (immature)	Field sample (mature)	Lab. sample (mature)	Sample material	Minimum size Lab. sample
Fruit	12-24 units min. 0.5 kg	0.5 kg	12-24 units min. 2 kg 5-7 kg 3 kg 3 kg 2 kg	1 kg	 Veg.juice Ketchup Puree Canned	 1 l 0.5 kg 0.5 kg 0.5 kg

Sampling

If necessary, pick a larger number of fruits, so as to obtain a sample of sufficient weight. Pick 24 fruits from varieties with small fruits and 12 fruits from varieties with large fruits. Take samples from the entire plot; do not harvest from a 0.5 m wide strip round the edge of the plot or the ends of the rows. Pick both those parts which were protected during spraying and those which were exposed.

Storage/transportation

In the case of short periods of storage and transportation (generally 24 hours), samples may be stored and dispatched under cool dark conditions. Otherwise, store or transport in a deep-frozen state. Stems must be removed before deep-freezing.

Group: Fruiting vegetables (inedible skin)
Produce: Melons, pumpkins/winter squashes/marrow, water melons

RAW PRODUCT Minimum size					PROCESSED PRODUCT	
Sample material	Field sample (immature)	Lab. sample (immature)	Field sample (mature)	Lab. sample (mature)	Sample material	Minimum size Lab. sample
Fruit	12 units min. 0.5 kg	0.5-1 kg	12 units	1 kg		

Sampling

If necessary, harvest a larger number of fruits, so as to obtain a sample of sufficient weight. Take fruit from at least 12 plants. Take samples from the entire plot; do not harvest from a 0.5 m wide strip round the edge of the plot or the ends of the rows. Harvest both those parts which were protected during spraying and those which were exposed.

Storage/transportation

In the case of short periods of storage and transportation (generally 24 hours), samples may be stored and dispatched under cool dark conditions. Otherwise, store or transport in a deep-frozen state.

In case of immature fruit, analyse the whole fruit. In case of mature fruit, separate the peel/rind from the flesh before deep-freezing and analyse peel and pulp seperately. The weight ratio of peel and flesh must be recorded for each sample. By doing this, the applicant obtains data on the peel/pulp distribution.

Group: Fruiting vegetables
Produce: Sweet corn

RAW PRODUCT Minimum size					PROCESSED PRODUCT	
Sample material	Field sample (immature)	Lab. sample (immature)	Field sample (mature)	Lab. sample (mature)	Sample material	Minimum size Lab. sample
Plant	12 units	1 kg				
Cob	12 units min. 1 kg	0.5 kg	12 units min. 2 kg	1 kg		
Cobs/ Kernels			2 kg		Canned	0.5 kg

Sampling

If the plot is small, harvest the entire plot. If the plot is large but not mechanically harvested, or if immature samples are to be taken before harvesting, cut no less than 12 plants distributed over the entire the plot. Harvest cobs and remaining plants later. Remove surrounding leaves from cobs If necessary, harvest more cobs in order to obtain a sample of sufficient weight. Be aware, when using mechanical methods to separate the various components of the harvest, of the risk of contamination. If the plots are mechanically harvested, take no less than 12 random samples of grains from the combine harvester at equal intervals throughout the plot. In the case of large plots, do not harvest within a metre of the edge of the plot.

Storage/transportation

In the case of short periods of storage and transportation (generally 24 hours), samples may be stored and dispatched at normal temperature under cool dark conditions. Otherwise, store or transport in a deep-frozen state. Where appropriate, separate into the various components before deep-freezing.

Group: Fungi
Produce: Mushrooms

RAW PRODUCT Minimum size					PROCESSED PRODUCT	
Sample material	Field sample (immature)	Lab. sample (immature)	Field sample (mature)	Lab. sample (mature)	Sample material	Minimum size Lab. sample
Whole product	24 units min. 0.5 kg	0.5 kg	12 units min. 1 kg 2 kg	1 kg	Canned	0.5 kg

Sampling

If necessary, pick a larger number of mushrooms, so as to obtain a sample of sufficient weight. Take samples from all parts of the cultivation area.

Storage/transportation

In the case of short periods of storage and transportation (generally 24 hours), samples may be stored and dispatched under cool dark conditions. Otherwise, store or transport in a deep-frozen state, removing any soil before deep-freezing.

Group: Sugar beet
Produce: Sugar beet

RAW PRODUCT Minimum size					PROCESSED PRODUCT	
Sample material	Field sample (immature)	Lab. sample (immature)	Field sample (mature)	Lab. sample (mature)	Sample material	Minimum size Lab. sample
Plant	12 units min. 0.5 kg	0.5-1 kg				
Leaf (with top)	12 units min. 1 kg	1 kg	12 units	1 kg		
Root	12 units	1 kg	12 units	1 kg		
			200 kg		Refined sugar	1 kg

Sampling

If necessary, harvest a larger number of plants, so as to obtain a sample of sufficient weight. Take samples from at least 12 plants. Take samples from the entire plot, with the exception of a 0.5 m wide strip round the edge of the plot and the ends of the rows. Plants are not usually separated into their various components. In the case of harvest samples, separate leaves with top from beet in accordance with the usual practice. Bag up foliage separately, since it is used as animal fodder.

Storage/transportation

In the case of short periods of storage and transportation (generally 24 hours), samples may be stored and dispatched under cool dark conditions. Otherwise, store or transport in a deep-frozen state, removing any soil from plants and beet before deep-freezing.

Group: Cereals (except rice and maize)
Produce: Barley, oats, rye, wheat, millet, triticale

RAW PRODUCT Minimum size					PROCESSED PRODUCT	
Sample material	Field sample (immature)	Lab. sample (immature)	Field sample (mature)	Lab. sample (mature)	Sample material	Minimum size Lab. sample
Plant	1kg	1 kg				
Ear/ panicle	1 kg	1 kg				
Grain			1 kg	1 kg		
Wheat/ Rye			3 kg		Flour Bran Bread	0.5 kg 0.3 kg 0.5 kg
			2 kg		Whole-meal	0.5 kg
					Bread, whole-meal	0.5 kg
Barley			3 kg		Pearl barley	0.5 kg
			20 kg		Brewing malt	0.5 kg
					grain, spent	0,5 kg
Oats			2 kg		Flakes	0,5 kg
Straw			0.5 kg	0.5 kg		

Sampling

If the plot is small, harvest the entire plot. If the plot is large but not mechanically harvested, or if immature samples are to be taken before harvesting, cut no less than 12 short lengths from rows over the entire plot. Cut culms 15 cm above the soil. When sampling up to the end of shooting, cut the plants just above the soil. In the case of later samplings, cut the culms 15 cm above the soil. Be aware, when using mechanical methods to separate the various components of the harvest, of the risk of contamination. If the plots are mechanically harvested, take no less than 12 random samples of grains and/or straw from the combine harvester at equal intervals throughout the plot. In the case of large plots, do not harvest within a metre of the edge of the plot.

Storage/transportation

In the case of short periods of storage and transportation (generally 24 hours), samples may be stored and dispatched under cool dark conditions. Otherwise, store or transport in a deep-frozen state. Where appropriate, separate into the various components before deep-freezing.

Group: Rice
Produce: Rice

RAW PRODUCT Minimum size					PROCESSED PRODUCT	
Sample material	Field sample (immature)	Lab. sample (immature)	Field sample (mature)	Lab. sample (mature)	Sample material	Minimum size Lab. sample
Plant	1kg	1 kg				
Panicle	0.5-1 kg	0.5 kg				
Grain (paddy rice)			1 kg 5 kg	1 kg	Husked rice Polished rice Glazed rice	0.5 kg 0.5 kg 0.5 kg
Straw			0.5 kg	0.5 kg		

Sampling

If the plot is small, harvest the entire plot. If the plot is large but not mechanically harvested, or if immature samples are to be taken before harvesting, cut no less than 12 short lengths from rows distributed over the entire the plot. Cut culms 15 cm above the soil. Be aware, when using mechanical methods to separate the various components of the harvest, of the risk of contamination. If the plots are mechanically harvested, take no less than 12 random samples of grains and/or straw from the combine harvester at equal intervals throughout the plot. In the case of large plots, do not harvest within a metre of the edge of the plot.

Storage/transportation

In the case of short periods of storage and transportation (generally 24 hours), samples may be stored and dispatched under cool dark conditions. Otherwise, store or transport in a deep-frozen state. Where appropriate, separate into the various components before deep-freezing.

Group: Maize
Produce: Maize

RAW PRODUCT Minimum size					PROCESSED PRODUCT	
Sample material	Field sample (immature)	Lab. sample (immature)	Field sample (mature)	Lab. sample (mature)	Sample material	Minimum size Lab. sample
Green or silage maize Grain	12 units	1 kg	2 kg	1 kg	Flour	0.5 kg

Sampling

If the plot is small, harvest the entire plot. If the plot is large but not mechanically harvested, or if immature samples are to be taken before harvesting, cut no less than 12 plants distributed over the entire the plot. Harvest cobs and remaining plants later. If necessary, harvest more cobs in order to obtain a sample of sufficient weight. Be aware, when using mechanical methods to separate the various components of the harvest, of the risk of contamination. If the plots are mechanically harvested, take no less than 12 random samples of grains from the combine harvester at equal intervals throughout the plot. In the case of large plots, do not harvest within a metre of the edge of the plot.

Storage/transportation

In the case of short periods of storage and transportation (generally 24 hours), samples may be stored and dispatched at normal temperature under cool dark conditions. Otherwise, store or transport in a deep-frozen state. Where appropriate, separate into the various components before deep-freezing.

Group: Sugar-cane
Produce: Sugar-cane

RAW PRODUCT Minimum size					PROCESSED PRODUCT	
Sample material	Field sample (immature)	Lab. sample (immature)	Field sample (mature)	Lab. sample (mature)	Sample material	Minimum size Lab. sample
Cane	12 units min. 2 kg	1 kg	12 units min. 2 kg 10-20 kg	1 kg	Refined sugar	1 kg

Sampling

If necessary harvest a larger number of canes, so as to obtain a sample of sufficient weight. Select whole canes from 12 points on the plot and use short (approx. 20 cm long) pieces from all parts of the full length of the cane. Care must be taken on account of the rapid changes which normally occur in the juices of the sugar-cane.

Storage/transportation

In the case of short periods of storage and transportation (generally 24 hours), samples may be stored and dispatched at normal temperature under cool dark conditions. Otherwise, store or transport in a deep-frozen state.

Group: Fodder legumes and fodder grasses
Produce: Alfalfa, clover, vetch, sainfoin, grasses (Forage from wheat, rye etc.: see "cereals")
(Forage from peas and beans: see "legume vegetables" or "pulses")

RAW PRODUCT Minimum size					PROCESSED PRODUCT	
Sample material	Field sample (immature)	Lab. sample (immature)	Field sample (mature)	Lab. sample (mature)	Sample material	Minimum size Lab. sample
Green matter	1-2 kg	1 kg	1-2 kg	1 kg		
Hay			0.5 kg	0.5 kg		

Sampling

Cut plants at normal height using cutters (usually 5 cm above the soil), cutting plants from no fewer than 12 sub-sections equally distributed over the entire plot and leaving a 0.5 m wide strip round the edge of the plot unharvested. Record height of cutting; avoid contamination by soil. If the plots are mechanically harvested (green matter/hay), take no fewer than 12 random samples of produce.

Storage/transportation

In the case of short periods of storage and transportation (generally 24 hours), samples may be stored and dispatched under cool dark conditions. Otherwise, store or transport in a deep-frozen state.

Group: Fodder beet
Produce: Fodder beet

RAW PRODUCT Minimum size					PROCESSED PRODUCT	
Sample material	Field sample (immature)	Lab. sample (immature)	Field sample (mature)	Lab. sample (mature)	Sample material	Minimum size Lab. sample
Plant	12 units min. 0.5 kg	0.5 kg				
Leaf (with top)	12 units min. 1 kg	1 kg	12 units	1 kg		
Root	12 units	1 kg	12 units	1 kg		

Sampling

If necessary harvest a larger number of plants, so as to obtain a sample of sufficient weight. Take samples from the entire plot with the exception of a 0.5 m wide strip round the edge of the plot and the ends of the rows. Plants are not usually separated into their various components. In the case of harvest samples, leaves with heads are separated from beet in accordance with the usual practice. Bag up foliage separately, since it is used as animal fodder.

Storage/transportation

In the case of short periods of storage and transportation (generally 24 hours), samples may be stored and dispatched under cool dark conditions. Otherwise, store or transport in a deep-frozen state, removing any soil from beet and plants before deep-freezing.

Group: Oilseeds
Produce: Cotton

RAW PRODUCT Minimum size					PROCESSED PRODUCT	
Sample material	Field sample (immature)	Lab. sample (immature)	Field sample (mature)	Lab. sample (mature)	Sample material	Minimum size Lab. sample
Seed			1 kg 5 kg	1 kg	Raw oil Refined oil Pressed cake (meal)	0.5-1 l 0.5-1 l 0.5 kg

Sampling

If necessary harvest a larger number of plants, so as to obtain a sample of sufficient weight. Take mature capsules (seeds) from at least 12 points on the plot.

Storage/transportation

In the case of short periods of storage and transportation (generally 24 hours), samples may be stored and dispatched under cool dark conditions. Otherwise, store or transport in a deep-frozen state.

Group: Oilseeds
Produce: Peanuts

RAW PRODUCT Minimum size					PROCESSED PRODUCT	
Sample material	Field sample (immature)	Lab. sample (immature)	Field sample (mature)	Lab. sample (mature)	Sample material	Minimum size Lab. sample
Shells with nuts			12 units min. 2 kg	1 kg		
Nuts			2-3 kg		Raw oil Refined oil Roasted Pressed cake (meal)	0.5 l 0.5 l 1 kg 0.5 kg

Sampling

If samples are harvested by hand, take samples of shells with nuts from at least 24 plants distributed throughout the plot. Do not harvest a 0.5 m wide strip round the edge of the plot or the ends of the rows.

Storage/transportation

In the case of short periods of storage and transportation (generally 24 hours), samples may be stored and dispatched under cool dark conditions. Otherwise, store or transport in a deep-frozen state, separating shells and nuts before deep-freezing.

Group: Oilseeds
Produce: Rape, Linseed

RAW PRODUCT Minimum size					PROCESSED PRODUCT	
Sample material	Field sample (immature)	Lab. sample (immature)	Field sample (mature)	Lab. sample (mature)	Sample material	Minimum size Lab. sample
Plant	12 units min. 0.5-1 kg	0.5 kg				
Pod	0.5 kg	0.5 kg				
plant without pods	12 units min. 1 kg	0.5 kg				
Seeds			0.5 kg	0.5 kg		
			2-3 kg		Raw oil Refined oil	0.5 l 0.5 l
					Pressed cake (meal)	0.5 kg

Sampling

If necessary harvest a larger number of plants, so as to obtain a sample of sufficient weight. Take samples from at least 12 points on the plot. Depending on the stage of development, cut directly above the soil or, from the end of shooting, approx. 15 cm above the soil. Take samples of mature rape (pods) from at least 12 points on the plot.

Storage/transportation

In the case of short periods of storage and transportation (generally 24 hours), samples may be stored and dispatched under cool dark conditions. Otherwise, store or transport in a deep-frozen state, separating into pods and plants or seeds and plants before deep-freezing.

Group: Oilseeds
Produce: Sesame

RAW PRODUCT Minimum size					PROCESSED PRODUCT	
Sample material	Field sample (immature)	Lab. sample (immature)	Field sample (mature)	Lab. sample (mature)	Sample material	Minimum size Lab. sample
Plant	12 units min. 0.5 kg	0.5 kg				
Seed			0.5 kg	0.5 kg		
			2-3 kg		Raw oil Refined oil	0.5 l 0.5 l

Sampling

If necessary harvest a larger number of plants, so as to obtain a sample of sufficient weight. Take plant samples or samples of mature seed from at least 12 points on the plot.

Storage/transportation

In the case of short periods of storage and transportation (generally 24 hours), samples may be stored and dispatched under cool dark conditions. Otherwise, store or transport in a deep-frozen state.

Group: Oilseeds
Produce: Sunflowers, safflower, soya bean

RAW PRODUCT Minimum size					PROCESSED PRODUCT	
Sample material	Field sample (immature)	Lab. sample (immature)	Field sample (mature)	Lab. sample (mature)	Sample material	Minimum size Lab. sample
Plant	12 units min. 1 kg	1 kg				
Seed	1 kg	1 kg	1 kg	1 kg		
			2-3 kg		Raw oil Refined oil	0.5 l 0.5 l
					Pressed cake (meal)	0.5 kg

Sampling

If necessary, harvest a larger number of plants, so as to obtain a sample of sufficient weight. Take plant samples or samples of mature seed from at least 12 points on the plot.

Storage/transportation

In the case of short periods of storage and transportation (generally 24 hours), samples may be stored and dispatched under cool dark conditions. Otherwise, store or transport in a deep-frozen state.

Group: Herbs
Produce: Parsley, thyme, chives etc.

RAW PRODUCT Minimum size					PROCESSED PRODUCT	
Sample material	Field sample (immature)	Lab. sample (immature)	Field sample (mature)	Lab. sample (mature)	Sample material	Minimum size Lab. sample
	0.2 kg	0.2 kg	0.2 kg	0.2 kg	Dried herbs	0.05 kg

Sampling

Take samples from at least 12 plants. If necessary harvest a larger number of plants, so as to obtain a sample of sufficient weight. Take samples from the entire plot; do not harvest a 0.5 m strip round the edge of the plot or the ends of the rows. For preparing the samples use only those parts of the plants which are representative of consumption.

Storage/transportation

In the case of short periods of storage and transportation (generally 24 hours), samples may be stored and dispatched under cool dark conditions. Otherwise, store or transport in a deep-frozen state. In the case of roots remove any soil from plants before deep-freeezing.

Group: Tea
Produce: Tea

RAW PRODUCT Minimum size					PROCESSED PRODUCT	
Sample material	Field sample (immature)	Lab. sample (immature)	Field sample (mature)	Lab. sample (mature)	Sample material	Minimum size Lab. sample
Leaf, fresh Leaf, dried			1 kg 10 g		Leaf, dried Infusion	0.1 kg 1 l

Sampling

Take samples in accordance with the usual practice. Freshly picked produce is not usually required for analysis.

Processing

Dry leaves after harvesting and ferment where appropriate.

Storage/transportation

In the case of short periods of storage and transportation (generally 24 hours), samples may be stored and dispatched under cool dark conditions. Otherwise, store or transport in a deep-frozen state.

Group: Hops
Produce: Hops

RAW PRODUCT Minimum size					PROCESSED PRODUCT	
Sample material	Field sample (immature)	Lab. sample (immature)	Field sample (mature)	Lab. sample (mature)	Sample material	Minimum size Lab. sample
Cones, green	0.5 kg	0.5 kg	1 kg 1 kg	0.5 kg	cones, dried Beer	0.1 kg 1 l

Sampling

Take samples of cones from at least 4 hop plants. Select cones from all parts of the plant, top and bottom, exposed and protected by foliage during spraying. Since hops are cultivated in rows, select cones from both sides of the rows but not within a metre of the end of the row.

Processing

The green cones must be dried in a hop kiln before further processing.

Storage/transportation

In the case of short periods of storage and transportation (generally 24 hours), samples may be stored and dispatched under cool dark conditions. Otherwise, store or transport in a deep-frozen state.

Group: Tobacco
Produce: Tobacco

RAW PRODUCT Minimum size					PROCESSED PRODUCT	
Sample material	Field sample (immature)	Lab. sample (immature)	Field sample (mature)	Lab. sample (mature)	Sample material	Minimum size Lab. sample
Leaf, green			2 kg		Leaf, dried and fermented	0.5 kg

Sampling

Take samples of leaves from at least 12 plants in accordance with the usual practice. Take samples from the entire plot, with the exception of the ends of rows. Freshly picked produce is not usually required for analysis.

Processing studies

It is necessary to make fermented tobacco from tobacco leaves.

Storage/transportation

In the case of short periods of storage and transportation (generally 24 hours), samples may be stored and dispatched at normal temperature. Otherwise, store or transport in a deep-frozen state.

References

FAO/WHO, 1989: Guide to Codex Recommendations concerning Pesticide Residues, Part 4, Codex Classification of Foods and Animal Feeds, Second Edition, Joint FAO/WHO Food Standards Programme, Codex Alimentarus Commission, CAC/PR 4-1989.

Council Directive of 27 November 1990 on the fixing of maximum levels for pesticide residues in and on certain products of plant origin, including fruit and vegetables (90/642/EEC).