



## Perspectives on agricultural research organizations: A new tool for agricultural research and land stewardship

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### ABSTRACT

To feed the projected global human population of 9.3 billion, it will be necessary to increase agricultural production approximately 70 % in only four decades. New avenues of agricultural research funding are needed to enhance and enable effective decision-making by stewards of working lands. In 2015, the United States Congress passed a bill that enables estates and others to devote their assets toward Agricultural Research Organizations (ARO). The ARO model is based on the proven existing tax organization, the Medical Research Organization, created in the Internal Revenue Service code in 1956. Our objectives were to provide the definition and description of AROs, describe East Foundation implementation of ARO to illustrate, and discuss opportunities for the ARO vehicle to advance agricultural research for public benefit. East Foundation, the nation's first ARO, is a landowner in southern Texas committed to conducting agricultural research and being primarily engaged in the continuous active conduct of agricultural research in conjunction with land grant universities or colleges of agriculture. We recommend other organizations and entities interested in forming an ARO consider our approach directed towards 1) partnerships, 2) professional advisors, 3) people, and 4) products. In a little more than a decade, our approach has led to the production of over 110 peer-reviewed scientific publications relevant to land stewards and agricultural producers. To advance agriculture, it is extremely valuable to get students, future scientists, and seasoned scientists out on private lands within a research context and realities of agribusiness and working lands. The ARO mechanism should be considered by landowners and others interested in championing agricultural research in the US now and for future generations.

### 1. Introduction

In 2015, the United States (US) Congress passed a bill that enables estates and others to devote their assets, or portions of their assets, toward Agricultural Research Organizations (ARO). While this bill has not been widely applied or appreciated, our purpose here was to further illustrate the opportunities of this bill to advance agricultural research and to ultimately feed our nation and beyond our borders for future decades. Our objectives were to provide the definition and description of AROs, describe East Foundation implementation of ARO to illustrate, and discuss opportunities for the ARO vehicle to advance agricultural research for public benefit.

### 2. Formation, definition, and description of agricultural research organizations (AROs)

#### 2.1. Enabling legislation

United States House bill – HR 2671/S 1280 – was passed into law in December 2015. The bill named the “Charitable Agricultural Research Act” created a new type of 501(c)(3) non-profit organization, to enable philanthropic giving to build US agricultural research capacity in conjunction with the nation's agricultural universities, including land grant universities and other colleges of agriculture. The ARO model is based on the proven existing tax organization, the Medical Research Organization (MRO), created in the Internal Revenue Service (IRS) code in 1956 and defined at 26 IRC 170(b)(1)(A)(iii). Note that AROs are named in part ix of the same section. The purpose or function of MROs is the providing of medical research, and which are directly engaged in the continuous active conduct of medical research in conjunction with

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hospitals. Examples of MROs include the Bill and Melinda Gates Medical Research Institute in Cambridge, Massachusetts and the Howard Hughes Medical Institute in Chevy Chase, Maryland. However, there are numerous other examples of MROs, many of which have existed for decades. Similar to MROs, AROs enable private funding for agricultural research for public benefit.

## 2.2. Requirements and defining characteristics of AROs

The purpose of the Charitable Agricultural Research Act is to create 501(c)(3) non-profit organizations that conduct agricultural research and be primarily engaged in the continuous active conduct of agricultural research in conjunction with a land grant college or university or non-land grant college of agriculture [1]. Within the Act, “agricultural research” is defined in the US Tax Code at 7 U S C. 3103, and includes research related to food and agricultural sciences, and presently includes the following [1].

- Animal health, production, and well-being;
- Plant health and production;
- Animal and plant germplasm collection and preservation;
- Aquaculture;
- Food safety;
- Soil, water, and related resource conservation and improvement;
- Forestry, horticulture, and range management;
- Nutritional sciences and promotion;
- Farm enhancement, including financial management, input efficiency, and profitability;
- Home economics;
- Rural human ecology;
- Youth development and agricultural education, including 4-H clubs;
- Expansion of domestic and international markets for agricultural commodities and products, including agricultural trade barrier identification and analysis;
- Information management and technology transfer related to agriculture;
- Biotechnology related to agriculture; and
- The processing, distribution, marketing, and utilization of food and agricultural products.

Following IRS Section 501(c)(3) organizations are classified as either a private foundation or a public charity, which are distinguished primarily by the level of public involvement in their activities [2]. Public charities often receive a greater portion of their financial support from the public or governmental units and have greater interaction with the public. Whereas a private foundation is typically controlled by members of a family or by a small group of individuals and derives much of its support from a small number of sources and from investment income [2]. Private foundations, because they are less transparent or open to public scrutiny, are subject to various operating restrictions and to excise taxes for failure to comply with those restrictions [2]. Agricultural Research Organizations combine the attributes of private foundations

**Table 1**  
Funding and primary activities of private foundations, public charities, and Agricultural Research Organizations [4].

Feature	Private Foundations <sup>a</sup>	Public Charity	Agricultural Research Organizations
Funding	Single, major source	Fundraising and receive contributions from many sources including general public, government agencies, corporations, private foundations, or other sources	Single, major source; can receive funding from other sources
Primary Activity	Making of grants to other charitable organizations or individuals	Receive income from the conduct of activities in furtherance of the organization’s exempt purposes	Conduct agriculture research and be primarily engaged in the continuous active conduct of agricultural research with land grant college or university or non-land grant college of agriculture

<sup>a</sup> Note – there are two types of private foundations – grantmaking and private operating. Grantmaking foundations are devoted to philanthropy (primarily giving to public charities) whereas private operating foundations directly operate charitable programs [5].

and public charities to build agricultural research capacity in the US [1].

One benefit to families, estates, or organizations establishing an ARO versus a private foundation is that they are not subject to specific federal tax rules regulating organizational activities. These include a one or two percent excise tax, which is determined on a complex set of rules, and on investment income, including capital gains [3]. Additionally, ARO’s allow for landowners to keep their lands intact, in perpetuity. Other differences between private foundations and public charities exist (Table 1).

## 2.3. Benefits and expected outcomes from AROs

To feed the projected global human population of 9.3 billion, it will be necessary to increase agricultural production approximately 70 % in only four decades (by ~2060) [1]. However, the growth of agricultural productivity will be constrained by 1) heightened economic and environmental concerns regarding the use of more pesticides, fertilizers, and ground water for agricultural production; 2) pressure to avoid expanding cultivated lands into already shrinking forests and wetlands; and 3) the loss of existing farmland, whether through urban expansion or land erosion [1]. New avenues of agricultural research funding are needed to enhance and enable effective decision-making by stewards of working lands. Specifically, there is a need for additional private funding to complement public funding for agricultural research in the US, with growth in public agricultural research spending peaking in the 1970’s and decreasing since, particularly relative to per capita [1].

Agricultural Research Organizations expand and enhance public-private partnerships in the agricultural research sector by 1) requiring research to be completed in conjunction with one or more of the nation’s land-grant universities or non-land-grant colleges of agriculture; 2) providing a new avenue for financial and in-kind resources for the nation’s agricultural universities’ research and education efforts; and 3) providing essential “checks and balances” to the research conducted at AROs [1]. Agricultural Research Organizations are required to be in relationship with agricultural universities, which facilitates new private-public opportunities to connect private wealth with publicly funded agricultural operations of universities, such as research, education, and knowledge dissemination [1]. With shared missions, AROs and partnered universities provide a public benefit by expanding agricultural research and productivity.

## 3. Current status of AROs

East Foundation was the nation’s first organization to receive the designation as an ARO by the US IRS. This was followed quickly by the Noble Research Institute in Ardmore, Oklahoma. Also, Turner Institute of Ecoagriculture was established as an ARO in early 2023, with lands across the midwestern and western US. To our awareness as of October 2024, there are ~10 AROs in existence. East Foundation converted to an ARO from a private operating foundation and was subject to a 5-year IRS review and transition period. There was a similar situation, related to a 5-year IRS determined transition period, for Noble Research Institute.

However, Turner Institute of Ecoagriculture formed *de novo* as an ARO and was not subjected to the IRS 5-year review and transition period.

#### 4. Case study: East Foundation – the nation’s first ARO

##### 4.1. History and formation of East Foundation [modified from [6]]

East Foundation promotes the advancement of land stewardship through ranching, science, and education. We manage over 217,000 acres of southern Texas native rangeland, operated as six noncontiguous ranches in Jim Hogg, Kenedy, Starr, and Willacy counties. These lands were bestowed on us through the generous gift of the East family in 2007. To honor their legacy, we uphold their vision and values that were established more than a century ago, putting agricultural research, education, and ranching foremost.

The ranchlands owned by East Foundation were acquired by the East family across a period of about one hundred years. Tom T. East, Sr. (1889–1943) first registered the family’s trademark Diamond Bar brand in 1912. In 1915, Tom married Alice Gertrudis Kleberg (1893–1997), the granddaughter of Captain Richard and Henrietta King, founders of King Ranch. Alice and Tom raised their family and built a ranching legacy on their largest ranch, the San Antonio Viejo.

Between 1912 and his death in 1943, Tom T. East, Sr. Ranched across more than 400,000 acres of deeded and leased land throughout southern Texas – and he placed the Diamond Bar brand on hundreds of thousands of cattle. After his death, Alice and her children continued to work and live on the San Antonio Viejo Ranch and develop their agricultural operation. When Robert East passed away in 2007, he gifted his landholdings and estate to East Foundation.

In keeping with the East family’s wishes, their ranchlands remain a working cattle ranch where scientists and managers work together to address issues important to agriculture, including wildlife conservation, rangeland health, and ranch productivity. We ensure that ranching and wildlife management work together to conserve healthy rangelands. Also, we are committed to keeping East lands intact, undeveloped, and for agricultural production and research purposes.

##### 4.2. East Foundation as a private operating foundation

East Foundation was originally designated as a private operation foundation by US IRS in 2010. Unlike most private foundations that are grantmaking foundations, East Foundation was designated as a private operating foundation due to its sizable landholdings, healthy investment portfolio, and ability and expectation to directly operate its own charitable programs of ranching, science, and education (Table 1). During this early period, East Foundation worked closely with partnering universities and other like-minded organizations to accomplish its mission. When the Charitable Agricultural Research Act passed in 2015 and given the existing relationships with colleges of agriculture that were in place, it was clear that East Foundation should seek to become an ARO to benefit the public most efficaciously and use our assets best. At the time, as a private operating foundation, East Foundation was already functioning as an ARO in many ways, thereby affording a smooth transition.

##### 4.3. Key criteria for conversion to ARO

Following the Charitable Agricultural Research Act, AROs must have the principal purpose or function of conducting agricultural research and be primarily engaged in the continuous active conduct of agricultural research in conjunction with a land grant college or university or non-land grant colleges of agriculture [3]. Additionally, there must be a joint effort on the part of the ARO and the university/college pursuant to an understanding that the two organizations will maintain continuing close cooperation in the active conduct of agricultural research [3]. Also, AROs must commit significant portions of their resources to agricultural research, as defined by legislation (see subsection 2.2).

However, having large landholdings (like East Foundation) is not a requirement of AROs.

##### 4.4. East Foundation’s approach to the key criteria

The following captures the approach that East Foundation has taken to complete its function as an ARO. Again, this was made more straightforward by the fact that we were gifted large landholdings and an investment portfolio and were already doing many “ARO-like” things as a private operating foundation that ensured a smooth transition to an ARO. We refer to these as the four P’s and these can be considered actionable lessons from East Foundation.

###### 4.4.1. Partnerships

In 2012, the East Foundation established Master Research Agreements (MRA) with both Texas A&M University (land grant university) and Texas A&M University-Kingsville. Specifically, a MRA was established between East Foundation and Texas A&M AgriLife Research and Extension Service at Texas A&M University in December 2012, and between East Foundation and Caesar Kleberg Wildlife Research Institute at Texas A&M University-Kingsville in November 2012. Master Research Agreements between East Foundation and both agricultural universities were renewed in August 2017 and August 2019 for Texas A&M University and Texas A&M University-Kingsville, respectively. An additional MRA was established between East Foundation and King Ranch® Institute for Ranch Management at Texas A&M University-Kingsville in April 2020.

The purpose of MRAs is to serve as an umbrella, governing document under which individual Project Agreements (PA) for agricultural research endeavors are performed by East Foundation on their lands in conjunction with agricultural universities or colleges, their faculty, students, and other personnel. Both MRAs and PAs function as cost reimbursement contracts, though this is not a requirement of AROs. Master Research Agreements cover items such as.

- Payment for services rendered, documented in quarterly reports, through quarterly invoicing;
- Work product joint ownership;
- Ownership of inventions;
- Equipment purchases; and
- Other terms related to conduct and safety of university partners while working on East Foundation lands.

As mentioned, individual PAs are established in conjunction with faculty at colleges of agriculture that are covered under an umbrella MRA. East Foundation identifies research questions important to US agriculture (in partnership with its Professional Advisors, see subsection 4.4.2) and works closely with partners and faculty at colleges of agriculture to develop PAs. For East Foundation, PAs are central to our ARO functions and resulting work products. Key features of PAs include.

- Summary Scope
- Project Description, including:
  - o Objectives
  - o Methods
  - o Deliverables (to East Foundation)
  - o Timeline
- Budget and Budget Narrative

East Foundation personnel work closely with agricultural universities, their faculty, students, and other personnel to develop, implement, and deliver agricultural research products through PAs. However, East Foundation does not implement a request for proposal system that solicits research proposals at large. Rather, East Foundation identifies the agricultural research questions to be addressed through PAs and works in conjunction with colleges of agriculture to perform agricultural

research on our lands.

Additionally, AROs allow for relationships with sponsors and donors who can support agricultural research through donations to East Foundation. At present, this is an emerging source of funding for East Foundation agricultural research.

#### 4.4.2. Professional advisors

In 2012, East Foundation established a professional advisor's group (PAG) composed of scientists, educators, and land management professionals with recognized expertise in agricultural sciences, including wildlife science, animal science, range science, and ranch management systems. The duties of the PAG were to provide input into the East Foundation's strategic planning efforts, recommend options and alternatives for effectively implementing the mission-driven program, and serve as a resource for technical and peer review. Specifically, the PAG provided counsel to East Foundation on 1) identifying and recommending approaches for long-term agricultural research programs that integrate wildlife, rangeland, and livestock management objectives, 2) planning and implementing ranch infrastructure to support agricultural research with university partners, and 3) reviewing and providing feedback for the improvement of agricultural research and education programs.

Presently, the East Foundation's PAG has six regular members, one consulting professional advisor, and three emeritus members. Membership includes leaders of agricultural industry, agricultural research and education, veterinary medicine, and agricultural non-profit management. The East Foundation's PAG meets from two to six times per year to engage with Foundation leadership, scientists, and staff. Since inception, East Foundation has built up its internal capacity and is in the process of phasing out our PAG, which was of critical importance during our start-up, but less important now that we are more established.

#### 4.4.3. People

In 2020, East Foundation established its "scientist in residence" program. Here, East Foundation embeds university faculty and scientists from one of the colleges of agriculture that it maintains MRAs with, directly into the East Foundation's operations and functions. Specific arrangements between East Foundation and colleges of agriculture are established through PAs; however, East Foundation typically provides a portion of the scientist's salary with mutually determined objectives and deliverables (subsection 4.4.1). East Foundation has had one scientist in residence with the King Ranch® Institute for Ranch Management at Texas A&M University-Kingsville and one scientist in residence with Caesar Kleberg Wildlife Research Institute at Texas A&M University-Kingsville. For the latter, a new scientist in residence began in January 2023 and is an expert in carnivore ecology at the livestock interface, including complex agricultural systems.

Related, East Foundation scientists also serve as graduate faculty (or Adjunct Faculty) at different colleges of agriculture throughout Texas. Specifically, five East foundation scientists serve on the graduate faculty at Texas A&M University-Kingsville, four East Foundation scientists serve on the graduate faculty at Texas A&M University, and one East Foundation scientist serves on the graduate faculty at Sul Ross State University. The primary purpose of both the scientist in residence and graduate faculty designations and appointments are to continuously conduct active agricultural research in conjunction with a land grant college or university or non-land grant college of agriculture, made possible through physical proximity, shared missions, and usually on East Foundation lands.

Since inception, East Foundation has worked with colleges of agriculture to develop emerging PhD level scientists. A major transition for young scientists is from PhD student status to professional scientist and this is often accomplished through leading post-doc research projects, including the management of people, places, and things. East Foundation has worked closely with six post-doc researchers, including one at Texas A&M University and five at Texas A&M University-Kingsville.

East Foundation post-docs have matriculated into faculty positions at colleges of agriculture (2) or leadership positions within federal or state natural resource agencies (4).

Furthermore, East Foundation works directly with graduate students fulfilling their agricultural research and education requirements at colleges of agriculture on our lands. At present, East Foundation has graduated 40 graduate students through colleges of agriculture at Texas A&M University or Texas A&M University-Kingsville, including 27 master of science graduates and 13 doctor of philosophy graduates. These former students have gone on to be leaders in agriculture, with 45 % working for colleges of agriculture (several working on their PhD degrees), 17.5 % working for state natural resources agencies, 15 % working in the private agricultural sector, 12.5 % working for agricultural non-profits, 10 % working for federal natural resources agencies. Additionally, East Foundation is currently working with two graduate students at Texas A&M University and 12 graduate students at Texas A&M University-Kingsville on their agricultural research towards their degrees on our lands. Related, East Foundation has worked closely with >35 agricultural interns who were enrolled in or recently graduated from colleges of agriculture throughout the U.S.

Since 2013, East Foundation has recorded the number agricultural researchers (including university faculty, graduate students, undergraduate students, research technicians, interns, and volunteers) and external educators (educators from outside organizations conducting K-12 education programs on our lands) that have visited our lands to perform their agricultural work. These have ranged from about 3300 to 7200 days per year since 2014 (Fig. 1).

#### 4.4.4. Products – agricultural research

Since inception and both as a private operating foundation and ARO, East Foundation has focused its research efforts within seven main agricultural themes. These are aimed at agricultural research that provides information to enhance effective decision making by stewards of working agricultural lands. These include.

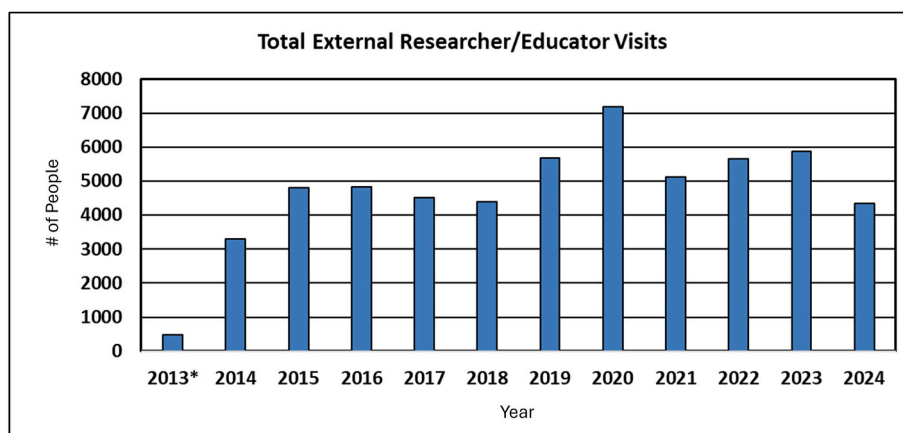
- Population Parameters of White-tailed Deer
- Ocelot Conservation on Working Cattle Ranches
- White-tailed Deer, Nilgai, and Cattle Grazing Interactions
- Wildlife and Vegetation (Cattle Forage) Monitoring
- Patch Burn Cattle Grazing on El Sauz Ranch
- Cattle and Coyote Relationships
- Management of Bobwhites on Working Cattle Ranches

These collective efforts among East Foundation scientists, university faculty, and graduate students, as well as their supporting staff have produced >110 peer-reviewed agricultural journal articles (e.g., see East Foundation - Google Scholar for current list) and countless presentations to agricultural researchers, producers, students, and professionals. These agricultural research products have been made possible only through the MRAs, PAs (subsection 4.4.1), university graduate students and constructive relationships established and maintained among East Foundation and colleges of agriculture in Texas. In 2024 East Foundation restructured its agriculture research themes into 1) Livestock Production and Ranch Management, 2) Wildlife Management and Conservation, and 3) Land Stewardship and Management.

## 5. Opportunities for AROs

An underlying theme of the Charitable Agricultural Research Act is that it provides a new means for private funding, land, and resources to benefit the public in the arena of agricultural research. Ultimately, these benefits will promote more efficient production of agricultural products through the creation and use of advanced research. East Foundation believes that an undervalued feature of the Act is that it will promote the opening of private working lands, which are often understudied compared to public lands (as they are often perceived to be "closed"), for





**Fig. 1.** Total number of external agricultural researchers and educators visiting East Foundation lands to perform agricultural work from 2013 to 2024. \*Note 2013 only includes September–December.

scientific study and exploration within the realm of public research in conjunction with colleges of agriculture, following the ARO model. This is likely the most important public benefit and opportunities for AROs. Another benefit is that AROs allow landowners to keep their lands intact with minimal financial and regulatory burdens associated with private foundations. However, the potential for other public benefits exists, including the opportunity to train future leaders in US agriculture through hands-on, field-based learning experiences, such as internships, volunteerism, graduate studies, and faculty development. To advance agriculture, it is extremely valuable to get students, future scientists, and seasoned scientists out on private lands within the research context and realities of agribusiness and working lands. The Charitable Agricultural Research Act and its ARO mechanism should be considered by landowners and others interested in land stewardship and championing agricultural research in the US now and for future generations.

## 6. Conclusions

The East family was committed to agriculture and so is East Foundation. As an ARO, East Foundation is committed to operating as a working cattle ranch and conducting agricultural research and be primarily engaged in the continuous active conduct of agricultural research in conjunction with land grant universities or colleges of agriculture, as the above case demonstrates. We recommend other organizations and entities interested in forming an ARO consider our approach directed towards 1) partnerships (subsection 4.4.1), 2) professional advisors (subsection 4.4.2), 3) people (subsection 4.4.3), and 4) products (subsection 4.4.4). Sound relationships are the overarching theme and necessary for complete realization of benefits. We believe that relational, rather than transactional exchanges, dialogue, planning, and execution among East Foundation and colleges of agriculture have been key to our success thus far in our early existence and journey as an ARO.

## CRedit authorship contribution statement

**Tyler A. Campbell:** Writing – review & editing, Writing – original

draft. **Lindsay A. Martinez:** Writing – review & editing. **Jason E. Sawyer:** Writing – review & editing, Supervision.

## Declaration of competing interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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## Data availability

No data was used for the research described in the article.

## References

- [1] Charitable Agricultural Research Act, Frequently asked questions, HR 2671/S 1280, Agric. Res. Globa Agric.Challenges U.S. Charitable. Organization. (2014).
- [2] Internal Revenue service (IRS). <https://www.irs.gov/charities-non-profits/eo-operational-requirements-private-foundations-and-public-charities>, 2024. (Accessed 10 July 2024).
- [3] Charitable Agricultural Research Act, Frequently asked tax questions. HR 2671/S 1280, U.S. Tax Exempt, Charitable Organizations and Related Tax Law, 2014.
- [4] Internal Revenue Service (IRS), Public charities. <https://www.irs.gov/charities-non-profits/charitable-organizations/public-charities>, 2024. (Accessed 10 July 2024).
- [5] Internal Revenue service (IRS) exempt organization types. <https://www.irs.gov/charities-non-profits/exempt-organization-types>, 2024. (Accessed 10 July 2024).
- [6] East foundation. <https://eastfoundation.net/the-foundation/our-story/>, 2024. (Accessed 10 July 2024).