



AV Reviews

Rachel Hays

Department Editor



Depleting the gene bank.

1990. Films for the Humanities and Sciences, Inc. (Box 2053, Princeton, NJ 05843-2063). VHS. 26 min. Purchase \$149; rental \$75.

This video, part of The Life Revolution series, discusses ramifications of inbreeding major agricultural crops, including problems such as increased susceptibility to diseases. Genes conferring resistance to infectious agents are often found in "heirloom varieties" which are not economically attractive or in wild ancestral types (many of them tropical) whose existence is imperiled by habitat destruction.

When a large corporation buys a regional seed company, commercial hybridization might be redirected toward herbicide resistance and economically desirable traits. This might be advantageous to large farming operations, but unprofitable local varieties could be

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lost. The commercial varieties are not tailored to backyard farmers or to agriculture in other countries.

Noncommercial propagation seeks to answer these concerns. Tissue culture techniques provide varieties adapted to specific areas and preserve mutations with needed resistance. Germ plasm storage, in which seed banks maintain viable seeds of plants from around the world, creates some problems while solving others. Access to the seed banks seems to have political overtones, and the seeds must be grown out periodically, an expensive process. Fund shortages have created potentially critical situations in which seed viability is so low that some varieties soon might be lost.

The video focuses on the consequences of current agricultural practices in developed countries. Tissue culture techniques are discussed briefly, and some statistics on plant varieties and diseases are given. Presentation of differing viewpoints balances the presentation. This would be a good general introduction to a section on agriculture or artificial selection in a general biology, environmental biology or agriculture course. The general nature of the information makes it suitable for middle school, and its importance makes it valuable for a college-level course.

No teacher or user guide was supplied.

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Meiosis: The key to genetic diversity.

1991. Human Relations Media (175 Tompkins Ave., Pleasantville, NY 10570). VHS. 26 min. Purchase \$169.

This presentation at the secondary level is divided into two parts, the stages of mitosis and sexual reproduction and diversity. The stages of mitosis are clearly explained with the assistance of colorful diagrams, animations, electron micrographs and some real life models. New terms are introduced and explained in simple terms. At the end of part one, the meiotic events of spermatogenesis and oogenesis are explained.

Part two shows humans with diverse traits, then explains the importance of diversity. Diversity and survival of the species are cleverly explained with the use of fictional characters—wimpogs. Wimpogs are genetically alike and the video shows how this species might not survive if environmental conditions change. It goes on to explain the different ways in which diversity may arise.

A teacher's guide is included with the video. It contains a synopsis, review questions and topics for discussion. This video can be used as an introduction or summarizing activity. With a good assortment of review questions and topics for discussion in the guide, the summarizing use may be more desirable. The guide was thorough with some excellent topics for discussion.

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