

Jackson County Agriculture & Open Space Preservation Ordinance

Adopted by the County Board of Commissioners on June 20, 2006

Ordinance No. 12

AN ORDINANCE creating the Jackson County Farmland Preservation Program which protects farmland by acquiring development rights voluntarily offered by landowners, authorizes the cash purchase and/or installment purchases of such development rights, places an agricultural conservation easement on the property which restricts future development, and provides the procedures and guidelines governing the purchase of development rights and the placement of an agricultural conservation easement.

BE IT ORDAINED BY THE JACKSON COUNTY BOARD OF COMMISSIONERS:

Section 1: Declaration of Purpose

- A. Economic importance of farmland and agriculture. Jackson County's agricultural land is a unique and economically important resource. These lands support a locally important and globally unique agricultural industry that includes; dairy, livestock, food from grains, vegetables, fruit, forestry, and nursery and greenhouse crops. Jackson County's climate, topography and accessibility make it uniquely suited to the production, processing and distribution of agricultural products on a regional, national and international level.

Jackson County's economic base is also supported by a variety of agriculturally related businesses including; farm equipment, fuel, veterinarians, grain dealers, packaging plants and professional services.

- B. Importance of other non-agricultural attributes of farmland. In addition to its economic benefits, the county's farmland contributes significantly to the open space and natural resource benefits including rural character, scenic beauty, cultural heritage, hunting and other recreational opportunities, and the environmental benefits including watershed protection and wildlife habitat. By enhancing the scenic beauty and rural character of the county and providing other open space benefits, the county's farmland increases the overall quality of life and makes the county an attractive place to live and work for all of the county's residents.
- C. The extent of development and farmland loss. Because of the county's natural resources, productive farmland and rural character, it has become a desirable place to live and work. The population growth in Jackson County has continued to increase dramatically. As the population increases and people move out into the countryside, agricultural land is converted to residential and other developed uses. There has also been a corresponding increase in residential parcels and loss of farmland.

- D. The impact of farmland loss. Land suitable for farming is an irreplaceable natural resource with soil and topographic characteristics that have been enhanced by generations of agricultural use. When such land is converted to residential or other more developed uses that do not require those special characteristics, a critical community resource is permanently lost to the citizens of the county. Residential development in agricultural areas also makes farming more difficult by increasing conflict over farming practices and increased trespass, liability exposure and property damage. Because agricultural land is an invaluable economic, natural and aesthetic resource, the county should make an effort to maintain agricultural land in a substantially undeveloped state to ensure the long-term viability of agriculture and to create a long-term business environment for agriculture in the county.
- E. State and local policies. It is the policy of the state of Michigan and Jackson County to protect, preserve and enhance farmland as evidenced by the Jackson County Master Plan and township master plans, the Farmland and Open Space Preservation act, the State Agricultural Preservation fund, the conservation and Historic Preservation Easement act, portions of the county zoning Act, and other state and local statutes and policies. These measures by themselves, however, have not effectively provided sufficient long-term protection of farmland in Jackson County from the pressure of increasing residential and commercial development.
- F. Value of development rights. Generally, farmland has a greater market value for future residential development than its market for farming. The features of good farmland, such as permeable soils and open space views, are also the features desired for residential home sites. This fact encourages the speculative purchase of farmland at high prices for future residential development, regardless of the current zoning of such lands. Farmland which has a greater development potential and market value than its agricultural value does not attract sustained agricultural investment and is eventually sold to non-farmers and removed from agricultural use.
- G. Purpose of the program. It is the purpose of the Jackson County Farmland Preservation Program and this development rights ordinance to protect farmland in order to maintain a long-term business environment for agriculture in the county, to preserve the rural character and scenic attributes of the county, to enhance important environmental benefits and to maintain the quality of life of county residents.
- H. Mechanism to achieve purpose. The purchase of development rights and the placement of an agricultural conservation easement on farmland through the Jackson County Farmland Preservation Program as provided for in this Ordinance is a public purpose of Jackson County. Financing of such purchases requires that

Jackson County enter into agreements with property owners to obtain such development rights. Properties on which the County has purchased development rights and entered into an agricultural conservation easement should remain undeveloped in order to remain viable for agricultural use.

Section 2: Definitions

- A. “Agricultural conservation easement” means a conveyance by a written instrument, in which, subject to permitted uses, the owner relinquishes to the public in perpetuity his or her development rights and makes a covenant running with the land not to undertake development.

- B. “Agricultural Use” means substantially undeveloped land devoted to the production of plants and animals useful to humans, including forages and sod crops, grains feed crops and field crops; dairy and dairy products; poultry and poultry products; livestock, including breeding and grazing of cattle, swine, captive cervida, fish, and similar animals; berries; herbs; flowers; seeds; grasses; nursery stock; fruits; vegetables; Christmas trees and other similar uses and activities. Agricultural use includes use in federal acreage set-aside program, a federal conservation reserve program or a wetland reserve program. Agricultural use also includes the management of timber for harvest.

- C. “Development” means an activity that materially alters or affects the existing conditions or use of any land.

- D. “Development Rights” means an interest in land that includes the right to construct a building or structure, to improve land for development, to divide a parcel for development, or to extract minerals incidental to a permitted use or as is set forth in an instrument recorded under this part.

- E. “Development Rights Ordinance” means an ordinance adopted under the County Zoning Act, P.A. 183 of 1943, as amended.

- F. “Farmland” means 1 or more of the following:
 - i. A farm of 40 or more acres in 1 ownership, with 51% or more of the land area devoted to agricultural use.
 - ii. A farm of 5 acres or more in 1 ownership, but less than 40 acres, with 51% or more land devoted to an agricultural use that has produced a gross annual income from agriculture of two hundred dollars (\$200.00) per year or more per acre of cleared and tillable land. A farm described in this subparagraph enrolled in a federal acreage set-aside program or a federal conservation reserve program is considered to have produced a gross

annual income from agriculture of two hundred dollars (\$200.00) per year or more per acre of cleared and tillable land.

- iii. A farm designated by the department of agriculture as a specialty farm in 1 ownership that has produced a gross annual income of two thousand dollars (\$2,000.00) or more from an agricultural use. Specialty farms include, but are not limited to, greenhouses; equine breeding and grazing; the breeding and grazing of cervidae, pheasants, and other game animals; bees and bee products; mushrooms; aquaculture; and other similar uses and activities.

G. “Intensity of Development” means the height, bulk, area, density, setback, use and other similar characteristics of development authorized by law, typically the Township (or other local government) zoning ordinance.

H. “Parcel” means a contiguous quantity of land in the possession of a single owner.

I. “Permitted Use, Agriculture” means any use contained within a development rights easement essential to the farming operation or that does not alter the agricultural character of the land. Storage, retail or wholesale marketing, or processing of agricultural products is a permitted use in a farming operation if more than 50 percent of the stored, processed, or merchandised products are produced by the farm operator for at least three of the immediately preceding five years. Entertainment agriculture, such as you pick fruit operations, petting farms, Christmas tree farms and farm markets that include ancillary related uses are permitted as long as the facility has been approved by the Participating Township and County.

J. “Property Owner” means the party or parties having a freehold estate or fee simple interest in land.

K. “Purchase of Development Rights (PDR) Program” means a program prepared and adopted pursuant to Section 32 of the County Zoning Act, P.A. 183 or 1943, as amended, MCLA 125.231 through 125.240.

Section 3. Authorization

A. Pursuant to the county zoning act, the County Board of Commissioners is authorized to purchase the development rights of farmland throughout the county. Such acquisition may be by purchase, gift, grant, bequest, devise, covenant or contract. The county shall only purchase development rights on farmland that are voluntarily offered for sale by a property owner.

- B. The county is authorized to enter into installment purchase contracts, options, and agreements or take receipt of donations of easements, consistent with applicable law. The county is authorized to pay interest on the declining unpaid principal balance at a legal rate of interest consistent with prevailing market conditions at the time of execution of the installment purchase contract.

- C. The county may contract with recognized and legally established nonprofit land trusts or other experienced and qualified individuals, parties or entities that would assist the county in the process of negotiating easements and purchase contracts, establishing baseline studies and procedures for monitoring, and actual monitoring of any agricultural conservation easements acquired under this Ordinance.

Section 4: County Agricultural Preservation Board

- A. The County Board of Commissioners shall create an eight member body under this ordinance to be named the County Agricultural Preservation Board. The eight voting members shall be residents of the county and will be appointed by the County Board of Commissioners and will include: (a) one County Commissioner, (b) three individuals with agricultural interests, (c) a private citizen representing the public, (d) one representative that is an elected official in township government, (e) one individual with real estate or development interests, and (f) one individual representing local natural resource conservation interests.

- B. Members of the County Agricultural Preservation Board shall serve three-year terms, with the exception that the County Commissioner representative shall be designated on an annual basis. The initial term shall be staggered so that one of the agriculture representatives and the real estate representative serve an initial one year term, another agricultural representative, the private citizen and the local township representative serve an initial two year term, and the third agricultural representative and the local conservation representative serve an initial three year term. Members may be reappointed to successive three year terms by the County Board of Commissioners. The County Board of Commissioners shall have the discretion to remove members for neglect of duty or malfeasance in office or other good cause. Vacancies due to removal or resignation shall be filled for the remainder of a term by appointment by the County Board of Commissioners. Members shall not be compensated for their services, although reimbursement for attending meetings, for mileage and for other approved expenses shall be at the discretion of the County Board of Commissioners when funding is available, at rates established and approved by the County Board of Commissioners.

- C. The County Agricultural Preservation Board shall oversee the county's farmland preservation program and shall be responsible for:
- i. Establishing selection criteria for the ranking and prioritization of applications to the program. The selection criteria must be approved by the County Board of Commissioners prior to each application cycle.
 - ii. Establishing a points-based appraisal formula for determining the value of the agricultural conservation easements.
 - iii. Reviewing and providing oversight in scoring all applications according to the adopted selection criteria.
 - iv. Ranking and prioritizing the top scoring applications for acquisition and determining whether the development rights should be purchased.
 - v. Approving the restrictions and permitted uses under the agricultural conservation easement.
 - vi. Establish the price to be offered to the property owner and authorize negotiations for the purchase of development rights and agricultural conservation easement. All purchases of development rights and agricultural conservation easements must be approved by the County Board of Commissioners.
 - vii. Establishing monitoring procedures and overseeing subsequent monitoring to ensure compliance with the agricultural conservation easement. Enforcement of the agricultural conservation easement in the case of non-compliance shall be the responsibility of the County Board of Commissioners upon recommendation of the County Agricultural Preservation Board.
 - viii. Maintaining a map of participating properties and requisitioning appropriate stewardship activities.
- D. Individual County Agricultural Preservation Board members shall disclose any potential conflict of interest and may not vote when a conflict exists. Conflicts of interest include, but are not limited to, situations where (1) the board member is the applicant; (2) the member is a close relative of the applicant; (3) the board member has a close business association or ties with the applicant; (4) the board member, a relative, or a business associate could receive financial gain or benefit from the acceptance of the application.
- E. To the extent of available funding and as approved by the County Board of Commissioners in consultation with the County Agricultural Preservation Board, the county may contract with qualified and experienced individuals or entities for consulting and staffing purposes.

- F. The County Agricultural Preservation Board shall adopt operating guidelines.

Section 5: Eligibility for Application

Any property owner may submit an application to the County Agricultural Preservation Board provided it meets the following requirements:

- A. The property owner has signed the application indicating that he or she is interested in voluntarily selling the development rights to the parcel.
- B. At least 51% of the parcel's area is devoted to an active agricultural use or forestry activities and no more than 49% of the parcel may be devoted to non-agricultural open space consisting of wetlands or otherwise unusable land.
- C. If the parcel is located within a city, village or township that administers a zoning ordinance, the municipality must also sign the application indicating its approval of the application to the County. The County shall not purchase development rights under a development rights ordinance from land subject to a city, village, or township zoning ordinance unless all of the following requirements are met:
 - i. The development rights ordinance provisions for the PDR program are consistent with the plan upon which the city, village or township zoning is based.
 - ii. The legislative body of the city, village or township adopts a resolution authorizing the PDR program to apply in the city, village or township.
- D. The property is not designated for commercial, industrial, or residential uses at densities in excess of 0.5 dwelling units per acre under the County, Township, City or Village Master Plan.
- E. Agricultural activities are a permitted use on the parcel under all applicable zoning ordinances.

Section 6: Criteria for Reviewing and Ranking Applications

The County Agricultural Preservation Board shall establish selection criteria for ranking and prioritizing all eligible parcels submitted to the County Farmland Preservation Program. The selection criteria shall place an emphasis on farmland that:

- A. As part of the application procedure for the specific proposed purchase of development rights, the city, village, or township provides the county with written approval of the purchase.
- B. Has a productive capacity suited for the production of feed, food and fiber and has a greater potential for long-term agricultural production.

Specific Selection criteria may be based on soil classifications, parcel size, agricultural income, enrollment in the Farmland and Open Space Preservation Act, or the implementation of a soil conservation plan.

- C. Is under the threat of development. Specific selection criteria may be based on proximity to public sanitary sewer or water, the extent of development activity in the township or the amount of road frontage.
- D. Complements other farmland protection efforts in the County. Specific selection criteria may include proximity to other permanently protected farmland, proximity to other protected lands or surrounding land enrolled in the State Farmland and Open Space Preservation Act, or inclusion in an agricultural zoning district.
- E. Has additional matching funds available for the purchase of development rights provided by a local unit of government, landowner or private sources.
- F. Other factors considered important by the County Agricultural Preservation Board such as unique physical, historical or environmental characteristics.

Section 7 Application and selection process

- A. The county shall, on an annual basis, at the discretion of the county agricultural Preservation Board, conduct a voluntary application and selection process for property owners who wish to sell development rights under the County Farmland Preservation Program.
- B. The County Agricultural Preservation Board shall begin each application cycle by giving notice at least 90 days in advance of the application deadline that the county is accepting applications to the county Farmland Preservation Program. Notification shall be given in newspapers of general circulation within the county, through the county Farm Bureau, county Conservation District, county MSU Extension Service, local township offices and other organizations.
- C. The application may require information to be filled out by the property owner, the county Conservation District and the unit of local government.
- D. All applications shall represent the applicant's intent to sell the development rights of the property to the County subject to mutually acceptable terms. The application will remain active by way of annual written approval of the landowner, provided there is no subsequent modification to the scoring criteria or application that requires

additional information. Every three years, local cities, villages and townships will be asked to sign a letter of continued support for standing landowner applications, and all applications, both new and old, will be scored and ranked for each cycle.

- E. The County Agricultural Preservation Board shall give notice to each city, township or village in which an application for the purchase of development rights has been received, and the disposition of that application.
- F. At the close of the application deadline, an initial determination of eligibility shall be completed by the County Agricultural Preservation Board or designated staff. The property owner shall be notified if the application is not eligible for the program. Each application shall be evaluated and scored according to selection criteria approved by the County Agricultural Preservation Board and the County Board of Commissioners prior to the application cycle.
- G. The County Agricultural Preservation Board shall rank parcels according to the selection criteria score but shall also individually evaluate and prioritize the top scoring parcels. The County Agricultural Preservation Board may reprioritize the top scoring parcels based on individual review of each application and establish a priority on which development rights should be purchased first based on available funds.

The written rationale for reprioritization of the top scoring parcels shall be included with each application.
- H. The final ranking and prioritization of applications shall be submitted to the County Board of Commissioners for their approval.
- I. Agricultural value shall be based upon a price established by the County Agricultural Preservation Board using a points-based appraisal method established in Section 10.
- J. Upon mutual agreement to purchase terms by the property owner and the County Agricultural Preservation Board, a title search shall be completed before signing and recording of the agricultural conservation easement. Any questions or concerns regarding clear title to the property shall be resolved prior to signing of the agricultural conservation easement. All individuals, parties or entities with an interest in the property must be willing to agree to the terms and provisions of the agricultural conservation easement.

- K. The county Board of Commissioners must approve the purchase of development rights and the agricultural conservation easement. The County Board of Commissioners may alter the recommendation by the County Agricultural Preservation Board to purchase the development rights.
- L. Once the application has been approved for purchase by the County Board of Commissioners, the county and the property owners shall sign the agricultural conservation easement and it shall be legally recorded with the County Register of Deeds' office
- M. The county shall notify the appropriate local unit of government of each agricultural conservation easement.
- N. The agricultural conservation easement will be monitored in accordance with procedures and guidelines established by the County Agricultural Preservation Board. (See Section 8, subsection B)

Section 8: Agricultural Conservation Easement Provisions

- A. Upon the agreement of the purchase and sale of development rights by the County Agricultural Preservation Board, the property owner and the County Board of Commissioners, the County and the property owner shall execute an agricultural conservation easement, approved by the County Agricultural Preservation Board and the County Board of Commissioners, that will perpetually protect the parcel's agricultural use. The Agricultural conservation easement shall contain a provision indicating that the easement runs with the land and may not be terminated except as provided for in this Ordinance and the easement.
- B. Restrictions on that portion of the property included in the agricultural conservation easement shall include, but not be limited to, the following:
 - i. Property shall not be divided into parcels less than 40 acres in size.
 - ii. The construction of residences for new owners of any divisions shall be prohibited
 - iii. Construction of any other buildings, unless they are built for uses consistent with farming operations shall be prohibited.
 - iv. Commercial or industrial activity that is inconsistent with a normal farming operation shall be prohibited.
 - v. Excavation of topsoil, sand, gravel, rock, minerals or other materials that significantly impairs or interferes with the agricultural values of the property shall not take place.
 - vi. Public access may not be required under the agricultural conservation easement.

- C. Permitted uses and retained development rights in the agricultural conservation easement shall include, but not be limited to, the following:
- i. Construction of buildings necessary for and consistent with agricultural uses.
 - ii. The right to construct one additional residence for an individual essential to the operation of the farm as defined in section 36110(5) of the Natural Resources and Environmental Protection Act, MCL 324.36110(5); MSA 13A.36110(5). Any structure must be in conformance with all applicable federal state and local laws, ordinances and regulations.
 - iii. The rights to maintain, renovate, add on to, or replace existing structures. Structure built must be in conformance with all applicable federal, state and local laws, ordinances and regulations.
 - iv. The right to sell, mortgage, bequeath or donate the property, provided that any conveyance shall be subject to the terms of the easement.

Section 9: Duration of the Agricultural Conservation Easement

- A. Except in cases as described in Section 9, subsection C, the agricultural conservation easement shall be permanent and run with the land, regardless of transfers in property ownership. It is the intent of this ordinance to preserve valuable farmland through the establishment of permanent conservation easements. Development rights acquired pursuant to this ordinance shall be held by the County in perpetuity and the development rights may be repurchased by the landowner when a court of competent jurisdiction has determined through eminent domain that the use of those development rights is necessary for a specific public interest, need or purpose.
- B. Upon a court's determination in eminent domain proceedings that the repurchase of the development rights from the County is necessary for a specific public interest, need or purpose, or a petition to the County Agricultural Preservation Board the party acquiring the property through eminent domain or the landowner shall pay to the County the appreciated fair market value of those development rights at the time of the repurchase as determined by a State Certified appraiser, or utilizing the points-based appraisal in section 10, before the termination of the agricultural conservation easement. The landowner shall also pay the difference in taxes that would have been paid had the property appreciated at fair market values. Payment will be made in cash or like kind payment only.

The value of the development rights shall be determined as the difference between the fair market value of the property with all development rights intact and the value of the property for agricultural use with an agricultural conservation easement in place. If the appraiser has a conflict of interest associated with a potential appraisal, the appraiser shall report the conflict to

the county, and the county shall select another appraiser to complete the appraisal.

C. Upon request from a landowner and a local governing body, the state land use agency shall relinquish farmland from the development rights agreement if the County Board of Commissioners upon recommendation by the County Agricultural Preservation Board determines 1 or more of the following:

- i That, because of the quality of the farmland, agricultural production cannot be made economically viable with generally accepted agricultural and management practices.
- ii That surrounding conditions impose physical obstacles to the agricultural operation or prohibit essential agricultural practices.
- iii That significant natural physical changes in the farmland have occurred that are generally irreversible and permanently limit the productivity of the farmland.
- iv. That a court order restricts the use of the farmland so that agricultural production cannot be made economically viable.

D. In determining public interest under subsection C, i, the governing body shall consider all of the following:

- i. The long-term effect of the relinquishment upon the preservation and enhancement of agriculture in the surrounding area, including any non-farm encroachment upon other agricultural operations in the surrounding area.
- ii. Any other reasonable and prudent site alternatives to the farmland to be relinquished.
- iii. Any infrastructure changes and costs to the local governmental unit that will result from the development of the farmland to be relinquished.

E. The county will deposit the proceeds from any repurchases into the farmland preservation fund and the proceeds shall be used to purchase additional development rights and agricultural conservation easements on additional farmland within the county.

F. Any repurchase of development rights must be approved by the County Board of Commissioners prior to completion of the repurchase.

Section 10: Determining the Value of the Agricultural Conservation Easement

A. The County Agricultural Preservation Board shall establish a points-based appraisal method and formula for determining the value of the agricultural conservation easement prior to each application cycle. The points based

appraisal method, as authorized under P.A. 262 of 2000, reduces administration costs, is much more time efficient, provides a consistent and objective value for all applicants and allows property owners to determine the value of the agricultural conservation easement prior to submitting an application. The formula shall establish a base value based on the parcel's soil characteristics size and proximity to other protected farmland. The base value shall be increased if the parcel qualifies for a market value adjustment based on the parcel's location within the county and the amount of road frontage. In determining the market value adjustment, an average of actual vacant land sales of parcels over 20 acres in size zoned for agricultural purposes sold during the prior three years shall be determined for each township. The parcel may also qualify for a premium based on its proximity to sewer and water as determined by a formula established by the county agricultural Preservation board. The County Agricultural Preservation Board shall review the points based appraisal method at the end of each application cycle, and compare agricultural conservation easement values relative to actual fair market sales in the county.

- B. The property owner may obtain, within reasonable timeframe, an appraisal of the development rights from a state certified Appraiser at the property owner's expense. The appraisal may calculate the value of the development rights as the difference between the fair market value of the property with all development rights intact and the value of the property for agricultural use with an agricultural conservation easement in place. The county agricultural preservation board may establish guidelines, consistent with state standards, for the state certified Appraiser to use in determining the fair market value or the agricultural value.
- C. The county agricultural preservation board shall approve the price to be offered and paid for the agricultural conservation easement. If the property owner obtains an independent appraisal, the county agricultural preservation board may elect to alter the initial offer based on qualified circumstances.
- D. The property owner may be paid a cash payment or offered an installment purchase contract, or a combination of both.

Section 11: Related Costs

The cost of services ordered by the County Agricultural Preservation Board in relation to the county's Farmland Preservation Program shall be paid from all available farmland preservation program funding sources within the county, including state and federal matching funds, which may include the cost of appraisal, engineering, surveying planning, financial, legal, environmental assessments, title searches, developing baseline assessments and monitoring easements. The county shall not be responsible for any expenses incurred by the property owner incident to this transaction that the county Agricultural

Preservation Board has determined is the responsibility of the property owner, which may include title searches, appraisals or surveying.

Section 12: Farmland Preservation Fund

- A. Available funding for the county Farmland Preservation Program shall be deposited in a special farmland preservation fund. The revenues for the deposit and/or investment of the Farmland Preservation Fund shall be applied and used solely for the purpose of purchasing development rights and agricultural conservation easements under this Ordinance, making payments obligated under installment purchase contracts, promoting farmland preservation programs, or paying for costs of administering or enforcing the County Farmland Preservation Program. The County Treasurer will hold fiduciary responsibility for all funds associated with the Farmland Preservation Program.
- B. Supplemental or matching funds from private sources or other governmental agencies, including local municipalities, the State, or Federal Government, may become available to pay a portion of the cost of acquiring development rights or agricultural conservation easements, or to supplement or enlarge such acquisitions. The County Board of Commissioners authorizes the County Agricultural Preservation Board to use such funds to purchase development rights of farmland and acquire agricultural conservation easements.
- C. The County, upon approval by the county Board of Commissioners, may finance the County Farmland Preservation Program through 1 or more of the following sources:
 - i. General appropriations by the county.
 - ii. Proceeds from the sale of development rights by the county under Section 9.
 - iii. Grants.
 - iv. Donations.
 - v. General Fund Revenue.
 - vi. Bonds or Notes.
 - vii. Special Assessments as permitted by law.
 - viii. Other nonfederal governmental funds.
 - ix. Other sources approved by the county Board of Commissioners as permitted by law.

Section 13: Amendments

This ordinance may be amended, after receiving input from the County Agricultural Preservation Board, by a vote of the County Board of Commissioners.

Section 14: Severability

Any provision of this ordinance which is found by a court of competent jurisdiction to be invalid, void or illegal shall in no way affect, impair or invalidate any other provision contained in the ordinance and such other provisions shall remain in full force and effect.