

Henri Bariselle
St. Stephen's Episcopal School
Austin, Texas, United States of America
Yemen, Animal Agriculture

Yemen: Ending Crisis Levels of World Hunger by Promoting and Implementing the Raising of Quail as a Superior and Efficient Nutrient Source

Mazlow's Hierarchy of Needs states that the bare necessities of life are: food, water and housing. If Yemen cannot provide its people with these necessities, how could they ever survive? An article stated that "more than 20 million people in Yemen are experiencing food insecurity; 10 million of them are at risk of famine," 20 million is almost two-thirds of the entire population (Human Rights Watch, n.d.). The food insecurity must be stopped and if Yemen cannot fix this problem they may never be able to recover. However, I have a solution: quails. Quails are incredibly adaptive, can be easily compacted into small spaces, and there is a very short time for slaughter and egg production. By advancing the use of quails in Yemen, available for everyone, rural farmers and urban citizens, will progress their way out of famine.

Yemen is a republic with a bicameral legislature and before Yemen entered a devastating civil war, still occurring today, it was a strong government (Wenner, 2021). While the control power in Yemen is in a bit of a grey area, the U.S. The Department of State recognizes Yemen's government as: "An elected president, an elected 301-seat House of Representatives, and an appointed 111-member Shura Council share power," with the president as "head of state" and the prime minister as the "head of government" (U.S. Department of State, n.d.).

With a population of almost 30,000,000 people, 35% urban and 65% rural, it is assumed that the majority of people in those rural areas would have a self-sustainable life due to the option of farming. The problem, however, is the climate (Worldometer, n.d.). Yemen is defined as a "desert country," and while some crops do grow, such as Yemen's major exports of Coffee and Khat, it is not as easy as other soil-rich countries (Lorenzen, 2019). Yemen is known to be a subtropical dry region, with a parching desert climate with short amounts of annual rainfall (Weather Online, n.d.). While the land in Yemen consists of about 528,000 square kilometers, only 3% of that is arable land (15,840 square kilometers) but the average farm size stretches to about 1.1 ha (LANDLINKS, 2010; Zappacosta, 2009). Since plant-based farming may not be the most adequate option, why not meat production?

A typical family in Yemen is certainly unique compared to American standards but common amongst most Middle Eastern countries. The average family size is about 7, three members per room, and the daily life in the household being very patriarchal (Taylor). The oldest male of the family is in charge of all significant decisions in the household, and while women in urban areas contribute to the secondary role of household management and raising children, rural women typically have to work on the farm alongside their family members (Wenner, 2021).

Yemeni housing, while not as strong as the family, are generally very frail. Studies from the Nations Encyclopedia claimed Yemeni housing that "about one-fourth of urban housing units are huts, tents, or other makeshift structures. In the hot coastal region, most dwellings, except those of the ruling classes, are straw huts" (Nations Encyclopedia, n.d.).

A typical diet in Yemen consists of bread and tea, at least for breakfast and dinner, but they have a customary dish for Middle Eastern countries for lunch called Asida which consists of wheat flour, honey, and butter. Since 35% of the population are not in rural areas and cannot grow or raise their own food, they have to depend on the imports of Yemen which, at times, could become a problem since the Saudi-led coalition has put strong restraints on the imports and exports of Yemen (Human Rights Watch, 2017). However, when Yemen does get their imported food, the food mainly comes through the seaports of Hodeidah, Aden, and others (Dahan, 2017). The methods of their cooking typically include boiling, grilling, and frying (Fandom, n.d.). With this information, Yemen is capable of cooking meat that could not only fit into their daily lives, but it could also provide a business through quails as their source of meat, making them a worthy investment with a new source of household income. An article described Yemeni grilling “applied to meats, like the Arabian style of kebabs, chopped or cubic meat pieces for salads and meat dishes as main courses” (Fandom, n.d.).

Agriculture and trade are the two principal monopolies of jobs in Yemen. About 30% of all Yemeni jobs relate to agriculture and 25% depend on trade, retail, and wholesale (Sana'a Center for Strategic Studies, 2018). Yemen, being the poorest country in the Middle East, has an average salary of \$1,500 dollars (salaryexplorer). In comparison with other nearby countries, the highest average salary in the Middle East is about \$40,000 (UAE) and Jordan’s average salary is about \$25,000 (Arabiya, 2017). Knowing this, Yemeni people do not make a strong enough salary to support their family but raising their own food would cut the spendings for food and could become a future business.

Education in Yemen is not perfect, but they do provide some learning for children. Education is free from ages 6 to 14 and despite the inhumanitarian aspects of Yemen, a research determined that “about 90% of Yemen's schools are open,” and Yemen’s government is trying to pursue education for over “5 million children and youth,” them being 73% of the population of students (Study Country, n.d.; Global Partnership for Education, n.d.). However, due to civil unrest and periodic attacks in Yemen, education has become hard to regulate, and while it is required from ages 6 to 14, only 46% of eligible children actually attended school (Study Country, n.d.). Health care is not as strong as its education. According to UN OCHA, they estimated “19.7 million people in Yemen lack access to basic healthcare,” which is devastating due to the fact that only “51% of the health facilities are functioning” (Lorenzen, 2019). Yemen’s health infrastructure is beginning to collapse. Disease, famine, war, are just a few of what most Yemeni citizens have to experience and being one of the poorest countries in the world, they cannot be supported by others so they now must support themselves.

Access to clean water is not common for most Yemeni citizens. A research from the UNDP described the water situation in Yemen as: “Sana’a, could run out of water within the next 10 years. In the meantime, only 22 per cent of rural and 46 per cent of urban populations are connected to even partially functioning public water networks. Less than 55 percent of the population has access to safe drinking water” (United Nations Development Programme, n.d.). Electricity, as well, is not robust in Yemen. The majority of Yemeni citizens do not have access to electricity and while the country claims that more generating facilities will be formed, it is not certain due to the unpredictable status in Yemen (U.S. Energy Information Administration, 2020). This could be a problem if families wanted to incubate their quail eggs which is why they need to be supplied with a good balance of male and female quails so that the birds could hatch their eggs themselves.

Traveling by road in Yemen is an unpredictable experience. Among the 71,000 kilometer roadways, only 6,200 kilometer roads are actually paved, but overall are very unsafe for travel and trade because of constant civil unrest and neglected repair (Country Reports, n.d.). This might be a challenge to implement the quail raising solution if the transportation might be disrupted.

Personal and food security are two of the most vital and yet greatest challenges in Yemen. Years of ongoing war and civil unrest lead to the claiming of almost 130,000 lives and a rubble economy (DW Made for Minds, 2021). The biggest barriers for families to prevail are the dangers that constrict the country. Land mines are a great factor endangering the welfare of families. Whether on the farmland, roads, hospitals, or villages, land mines have been known to incredibly affect families and farmers due to their water, livestock, and crops being affected (Lee, 2020). A study from Human Rights Watch has determined that landmines have killed “at least 140 civilians, including 19 children...in just the Hodeidah and Taizz governorates” (Human Rights Watch, n.d.).

Yemen’s access to food is a challenging matter. As stated earlier, Yemen has to fight through the greatest struggles no one should ever experience, that is not even accounting the mental struggles these citizens are struggling with. The thought of a sibling or best friend leaving for a day and never coming back, witnessing abusiveness from others, or just watching a building burn must break the spirit of these families. However, like all problems, they can be fixed, and with endurance and a little bit of determination, we can fix the food crisis in Yemen, and hopefully this could jump start the beginning of reform and bring Yemen back to prosperity.

Animal agriculture, specifically poultry, is a vital part of Yemeni diet. However, due to lack of water and governmental financial support, agriculture production has been in a decline like no other year in Yemen (Conflict and Environment Observatory, 2020). The main problem is the importing issue. As said earlier, due to the heavy restrictions the Saudi-led Coalition has placed against Yemen, it has become very difficult to get frozen poultry meat, and even if Yemeni civilians could receive them, random blackouts constrict the country and are highly unpredictable thus spoiling most of the food (THE CENTER FOR CLIMATE & SECURITY, n.d.). However, by raising their own quail, Yemeni citizens would have the option when they would like to eat the bird and not have to worry about freezing food which could also save the cost of electricity. Quail are exceptional in this case because as chickens age, their meat becomes of lesser quality while quails keep their young, supple meat even as they age.

However, if we want this plan to work, we have to do it now. Research shows that the trends of Yemen’s famine are not improving and will only get worse if there is no change (Bhaduri, 2020). Unless the government can repair itself and end the civil unrest, food security will continue to deteriorate and more people will be in despair for more food than ever before. This is why home raised food could be a possible solution. Raising quail is the perfect option for the Yemeni people because quail are very simple and they do not require a lot of time to raise. While a regular chicken requires at least 15 square feet of living space, quail only need 0.5 square feet, meaning a family could have one chicken or 30 quail (The Happy Chicken Coop, 2021; Bordessa, 2019). In times like these, Yemeni citizens, especially the urban dwellers, may have smaller homes and are filled with family members so they need a place to have home grown food without inflicting their daily lives. This is the reason why quail may solve this conundrum.

Raising poultry impacts both rural and urban areas. In rural areas, quail raising could have a definite impact because they are easier to raise there. As the desert climate in Yemen reaches high temperatures

and dry air, it limits the amount of crops and livestock that can be raised. However, quail are hardy birds and can endure most hot summers and even cold winters by just adding a towel on top of their cage to prevent drafts. However, in urban areas, quail impact them even greater. As said earlier, they can be stored in compact areas and another attribute of quails is that they are very quiet. While some breeds can be loud, most are generally very quiet so if they are in an apartment, by having them, the owners will not have to worry about disturbing neighbors and yet still have fresh eggs in the morning.

Raising quail may greatly benefit marginalized populations such as minorities and refugees because as said earlier, they need limited space, are quiet, but most importantly, they are cheap. While obtaining proper food for quails might be limited for these populations, leaving leftover vegetables and fruit can be enough for them to thrive. An article describing quails said that they “generally require very less amount of food as compared to other domestic poultry birds. And feeding quails won't add massive costs to your quail farming business planning. Quails will be good and healthy and can thrive on a special mixture of corn, wheat etc” (Roy's Farm, 2020). Additional resources to provide for quails will not be a problem as leftover food or even scraps could supply these birds forever. Furthermore, in rural areas, where crop growing is available, producing homemade feed is available and would not be a costly investment.

My solution is to popularize the use of quail raising for both rural and urban areas in Yemen. Quail are a very underrated poultry species and are superior to chickens for Yemeni citizens because of their incredible adaptability, hardiness, ability to be compacted into small spaces, and are a less costly investment. My solution, implementing the raising of quail cannot save the country from civil unrest and the devastating economic fallout, but if my solution succeeded, and nearly every family would have a set of quail, the percent of famine in Yemen would significantly drop which they could then transfer their focus on remedying their society and avoid the continued food insecurity.

The plan to implement quails in Yemen society is through working with the FAO (Food and Agriculture Organization of the United Nations), the MAI (Ministry of Agriculture and Irrigation), and with MoPIC (Ministry of Planning and International Cooperation). Cooperating with these organizations would help manage the foundation of this solution and to not only promote the use of quail in Yemen as a sustainable source of food, but aid quail raising in every home. This project could be funded through charitable donations from big name farm companies such as Quail International, Manchester International, Texas Quail Farms, and many more. However, if these companies are unable to provide an adequate amount of donations for the cause, our next step would be to partner with charitable agriculture organizations across the countries such as Farmers to Grow, Food Chain Work Alliance, and others. With these organizations, we could set up posts across the states where we would host events to promote the aid for Yemen.

The roles these organizations have in implementing the solution is mainly having access to run this operation in Yemen. It is impossible for a group of people to travel to Yemen and give out quail, as these organizations must partner with U.S. and Yemen agriculture foundations so that they may figure out a way to adequately implement this solution. These organizations have to work together to find a source of funds, ways to transport this solution to Yemen, how to promote it, and more.

This plan would take place in a different continent of the world, where the culture is very different from America, so if this plan is to succeed, Yemeni cultural norms need to be recognized when discussing with important leaders of Yemen and the people. Before conducting any type of international relations, our

organization must attend a briefing that enlightens our knowledge of the culture, norms, and etiquette that must be adhered to in order to prevent any misunderstandings or offenses.

This project will be sustainable because this is devised to be a long-term project. If it succeeds, most families in Yemen will have a set of 4-6 quails, with a healthy ratio between female and male (3-1), and the owners would only be required to feed and water them for about 5 weeks until when they are able to be eaten. Furthermore, they could wait for 7 weeks and begin to receive eggs each day to which they can eat or have their birds hatch the fertile eggs and obtain more quails. As it takes approximately three quail eggs to equal one chicken egg, if these families have 6 female quail, that would give them two chicken eggs a day, and even though that is not a massive amount, they could still be provided with even more food and an excellent protein source than they would have before.

Quail are one of the most underrated poultry animals even though they are incredibly adaptive, easy to raise in compact spaces, and quick to lay eggs or be slaughtered. In addition, their eggs are free from salmonella and with the egg and meat being superior in nutrient value (The Nibble, 2017). By advancing the use of quail in Yemen, everyone, not just rural farmers, would have the opportunity to have fresh meat and eggs of their choosing, and the birds would barely inconvenience the owners with their quiet sounds and are able to be raised in small spaces. If this project would become reality, the people of Yemen would be afforded more prime sustenance which would provide the necessary support to arise from the devastating humanitarian crisis of famine and society would nutritionally prosper in the future.

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