Rising each morning, your stomach hosting a thundering musical of groans and aches, lips crisped like the skin of a reptile, perhaps the anticipation of a long, physically demanding day has already made a debut in a starved mind, an unending fear of hunger echoes in those surrounding you --- these are the tribulations felt in far too many lives around the globe. The term “world hunger” has circulated through our society for decades; its continual presence has almost made it a cultural "norm" for many, a fearsome thought for all. Instead of serving as a reminder and motivation to put up a fight, the term has simply become everyday language to the general public, fortunately we have people like those serving the Association for International Agriculture and Rural Development (AIARD) to regenerate the urgency.

Through the cooperative generosity of Dr. Florence Dunkel, Dr. Hiram Larew and Dr. Sreekala Bajwa, I was able to attend the two and half day annual 2019 AIARD conference in Washington, DC. The theme of this year’s gathering, “Resilience in the Global Food Systems,” included narratives from both the sociological and technical science realms. Resilience as a form of the humanities discipline was portrayed through the importance of cultural knowledge and sustaining integrity in these practices, in other words, never foregoing traditional knowledge for the interest of economic, short-term durability. Academics from the technical sciences discussed crop sustainability, including projects such as gene modification, preservation in a changing climate and market-driven solutions. Keynote speakers and conference participants made a point to emphasize to the audience the idea that these two ways of studies are not exclusive from one another. To truly create a sustainable solution we must always be culturally aware, remaining cautious that our own biases, subconscious or not, never impede on the cultures we are inviting ourselves into. Some solutions to avoiding our subconscious bias are through education, immersion and communication.

**Empowerment**

AIARD’s team has chosen a path integrating technical sciences, such as plant pathology and water systems, with social sciences. The duo, not employed as frequently as it should be, brings a new perspective to an issue too often forgotten. Images from commercials aired on American television of starved children, bones protruding from their sides, faces dimmed by malnutrition and cheekbones awkwardly chiseled, alluding to sunken eyes flood my mind as I read the term “world hunger”.

These scenes seldom depict the native population as strong and successful, but rather as a “rag-tag” bunch of helpless and vulnerable people. This narrative sets the image for what Euro-Americans see “third world” countries as, a term that compares other cultures to
Euro-America, ranking them on their modernization efforts and technological advancements. This way of thinking continues to encourage the portrayal of the “white savior” ethos.

When we, as Euro-Americans, view our unsolicited humanitarian efforts as aid, modern colonization occurs and further degradation of culture begins. In many situations, this traditional knowledge has carried indigenous people well into this century—it’s only inhibitions being the environmental hazards struck up by the overuse of resources and blatant disregard for our Earth’s health; these acts generally done by Euro-American culture and business.

Traditional knowledge, especially from communities most impacted by agricultural struggles, should be considered in every implementation. This idea was reflected, at least briefly, in most of the presentations. Invoking humanitarian efforts without considering indigenous practices will ultimately result in an intellectual colonization, destroying any hope of true cooperation with all parties involved. Involving native people in processes will build a strong agricultural allyship while preserving native traditions—which are often helpful in critiquing the sociological postulation of the Human Exceptionalism Paradigm (HEP), a concept I learned of in an Environmental Sociology with Dr. Scott Myers. HEP illustrates the idea that humans are dominant to the environment (and its inhabitants) and, therefore, have the authority to override ecosystems and plead innocent to damages done. The philosophy countering this argument is the New Ecological Paradigm (NEP), which argues that humans do, in fact, need to take responsibility for anthropogenic harm caused to the environment.

Involving traditional knowledge allows for input relating to ancient practices that lack the dominant technology often forced onto ecosystems without thorough research capable of projecting long-term effects. Michael Neumann, executive director of Partners in Progress, values the truth in this “New Ecological Paradigm”. Neumann works with North Dakota natives, using traditional crops and cultural knowledge to create sustainable baby food. Neumann and colleagues put forth a great example of empowerment by allowing native communities to produce, create and profit from their own culture rather than be forced into an intellectual colonization. Including traditional knowledge is a feature of resilience in that it both continues the culture and integrates indigenous crops.

**Doomsday Vault**

Dr. Cary Fowler is considered the “father of the Svalbard Seed Project,” an effort to establish, in essence, a seed recovery center in multiple countries, specifically those in catastrophe prone zones. The “Doomsday Vault” puts seed genetics in indigenous hands. With climate change quickly rezoning ecosystems new assemblages of species, pests, diseases and crops have evolved threatening former inhabitants. Seed banks preserve future

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1 Description awarded to Dr. Fowler by former UN Secretary General Ban Ki-Moon. Dr. Fowler’s scientific journey with seed preservation is further detailed in his *Seeds on Ice*. 
crop generations while ensuring employment—especially vital in low income countries. Fowler emphasizes that most African regions will be under a new climate regime not seen since the dawn of agriculture.²

Exposure to new conditions may pose a conflict with traditional agricultural practices. In other words, traditional knowledge may become inconsistent with the ever-changing meteorological character. Arising from this dilemma comes the question, how do we fight climate change without disrupting indigenous cultures? How do we sustain ancient intellect?

While no immediate solutions surface, this age old concern remains essential to the sciences. Fowler begins this discussion by introducing the topic of crop diversity as a genetic resource in itself, noting Jack Harlan as the original mind behind this thought. Understanding crop diversity as a genetic resource ensures the idea that idiosyncratic symptoms of climate change may bring to light a potential sustainable application. Fowler’s presentation encapsulates the theory that “today’s best variety is tomorrow’s lunch if you’re a pest or a disease”³.

**Considering Gender**

It’s not a secret that gender discrepancy remains prominent throughout most of the globe. Women are often economically disadvantaged due to their traditional roles (which differ from traditional knowledge in the respect that knowledge incorporates agricultural practices whereas, cultural norms encompass gender roles that may, but do not always, hinder success for women and non-binary genders). In many cultures, women are restricted to child care and household chores. By providing them with the opportunity to improve their economic well-being through crop management and other farming tasks, women are able to develop a steady income, which ultimately results in a more successful economy. Programs, such as that of David Ader of the University of Tennessee, propose involving women in insect-rearing as a sustainable chicken feed. Invoking the potential of the woman’s role in the fight for a sustainable future will render increased efforts for self-reliant agriculture, contributing to a socioeconomically viable transition to resilient agriculture.

**The Future Leader Forum**

The AIARD fellowship is a program focused on celebrating the work of all scholars (undergraduate through Ph.D.), spotlighting their accomplishments and linking them with companies striving for similar goals. Students are given the opportunity to network in places like the USDA, promote their projects through “lightning talks” and may ultimately be chosen for the $5,000 scholarship. AIARD remains focused on the power of young people in the sustainability game and their passion is mirrored in the prolific praise these fellows

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receive, they are treated with just as much respect as those with thirty years of experience. Future Leaders Scholars are highly regarded at the convention, their work is taken seriously and companies working in similar fields attend with the intention of seeking applications in “real world” development.

These few pages merely discuss highlights of the knowledge that the conference brought forth. With the opportunity to attend the conference came the obligation to share these impressive academic feats with my university. Throughout my college career, I have focused on integrating indigenous practices into our environmental way of thinking; this meeting renewed my determination while also providing new paradigms for consideration in my endeavors. With that, I strongly encourage the involvement of Montana State administrators, colleges and their students in the Association of International Agriculture and Rural Development as a swell of knowledge stemming from differing backgrounds and disciplines will only further sustainability efforts, allegiances and cooperation.