**Mading Nhial Wal**

**Assignments 3**

**I am going to send you my third assignment again as you recommended to me to redo it, Thanks very much for being patient with me. If I finished all the answers so that you will also try to make correction on it, while, am going to go to a place where I will be having a very limited access to the internet. I send this to you to let you know that it’s not right time to send it. It should be at the end of December. Hope you will bear with me if I did not follow the right procedure to submit it to you. Thanks you very much for your understanding.**

**I will be happy if you will let me know where can improve myself and what I did right.**

**Here you go below**

1. Define the following terms:

(a) Policy

* A set of policies are [principles](http://www.businessdictionary.com/definition/principles.html), rules, and guidelines formulated or adopted by an [organization](http://www.businessdictionary.com/definition/organization.html) to reach its long-term goals and typically published in a [booklet](http://www.businessdictionary.com/definition/booklet.html) or other [form](http://www.businessdictionary.com/definition/form.html) that is widely accessible.
* Policies and procedures are designed to [influence](http://www.businessdictionary.com/definition/influence.html) and determine all major decisions and actions, and all activities take place within the boundaries set by them.
* Procedures are the specific methods [employed](http://www.businessdictionary.com/definition/employed.html) to express policies in [action](http://www.businessdictionary.com/definition/action.html) in day-to-day [operations](http://www.businessdictionary.com/definition/operations.html) of the organization.
* Together, policies and procedures ensure that a point of view [held](http://www.businessdictionary.com/definition/held.html) by the governing body of an organization is translated into steps that [result](http://www.businessdictionary.com/definition/result.html) in an outcome compatible with that view.

(b) Food balance sheet

* The food produced and net changes in private stocks and government reserves.
* Net changes refer to the level at the beginning of the year minus the level at the end of the year.
* The food available for human consumption is the total availability minus losses and food assigned to other uses.

2. Discuss four limitations of food aid

## Discussion

* Emergency food services are a potentially crucial resource for the large numbers of food-insecure medically ill.[4](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3665978/#CR4) However, they are too often inaccessible or have limited food choices. Almost a quarter of the pantries we studied were unreachable by phone, almost half had incorrect hours of service or location listed on the Food Bank website, and most had limited weekly hours. Some pantries were also faced with temporary or permanent closures because of recent budget cuts.[13](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3665978/#CR13) The time constraints imposed by multiple appointments per week for cancer treatment[14](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3665978/#CR14) create a likely barrier when coupled with the restricted food distribution offered by most pantries. Requirements at some pantries for government-issued identification could potentially discourage undocumented immigrants.

.

* The increased nutritional requirements of cancer patients coupled with their often decreased appetites necessitate individualized food provision services. Many pantries, however, were unable to provide food choice, or adequate fresh fruits, vegetables, and dairy.[16](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3665978/#CR16),[17](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3665978/" \l "CR17) Food pantries were also unable to offer appealing, varied protein sources.
* Limitations of this study include the absence of patients’ perceptions related to food resources. Further study on patient access to emergency food resources in underserved communities is needed.
* This study describes the limitations of food pantries as ongoing sources of food support for our patients. Underserved, immigrant and minority cancer patients are especially vulnerable and require special assistance to ensure their nutritional needs are met. Programs should be developed to provide access to nutritious, palatable foods that are medically and culturally appropriate.

3. Use of genetically modified foods (GMOs) has been a controversial issue. Discuss the role of GMOs on food and nutrition security.

So far, there’s no good evidence that the foods on the market containing GMOs are any less safe than regular foods.

**The mainstream view on safety:** At this point, billions of people around the world have been eating GM foods for decades without any noticeable ill effects. And [**numerous**](http://www.nap.edu/openbook.php?record_id=10977&page=R1) [**scientific studies**](http://jrs.sagepub.com/content/101/6/290.full) [**have concluded**](http://ec.europa.eu/research/biosociety/pdf/a_decade_of_eu-funded_gmo_research.pdf) that the GM crops currently on the market pose no more of a health risk than conventional crops.

Here’s what the American Association for the Advancement of Science (AAAS) [**said**](http://www.aaas.org/news/releases/2012/media/AAAS_GM_statement.pdf) in 2012: “The science is quite clear: crop improvement by the modern molecular techniques of biotechnology is safe.”

Likewise, in 2010, the European Commission [**reviewed a decade’s worth of independent research**](http://ec.europa.eu/research/biosociety/pdf/a_decade_of_eu-funded_gmo_research.pdf) and concluded, “GMOs are not per se more risky than e.g. conventional plant breeding technologies.”

**What that means:** Traditional breeding techniques have long altered the genes of plants and animals. That’s a messy process. The risk of random mutations and unexpected outcomes has always been present. (To take one example, crop scientists [**have long used radiation**](http://en.wikipedia.org/wiki/Mutation_breeding) on seeds to induce mutations and improve the odds of getting desired traits.)

So what most scientific advisory panels have concluded is that the risk of using genetic engineering to alter genes isn’t any riskier than conventional breeding when it comes to food safety.

**The dissenters:** A minority of scientists still insist, however, that more research is needed before GM foods can be definitively considered safe. After all, genetic engineering isn’t exactly like traditional breeding, and it may have downstream effects scientists haven’t fully studied.

For example, in a dissent to that AAAS statement, 21 researchers [**argued**](http://www.environmentalhealthnews.org/ehs/news/2012/yes-labels-on-gm-foods) that increased herbicide use — which can occur with crops engineered to be resistant to Roundup — might have health effects we don’t yet know about. (That said, many “conventional” crops also require plenty of pesticides. This varies from crop to crop, and simply calling something “GMO” doesn’t necessarily tell you all you need to know.)

**Allergies:** Another common question has to do with allergies. Transplanting DNA from other organisms into crops has the potential to introduce new allergens into foods. Companies [**tend to test**](http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3091128) for specific allergens, but critics [**often argue**](http://grist.org/food/genetically-engineered-food-allergic-to-regulations/) that it’s impossible to test for all unknown allergens.

One counterpoint, however, is that many traditional foods also carry some risk of allergies, including foods imported from other countries, which receive far less screening. (See [**here for more**](http://grist.org/food/genetically-engineered-food-allergic-to-regulations/) on this debate.)

Let’s imagine that researchers wanted to genetically engineer corn to make it resistant to pests. Here’s a simplified overview of what they would do:

**1)** First, the scientists need to find an organism that contains the trait they would like their corn to have. In our example, they’ve identified a protein in [**Bt soil bacteria**](http://en.wikipedia.org/wiki/Bacillus_thuringiensis) that can kill pests like rootworm but isn’t harmful to mammals. (Farmers [**have been spraying**](http://onlinelibrary.wiley.com/doi/10.1111/j.1467-7652.2011.00595.x/full) their fields with Bt for decades, but it can wash away easily.)

**2)** They then extract the DNA from the soil bacteria. Here’s [**a list of ways**](http://en.wikipedia.org/wiki/DNA_extraction) to extract DNA.

**3)** Now, the scientists don’t want the entire bacterial genome — they just want the specific gene that controls production of the pest-killing Bt protein. So they use a process called [**gene cloning**](http://en.wikipedia.org/wiki/Molecular_cloning) to isolate and make many copies of the Bt gene.

**4)** Next, the scientists may want to modify the Bt gene. This is done in a lab machine by tearing the gene apart with enzymes and repairing certain regions. For example, the scientists might want to design the Bt gene so that *only* the green leaves of corn produce the pest-killing protein.

**5)** The newly modified “transgene” is now ready to be inserted into corn DNA. There are a variety of ways to do this. One method is to use [**agrobacterium**](http://en.wikipedia.org/wiki/Agrobacterium), a type of bacteria that can naturally transfer the transgene to the nucleus of the plant cells. There’s also the **[”gene gun,”](http://en.wikipedia.org/wiki/Gene_gun)** which essentially shoots very tiny gold particles coated with copies of the transgene into the plant cells. This process often has to be repeated hundreds of times before the transgene is successfully integrated into the corn’s DNA.

**6)** If and when the Bt gene has been successfully inserted into the corn cells, and a new plant with the trait is grown from those cells, the genetic engineering is done. The new “transgenic” corn is now handed over to crop breeders so they can breed it with other corn in more traditional ways to select for other desirable traits.

Genetically modified food (or GM food) is food produced from plants or animals whose DNA has been altered through genetic engineering. These genetically modified organisms are often called GMOs for short.

Genetic engineering is the process of [**manipulating an organism’s genes directly**](http://www.vox.com/cards/genetically-modified-foods/how-do-you-genetically-modify-food-exactly) — by, for example, transplanting DNA from other organisms. It’s different from the conventional method of selectively breeding plants and animals to get desired traits. Genetically modified foods have been on the US market since 1994, ever since the introduction of [**”Flavr Savr” tomatoes**](http://californiaagriculture.ucanr.edu/landingpage.cfm?article=ca.v054n04p6&fulltext=yes) that had been engineered to ripen more slowly.

There’s no one type of genetically modified organism — genetic engineering is a tool that can be used [**for a variety of purposes**](http://www.vox.com/cards/genetically-modified-foods/why-would-anyone-want-to-make-gmo-food). Most of the corn and soy grown in the United States has been genetically modified to be resistant to herbicides, so that it’s easier to spray fields with weed killer. Other crops have been modified to withstand pests. But genetic engineering could conceivably help create crops that can survive drought, or help produce food that’s more nutritious.

There’s [**a broad scientific consensus**](http://www.vox.com/cards/genetically-modified-foods/are-gmo-foods-safe-for-your-health) that the genetically modified foods currently on the market pose no more of a health risk than regular foods. Still, GM foods are controversial. Opponents argue that genetically modified crops can lead to things like the [**increased use of chemical herbicides**](http://www.vox.com/cards/genetically-modified-foods/are-gmo-crops-good-or-bad-for-the-environment), or cite problems with the fact that GMOs are owned and [**patented by large companies**](http://www.vox.com/cards/genetically-modified-foods/can-genetically-modified-foods-be-patented). That has led to debates over whether GMOs should be [**labeled**](http://www.vox.com/cards/genetically-modified-foods/whats-the-debate-over-labeling-gmo-foods) or [**tightly regulated**](http://www.vox.com/cards/genetically-modified-foods/how-are-genetically-modified-foods-regulated).

4. Discuss the common coping strategies adopted by household in your community when there is crop failure.

* In South Sudan, if it happens that there is crop failure some people have to go to their relatives to get food from them and ask for assistance for any kind they may offer to give.
* Some households have to sell some cows, goat and sheep of which they have in their family to cater for their family for food consumptions
* Some communities have to go to swamps to go for fishing and help their own food form fish either dry fish or fresh fish.
* Households across the affected area are applying various coping mechanisms to address the sudden loss of agricultural production, jobs and income. Unfortunately, many of these strategies are negative and some of them are irreversible, potentially causing indelible damage on a household and individuals. In this assessment, households were asked to express if they adopted any strategies to adjust their food consumption as a result of the typhoon. The most frequently applied coping response was reliance upon less preferred, less expensive food (Table 24). Many families also reported reducing the number of meals, limiting expenditures on other living costs, accepting food from friends and relatives. The worse time of year in South Sudan was when the fighting erupted in 2013 many household have no food to eat and many people lost their jobs and cattle have been looted and raided, goats and sheep have taken by armed men. Many people have ended up UNMISS POC protection of civilian site in juba.
* Analysis reveals that ‘reducing number of meals’, ‘limiting meal size’, ‘borrowing food’ and ‘relying on less preferred food’ were the commonly applied coping mechanisms. This also clearly indicates that some households are attaining acceptable food consumption level only by borrowing food from others. Reducing the number of meals and/or limiting the meal portion may also cause under nutrition, particularly among children and pregnant and lactating women.
* Households in POC protection of civilian site in Juba many people have to depends on UNMISS food rations in which all the civilian who ran to UNMISS have food ration every Month provided by UNMISS. In other parts of South Sudan WFP is currently provided food to the people who have a shortage of food due to the drought, poor harvest and flooding

5. Explore the technological trends that can increase individuals’ vulnerability to food insecurity.

* Vulnerability happened when a household lost their food income or loss of job or cattle. When the family cannot afford to get food to the family.
* Either a failure of crops or disaster like no rain or famine.
* Vulnerability describes the probability of an individual to become food insecure. It is a function of a risk (e.g. sickness, drought, armed conflict) and the ability to cope with this risk (e.g. insurance, diversified income, savings).
* Vulnerability thus combines exposure to one or more risk factors, and the capacity to withstand the effects of that risk or those risks.
* People or households that have little or no capacity to safeguard their access to food, even when confronted with a minimal risk factor, are considered vulnerable.
* Although vulnerability in certain specificities (e.g. malnutrition, exploitation, abduction and recruitment into fighting forces, sexual violence and lack of opportunity to participate in decision-making) can also apply to the wider population, the most harmful impact is felt by children and young people.
* If the food shortage is becoming too scarce the family have to adjust and organize their meal depending on the food availability in the family. Maybe they can eat once a day or twice a day.