



May 17, 2018

Dear Fellow Conservationist,

Thank you for joining us as we meet with fellow conservationists, food producers, scientists, educators, farmers, policy makers, and many other interested members of our community. We are united by a sincere interest in working together to take on the challenge of producing more food responsibly for a growing population, while also providing energy in a sustainable way to meet the growing demands of a growing global community. These seemingly opposing requirements sometimes have us using land in ways that serve a single purpose with unintended consequences - and little consideration to the land, the environment and society have strained our rivers, our soil, and our potential to sustainably produce both food and energy in a way that preserves our way of life as we know it.

The thing that inspired me the most about conservationist Aldo Leopold was that he never condemned society or agriculture or farmers for doing what they did - even in the dust bowl era. He chose instead to illustrate the facts in a very humanistic and artistic way that really touched my soul to try to do something. I have built upon Leopold's approach by combining the altruistic perseveration of wilderness and finding a way to define its value in terms of economic benefits. No one that has never immersed themselves in a true wilderness experience will ever be able to put a monetary value on how that recharges your soul and stimulates your mind.

No one that has never immersed themselves in a true wilderness experience, will ever be able to put a monetary value on how that recharges your soul and stimulates your mind.

John Muir and Theodore Roosevelt knew the value of such experiences. John would suffocate in his business existence until he would venture out for months and experience the fragile mortality of being human; and Teddy would become engrossed in month-long hunts that would connect them with those altruistic values. However, they also knew how our mountains and streams were the lifeblood of our water systems, and probably never imagined we would be farming up to the rivers edges, building great levies to eliminate their accumulation and filtration systems to produce food, energy, and transportation. We are now just starting to appreciate and understand these God-given assets and the vital services to humankind that they provide.

My vision to restore 30 million acres of native grassland and forbs around our streams, rivers, and critical uplands relies on three dimensions to provide ecological services, wildlife habitat and energy biomass. Unless that biomass provides all three dimensions, I just consider it more of the same approach to solving our energy needs without considering the needs of the system as a whole. If a biomass does not provide or improve ecological services and wildlife habitat, we will just continue down this path of trying to develop a monoculture that profits one dimension while not symbiotically serving the other two. We have many cultivars that produce a tremendous amount of energy potential but do they also provide ecological services and wildlife habitat. One dimension is not wholly effective without the other two.



I recently received a notification from Susan Rupp on an article she worked on that provided the value of hunting in our country. Johnny Morris is promoting a \$1.2 Billion tax on various sporting goods to help clean our water and perpetuate our hunting landscape because he knows what would happen to his company without clean water and habitat that supports both consumptive and non -consumptive use of our wildlife. That is a small investment on an industry that provides jobs, recreation, wildlife, and an essential, worthwhile standard of living that is critical for a society to prosper.

That is a small investment on an industry that provides jobs, recreation, wildlife, and an essential, worthwhile standard of living that is critical for a society to prosper.

During my five-year effort with the Smithfield project I have personally spent \$50 million to provide solutions and turn problems into opportunities for Smithfield to keep their facilities in Northern Missouri operating in an environmentally sound way while saving them operational costs and benefitting the region with a responsible and sustainable way to produce food. The technology and integration expertise we provided did not exist 10 years ago and was frankly still in its nascent stages in Europe and several other places around the world. The California Renewable Gas market, which provides a 10 X return over natural gas, has stimulated the financial investments

needed to commercialize and prove out the technology of Anaerobic Digestion and renewable natural gas. This market can provide an alternative to diesel and gasoline that is significantly friendlier to the environment - all the while solving problems of what to do with nutrients from animal waste that cannot be economically moved very far from the source and typically land applied in the surrounding farms.

Using cover crops and renewable native grasslands can provide a reliable source of biomass while also solving many ecological problems. Designing these systems at large scale by superimposing the river ways and creeks over the areas of high concentrations of animal production and current access to gas pipelines is the first step. Providing farmers with incentives to grow cover crops and reconstructed native grassland to augment the manure for the production of renewable gas will make them economically viable and environmentally the preferred and best practice solution.

Because we took the risk to demonstrate these values to Smithfield, they have offered up funds to restore 1,000 acres of their land to natives to test out vision of using natives to limit the nutrient run off, mitigate erosion around their critical lakes used to provide water for their hogs, and also cooperate with Iowa State, EDF and TNC on pollinator plots and monitoring. We have agreed to use cover crops and reconstructed native grassland to develop an economic model that tests my vision of using these as the best source of biomass - not because they have the highest yields per acre - but because overall they provide the best return to the farmer for the use of that land and to society and wildlife.

We need assistance in defining what our floods are costing us in human misery, lost property and insurance, lost time from work, and just plain human dignity of being struck into communal living. I know the pain of that because, as a young boy, I lived in several displaced immigration camps in Europe and I can tell you it is something that molds your very fiber of how you think and what you believe in. We need to consider the cost of building bigger and more elaborate water purification systems in our cities and the cost of health because of our children and grandchildren consuming high concentrations of nutrients, pesticides, and chemicals entering our streams and rivers. We need to consider what the cost of hypoxia is to the diversity of life in our rivers and streams and at what point do we reach a tipping point of no



return. I have seen the devastating effects of unmanaged growth in industry and agriculture in parts Asia, Africa, and South America and it is this vision that spurs me to try to do something here at home before it is too late.

My extensive 40 years of experience in designing and building some of the most complex industrial systems around the world has taught me that there are no simple solutions to complex issues but rather an integrated approach of listening to all of the stakeholders and coming up with a holistic solution that takes all of the dimensions into consideration. This is a complex integration of technology and natural systems working together for a balanced and holistic solution that must meet all three dimensions of my VENN. I always ask myself Aldo’s challenge, “Does it tend to preserve the integrity, stability and beauty of the biome?” and if not I must keep searching for a better solution. In my St. Louis U 1967 Division 1 national soccer championship team, we had a motto “alone you can go fast but together you can go far.” I believe that this group can go far in solving the challenges we face and lead the way to holistic solutions for a truly sustainable way to produce food responsibly, while preserving our natural resources for this and many generations to come.

I always ask myself Aldo’s challenge, “Does it tend to preserve the integrity, stability and beauty of the biome?” and if not I must keep searching for a better solution.

Rudi Roeslein
Roeslein Alternative Energy

