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Marketing and Regulatory Programs

Animal and Plant Health Inspection Service

Importation of *Schlumbergera* and *Rhipsalidopsis* from The Netherlands and Denmark

Environmental Assessment, April 2005

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Table of Contents

I. Introduction

A. Purpose and Need

The Netherlands and Denmark have requested that potted Christmas cactus (*Schlumbergera* spp.) and Easter cactus (*Rhipsalidopsis* spp.) be permitted to be imported into the United States. International trade agreements require that such requests be honored as long as there are no science-based reasons for denial or modification of the requests. The United States Department of Agriculture (USDA), Animal and Plant Health Inspection Service (APHIS), Plant Protection and Quarantine (PPQ) has conducted pest risk assessments to determine the potential risk of introducing a plant pest if the importation requests are honored. Based on the results of these pest risk assessments PPQ is proposing to amend the regulations for the importation of plants and plant products (7 Code of Federal Regulations (CFR) Part 319) to add Christmas cactus and Easter cactus from The Netherlands and Denmark to the list of plants that may be imported in approved growing media, subject to specified growing, inspection and certification requirements as delineated in 7 CFR § 319.37-8(e). The purpose of the proposed rule change is to remove the current restrictions that prohibit the importation of *Schlumbergera* spp. and *Rhipsalidopsis* spp. from The Netherlands and Denmark in approved growing media.

Currently, the regulations allow the importation of *Schlumbergera* spp. and *Rhipsalidopsis* spp. from all countries of the world provided the plants are (1) free of soil, sand, earth or other growing media; (2) accompanied by a phytosanitary certificate of inspection; (3) imported under a permit issued by APHIS; and (4) imported into a federal plant inspection station. Such plants are imported as cuttings and bare-root plants into the United States and are then rooted, potted, and grown for sale by U.S. nurseries.

The Council on Environmental Quality (CEQ) implementing regulations for the National Environmental Policy Act of 1969 (NEPA) require federal agencies to "[b]riefly provide sufficient evidence and analysis for determining whether to prepare an environmental impact statement or a finding of no significant impact" prior to initiation of actions that may impact the environment (40 CFR Part 1508.9(a)(1)). Thus, this environmental assessment (EA) has been prepared to determine whether the potential environmental impact of the proposed rule change is likely to be significant, thus requiring the preparation of an environmental impact statement, or whether a finding of no

significant impact is appropriate. This EA has been prepared in accordance with CEQ, USDA and APHIS regulations under NEPA (40 CFR Parts 1500-1508, 7 CFR Part 1b and 7 CFR Part 372, respectively).

B. Background

The Plant Protection Act of 2000 (PPA), Title IV of Public Law 106–224 (7 USC §§ 7701 *et seq*.), as delegated by the Secretary of Agriculture, authorizes APHIS to take actions to prevent the entry and establishment of harmful plant pest species, provide for the control, and minimize the economic, ecological, and human health impacts that harmful pests can cause. APHIS promulgates regulations under 7 CFR Parts 300–399 to carry out its safeguarding mandates under the PPA. Under these regulations, APHIS provides notices of quarantines on agricultural commodities; requires permits for importation of agricultural commodities; inspects cargo and passengers; can refuse entry of commodities found to be infested with certain pests; can require treatment of commodities with chemical or nonchemical methods, or with a combination of these methods; monitors for pests; provides preclearance inspection programs of certain agricultural commodities in some countries; participates in cooperative efforts at the international, Federal, State, and local levels to help protect against the introduction and spread of harmful pests; and conducts control or eradication programs.

Title 7 CFR Part 319.37 pertains to foreign quarantine notices for nursery stock, plants, roots, bulbs, seeds, and other plant products. The proposed changes for allowing import of *Schlumbergera* spp. and *Rhipsalidopsis* spp. in growing media from The Netherlands and Denmark affect 7 CFR 319.37. The regulations under 7 CFR 319.37 currently allow the importation of *Schlumbergera* spp. and *Rhipsalidopsis* spp. from all countries to the United States as cuttings and bare-root plants provided that specific restrictions are followed. Section 319.37–8(g) provides for APHIS to evaluate requests from countries to allow importation of additional taxa of plants established in growing media using specific pest risk evaluation standards. The Netherlands and Denmark have requested that APHIS allow the importation of *Schlumbergera* spp. and *Rhipsalidopsis* spp. in approved growing media from their countries. Under this request, the imported plants would be subject to the growing, inspection and certification requirements as delineated in 7 CFR Part 319.37-8(e). These

requirements are further outlined in the Proposed Rule Alternative of this EA.

As required by 7 CFR 319.37–8(g), APHIS has performed pest risk assessments, based on the pest risk analysis guidelines established by the International Plant Protection Convention of the United Nations Food and Agricultural Organization, for the importation of *Schlumbergera* spp. and *Rhipsalidopsis* spp. in growing media from each of the requesting countries. The risk assessment done for Denmark (USDA, APHIS, 2004a) indicated that there were no quarantine pests in Denmark that are associated with *Schlumbergera* or *Rhipsalidopsis*. The risk assessment done for The Netherlands, however, did indicate the presence of one quarantine pest associated with *Schlumbergera* and *Rhipsalidopsis*: *Fusarium oxysporum* f. sp. *opuntiarum* (USDA, APHIS, 2004b). While *Fusarium oxysporum* does occur in the United States (Farr *et al.*, 1989), the specific *formae speciales* is not known in the United States, although current diagnoses in production systems are not made at the *formae speciales* level (USDA, APHIS, 2004b). Since this leaves a question as to whether or not the specific *formae speciales* is present in the country, under strict interpretation of the FAO guidelines (FAO, 2003), it must be considered not present and, therefore, a potential quarantine pest.

Importation into the United States of Christmas cactus (*Schlumbergera* spp.) and Easter cactus (*Rhipsalidopsis* spp.) is currently limited to importation of cuttings and bare-root plant stock which are then propagated and/or grown by U.S. nurseries, grown and sold throughout the country. The importation of plants already established in growing media is not permitted under current regulations. The result of the current practice is that imported plants and cuttings are not available in the market place until after they have been planted and grown in media and then shipped to retail outlets. This additional handling of plants results in some loss of merchandise. It does, however, provide business to the U.S. nurseries that supply the labor, materials and space for the rooting, potting, and growing of the plants.

An economic analysis done by APHIS (USDA, APHIS, 2004c) as part of the analysis of this proposed rule change indicates that the total U.S. dollar value of live plant imports into the United States is estimated at $843.78 million per year. Approximately $148.16 million of that comes from Denmark and The Netherlands (primarily The Netherlands). Of that, only $1.76 million is attributable to unrooted cuttings and slips of all varieties of plants. There are no data to indicate

what fraction of that $1.76 million is attributable to *Schlumbergera* and *Rhipsalidopsis,* but it is something less than the entire amount of unrooted cuttings and slips. Even if all of the unrooted *Schlumbergera* and *Rhipsalidopsis* that enters the country from The Netherlands and Denmark were to be imported in approved growing media, it would represent only a relatively small number of plants from only a few growers in Denmark and The Netherlands.

II. Alternatives

A. No Action

This alternative would simply continue the status quo. That is, importation of Christmas and Easter cacti from The Netherlands and Denmark would be restricted to cuttings and bare-root plants. Importation of plants in approved media would not be permitted.

B. Proposed Rule

The proposed rule would allow *Schlumbergera* and *Rhipsalidopsis* plants in approved growing media to be imported into the United States from The Netherlands and Denmark subject to the requirements of §319.37-8(e). This section defines approved media and outlines numerous additional requirements, including: all plants must be grown in compliance with a written agreement for enforcement signed by the plant protection service of the exporting country and PPQ; plants must be developed from mother stock that was inspected by an APHIS inspector or foreign plant protection service inspector and found free of diseases and pests no more than 60 days prior to the time the plant is established in the greenhouse; all plants must be grown in compliance with a written agreement between the grower and the plant protection service of the country in which it is grown that allows for inspections and monitoring of compliance; plants must be grown in a greenhouse in which sanitary procedures are sufficient to exclude plant pests and diseases; plants must be rooted and grown in an active state of foliar growth for at least 4 consecutive months immediately prior to importation into the United States; plants must be grown from seeds germinated in the greenhouse unit or descended from a mother plant that was grown at least 9 months in the exporting country prior to importation into the United States; plants must be watered only with rainwater that has been boiled or pasteurized, with clean well water or

with potable water; plants must be rooted and grown in approved media as listed in Section 319.37-8(e)(1) on benches supported by legs and raised at least 46cm above the floor; plants must be stored and packaged only in areas free of sand, soil, earth and plant pests.

III. Environmental Consequences

A. No Action Alternative

As described above, the no action alternative would continue the status quo. Under the no action alternative, importation of Christmas and Easter cacti from The Netherlands and Denmark would continue to be restricted to cuttings and bare-root plants only.

The potential environmental consequences of continuing the status quo of importation of cuttings and bare-root plants only are minimal. There are some bacterial and fungal diseases that are identified in phytopathological literature sources that theoretically have the potential to infect Christmas and Easter cactus species. However, as discussed in the biological evaluation document and the two pest risk assessments done for this proposal (USDA, 2004d; USDA, 2004a; and USDA, 2004b), there are no quarantine pests identified for Christmas and Easter Cacti species imported from Denmark, and the only potential existing quarantine pest from The Netherlands is the organism *Fusarium oxysporum* f. sp. *opuntiarum*. An assessment of the potential for threatened and endangered cactus species in the United States to become infected with *Fusarium oxysporum* f. sp. *opuntiarum* as a result of importation of Christmas and Easter cactus species from Denmark and The Netherlands did not reveal any environmental impacts from either an invasiveness or a pest host potential.

The current practice of importation of cuttings and bare-root Christmas and Easter cactus species from Denmark and The Netherlands has not resulted in any incidences of identified environmental impacts as a result of either the imported cactus species or any pests that may have been present on the imported cuttings and bare-root plant material.

B. Proposed Rule

Under the proposed rule, as discussed above, the current importation rules would be revised so that Christmas and Easter cactus species

could be imported into the United States in approved growing media. The requirements associated with the propagation, rearing, shipping and importation of Christmas and Easter cactus under this option are designed to minimize any potential environmental impacts associated with the plants being brought into the United States in growing media.

In two other recent environmental assessments (Final Rule for the Importation of Artificially Dwarfed Plants in Growing Media From the People's Republic of China, December 2003; Importation of Moth Orchids (*Phalaenopsis* spp.) in Approved Growing Media From Taiwan), APHIS has analyzed the environmental impacts of proposed changes to importation regulations to allow entry of plants in approved growing media. Both rule changes include significant phytosanitary measures to reduce the risk of environmental impacts. Prior to the *Phalaenopsis* and penjing rules, a number of other species, including rhododendrons from Europe, *Begonias, Gloxinias, Ananas,* and other plants were permitted to be imported in approved growing media. To date, in all of these cases, the phytosanitary measures are believed to have been effective in reducing potential environmental impacts, *i.e.*, no associated pests are known to have been imported and become established as a result of the importation of plants in approved media.

For Christmas and Easter cactus species under the conditions of the proposed rule, importation would be allowed only if the measures summarized below are followed. These measures constitute a systems approach to addressing potential risk and environmental impacts of the proposed importation. Additional detailed information on the associated phytosanitary requirements discussed below is available in the associated Biological Evaluation (APHIS, 2004d).

Approved Plant Sources: All Christmas and Easter cactus species imported into the United States must be greenhouse or laboratory propagated plants or may be propagated in the laboratory from aseptic tissue cultures. Wild and non-domesticated species cannot be imported. All mother stocks are to be determined to be pest-free by an approved official of the exporting country's national plant protection organization and an APHIS PPQ inspector.

Approved Growing Media: All Christmas and Easter cactus species imported into the United States must be in approved growing media (as defined in 7 CFR 319.37-8) to prevent the introduction of pest species. No sand, soil, earth or other unapproved media can be present with the imported plants.

Agreements: Cactus species must be grown in accordance with written enforcement agreements among APHIS, the plant protection organization of the exporting country and growers. This includes requirements for written operational workplans for detecting and eradicating any pests before importation and any applicable registration or permitting of growers in the exporting country.

Exclusionary Greenhouse: Christmas and Easter cactus species grown for importation into the United States must be grown in pest exclusionary greenhouses following all applicable phytosanitary measures outlined by APHIS in the Code of Federal Regulations (7 CFR § 319.37-8(e)(2)(ii)).

Raised Benches: Benches on which Christmas and Easter cactus species are grown for importation into the United States must be at least 46 cm above the floor.

Floors: Floors in greenhouses where Christmas and Easter cactus species are grown must be composed of permanent material that can be sanitized if necessary and be free of soil.

Automatic Doors: Automatic closing doors to exclude flying insects and, to a limited extent, prevent windborne pests from entering the greenhouse, are required.

Screens: Greenhouse air exchange and temperature control vents must have screens with openings no larger than 0.6 mm to exclude pests.

Sanitation: Sanitary procedures must be in place to maintain the greenhouse nearly free of pests.

Detention Periods: Mother stock cacti must be grown in the exporting country for at least 9 months prior to export of descendant cacti to the United States. Mother plants imported into Denmark or The Netherlands from another country must have been grown in the exporting country for 9 to 12 months (the actual time period is dependent upon the treatment of the mother stock in the exporting country). Descendant plants must be grown in an active state of foliar growth for at least 4 consecutive months before export.

Clean Water Sources: Water sources used in the growing of Christmas and Easter cacti for importation into the United States must be either rainwater that has been boiled or pasteurized, clean well water, or potable water.

Phytosanitary Certificate: Christmas and Easter cactus plants for importation into the United States must be accompanied by phytosanitary certificates issued by the plant protection organization of the exporting country.

Inspection: Inspection of mother stock by a PPQ inspector or inspector from the plant protection organization of the exporting country will take place no more than 60 days before the cacti are established in the greenhouse. Descendant plants will be inspected no more than 30 days prior to export. APHIS inspectors will visit Denmark and The Netherlands periodically to ensure that the program is working properly. In addition, inspection of imported Christmas and Easter cacti will take place at the port of entry into the United States by PPQ at plant inspection stations. Pest interceptions or repeated detection of a quarantine pest will result in PPQ requiring more specific mitigation of the pest(s) of concern.

Packing and Storage: Christmas and Easter cactus plants intended for importation into the United States must be packed and stored in areas that are free of sand, soil, earth, and plant pests. Packaging should be designed to prevent contamination and introduction of hitchhikers. Cactus plants shall not be packed in the same container as prohibited articles.

The systems approach described above is designed to be a fail-safe system that includes tiered safeguards. Thus, if one of the above mitigation measures were to fail, other safeguards built into the system are designed to ensure that risks are managed. Even though the risk of any environmental impacts associated with the importation of Christmas and Easter cactus species into the United States in approved growing media is extremely low, this systems approach further minimizes any potential environmental impacts.

IV. Endangered Species Act Compliance

According to 40 CFR § 1508.27(b)(9), APHIS PPQ is required to consider the "degree to which the action may adversely affect an endangered or threatened species or its habitat that has been determined to be critical under the Endangered Species Act of 1973." In addition, Section 7 of the Endangered Species Act (ESA) and ESA's implementing regulations require Federal agencies to consult with the U.S. Fish and Wildlife Service (FWS) and/or the National Marine Fisheries Service to ensure that their actions are not likely to jeopardize the continued existence of endangered or threatened species or result in the destruction or adverse modification of critical habitat.

To fulfill the above requirements, APHIS prepared and submitted a biological evaluation (BE) (USDA, APHIS, 2004d) to the U.S. Fish and Wildlife Service (FWS), Arlington, VA. The BE used the results of the two APHIS risk assessments (USDA, 2004a; USDA, 2004b) and analyzed (1) the potential quarantine pests that could be included in commercial shipments of *Schlumbergera* and *Rhipsaladopsis* plants, (2) any endangered, threatened, or candidate species that are potential hosts for these quarantine pests (no proposed species that could be potential hosts for quarantine pests were identified), and (3) the potential invasiveness of *Schlumbergera* and *Rhipsaladopsis* plants.

The BE indicated that, based on the results of the two risk assessments, (1) there is only one quarantine pest identified by the risk assessments that may be potentially present on imported *Schlumbergera* and *Rhipsaladopsis* (*Fusarium oxysporum* f. sp. *opuntiarum*); (2) while several, and possibly all, listed and candidate cacti could be hosts, there is no evidence that any of them actually are hosts of *Fusarium oxysporum* f. sp. *opuntiarum*; (3) there is no evidence that either *Schlumbergera* or *Rhipsaldopsis* have been invasive, despite having imported them as cuttings and bare-root plants for years; and (4) the quarantine pest that is potentially found in *Schlumbergera* and *Rhipsaldopsis* would be effectively removed from the pathway by the mitigation measures required by the regulations, and thus would be precluded from establishing itself in the United States.

Based on this information, additional information presented in the BE, and a previous programmatic consultation concerning the PPQ program to import nursery stock established in APHIS-approved growing

media[1], FWS is expected to concur with the APHIS determination that the importation of *Schlumbergera* and *Rhipsaladopsis* plants in growing media from The Netherlands and Denmark will not adversely affect federally listed or proposed endangered or threatened species or their habitats.

V. Consultation and Review

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U.S. Department of Agriculture
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[1] APHIS previously engaged in a Section 7 programmatic consultation with U.S. Fish and Wildlife concerning a proposed program to import nursery stock in APHIS-approved growing media. This programmatic consulation incorporated consultation on the proposed program as well as two completed section 7 consultations related to the APHIS nursery stock importation program (the importation of *Phalaenopsis* spp. (moth orchids) established in APHIS-approved growing media from Taiwan into the United States (April 7, 2003), and the importation of five species of penjing, or artificially dwarfed plants, established in APHIS-approved growing media from the People's Republic of China (April 10, 2003). On September 1, 2004, the U.S. Fish and Wildlife Service concurred with the APHIS determination that the proposed program "may affect, but is not likely to adversely affect" Federally listed species or designated critical habitat.

V. References

American Phytopathological Society. 2004. Common Names of Plant Diseases: Diseases of Holiday Cacti. Available from http://www.apsnet.org/online/common/names/holcacti.asp

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United States Department of Agriculture (USDA) Animal Plant Health Inspection Service (APHIS). 2004a. Importation of Christmas Cactus, *Schlumbergera* spp. and Easter Cactus, *Rhipsalidopsis* spp. in APHIS Approved Growing Media Into the United States, From Denmark. June 15, 2004.

United States Department of Agriculture (USDA) Animal Plant Health Inspection Service (APHIS). 2004b. Importation of Christmas Cactus, *Schlumbergera* spp. and Easter Cactus, *Rhipsalidopsis* spp. in APHIS Approved Growing Media Into the United States, From The Netherlands. June 15, 2004.

United States Department of Agriculture (USDA) Animal Plant Health Inspection Service (APHIS) Policy and Program Development (PPD) Policy Analysis and Development (PAD). 2004c. Importation of Christmas Cactus and Easter Cactus in growing media from The Netherlands and Denmark, Docket No. 04-082-1. November, 2004.

United States Department of Agriculture (USDA) Animal Plant Health Inspection Service (APHIS). 2004d. Importation of Christmas Cactus (*Schlumbergera* spp.) and Easter Cactus (*Rhipsalidopsis* spp.) in Approved Growing Media From The Netherlands and Denmark: Biological Evaluation. December, 2004.