**Stage 2: Research**

**Due Beginning of class May 23th**

**Fill this out for each solution and then put info on poster**

What is your problem (at least 2 paragraph)? More detail the better

One of the biggest issues facing Sub-Saharan Africa is the lack of enough food. According to UNICEF, 80 million people in Africa and the Middle East are threatened by lack of adequate food and famine. More than half of these people are children. Some of the countries most affected are DRC, Ethiopia, Chad, South Sudan, and Kenya.

The major ways these famines are caused are through drought, war, poverty, and climate change. Access to clean drinking water is also a huge issue. 40% of South Sudan’s population is on the verge of starving. For many Africans, starvation isn’t too far away.

Current limitations, why has it not been solved already?

Weak infrastructure to impoverished areas limits transport. Four-wheel drive is often required to reach most places, limiting transport of supplies. Theft of supplies by rebels and warlords. An estimated 5000 sacks of rice and 750 assorted packages have been reported missing in Yemen alone.

Proposed solution. More detail the better

Research in making “clean meat” (the process of extracting animal cells to grow meat outside the animal and avoid killing it) more affordable and more widely available to curb the lack of food.

Proposed solution. More detail the better

Mass reverse osmosis to deliver clean drinking water. This is done by forcing water through a semipermeable membrane. This would create a more sustainable solution to the water issue.

Proposed solution. More detail the better

Use gene-splicing to make crops such as yams and corn resistant to droughts.

We would use CRISPR technology in order to achieve this. Droughts and lack of usable water is a big issue facing agriculture in these areas.

Mentor, why did you choose them, their credentials and contact info.

Professor TJ Lobl, we chose him as he is a professor in the sciences meaning he would be able to give us practical input, his credentials are he is a professor at the University of Southern California. His contact info is [tjlobl@att.com](mailto:tjlobl@att.com).

Citations

[Starving children](https://www.unicefusa.org/stories/famine-threatens-25-million-children-africa-and-middle-east/32005)

[Supply Theft](https://www.apnews.com/bcf4e7595b554029bcd372cb129c49ab)

[Poor Infrastructure](https://web.archive.org/web/20130622005753/http://travel.state.gov/travel/cis_pa_tw/cis/cis_1061.html#traffic_safety)

<https://www.theguardian.com/global-development/2013/jun/08/eight-ways-solve-world-hunger>

<https://cleanmeat.org/>