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Standard Terminology Relating to Natural Multi-Cellular Biological Control Organisms[1]

This standard is issued under the fixed designation E2643; the number immediately following the designation indicates the year of original adoption or, in the case of revision, the year of last revision. A number in parentheses indicates the year of last reapproval. A superscript epsilon (ε) indicates an editorial change since the last revision or reapproval.

1. Scope

1.1 This terminology may be general, but is represented here for application in the realm of Subcommittee E35.30. These terms are quoted from Penn et al[2] and are reiterated here so that people using E35.30 standards can all interpret the terms in the same way in discussions, applications, and revisions of the standards. The applicability of these terms to general use has not been examined by Subcommittee E35.30.

2. Terminology

application, *n*—the release of the natural enemies or otherwise putting them to use.

contaminant, *n*—any undesirable organisms not claimed on the product information.

customer involvement, *n*—selection of product, application of the product, evaluation of the results, and feedback with encouragement of continual informational flow.

level of purity, *n*—see **purity level**.

performance (of natural enemies in pest management), *n*—the capacity to maintain pest populations at acceptable levels. Performance is a function of innate genetic characteristics, the effects of production, storage, shipping, application method, application timing, and environmental effects on survival, reproduction, and frequency of attacks against hosts/prey.

performance evaluation, *n*—assessment of the effects of natural enemy application upon the target pest population under controlled conditions.

process control, *n*—the means of assuring the performance of production processes through sampling of all life stages of the arthropods in production, using indicators to predict quality and minimizing variance from predetermined standards.

product control, *n*—assurance of conformity of the product to acceptable standards of quality through monitoring procedures applied at the end of production. Such procedures substantially increase the probability that the product will be effective in performing its intended function but cannot predict performance because of the highly variable conditions to which the product may be exposed after the product is shipped.

product control guidelines, *n*—suggested standards and processes for product control procedures that might be adopted by commercial insectaries, trade associations, and other groups to provide consistency in product control.

product handling and evaluation, *n*—environmental conditions and actions designated by the customer, including assessments of quantity and quality of the product prior to application.

production control, *n*—management of the consistency, reliability, and timeliness of production output through monitoring items such as materials, equipment, environments, schedules, and personnel.

product profile, *n*—a document supplied by a producer, often with a product shipment, to provide the customer with information on the nature of the product being shipped and methods of storing and using the product properly. Details such as identity, quantity, origin, life stages shipped, sex ratio, and expiration date are usually included. Alternatively, similar information of a more generic nature may be developed by an organization of producers.

purity level, *n*—a percentage calculated as the number of the claimed species divided by the total number of predators or parasites in the container. Purity level does not address prey/host items in the package. Because the term Purity expressed alone denotes a 100 % purity level, caution should be exercised in the use of these terms.

quality, *n*—the suitability of a product for its intended use and its degree of excellence in comparison with standards

quality assurance, *n*—the process by which confidence in the quality of a product is developed. Quality assurance goes

[1] This terminology is under the jurisdiction of ASTM Committee E35 on Pesticides and Alternative Control Agents and is the direct responsibility of Subcommittee E35.30 on Natural Multi-Cellular (Metazoan) Biological Control Organisms.

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[2] Penn, Ridgway, Scriven, and Inscoe, "Quality Assurance by the Commercial Producer of Arthropod Natural Enemies," in Mass-reared Natural Enemies: Application, Regulation and Needs, Ridgway et al. (ed.), ESA Thomas Say Publications: Proceedings, 1998, pp. 202 –227.

beyond quality control in that it involves both the procedures whereby the producer makes certain that the quality of the product is maintained and the processes through which the customer, the ultimate user, gains confidence in that product. For this reason, customer involvement and customer education are critical components of quality assurance.

quality management, *n*—a system for monitoring and directing desired outcome.

quality control, *n*—a system for verifying and maintaining a desired level of quality in a product or process by careful planning, continued inspection, and corrective action where required. Three major interrelated elements of quality control are production control, process control, and product control (defined above). See also **total quality management**.

reference date, *n*—a date denoting the producer's reference point in the product's life that allows for the age of the package contents to be identified. The reference date may be in the form of a week number or an actual day and should be interpretable by the customer. Examples are: harvest date, "best if used by date," packaging date, expiry date.

sex ratio, *n*—the ratio of the number of females of the claimed species to the total number of males of the claimed species in the unit being examined.

total quality management, *n*—a program or philosophy that includes the customer as a major component of a dynamic system in which processes and products are continuously examined for ways of improvement. A fundamental aspect of total quality management is identification of the desired characteristics of a product, followed by achievement of these characteristics through minimizing variance at defined critical control points.

viability, *n*—the level of an organism's capacity for surviving and performing its desired function under favorable conditions.