



**School** Asia Pacific International School

**City/Country** Seoul / Korea

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**Title of Movie** Ending Hunger with One Jelly Drop  
／ゼリーカプセルで飢餓を止める

**Topic** Nutritious Konjac Jelly Capsules / 栄養たっぷりコンニャクゼリーカプセル

### Current Issue of Topic / テーマが抱える課題

For a long time, food and hunger problems have been controversial issues that have compelled our society to yield a definitive solution. According to statistics, 1 in 9 individuals around the world suffer from hunger though Earth provides enough food to sustain 7.5 billion people. However, recent efforts on the issue has resulted in a decrease of 27% of hunger in the world. There are four major factors that result in world hunger: poverty, food shortages, war or conflict, and climate change. Sometimes the worst problem regarding food and hunger issues is that poverty is not only equivalent to starvation but, even more, directly synonymous to unhealthy food. For instance, while one needs to nourish themselves with nutrients, instead, one would be eating unhealthy hamburgers because that is the only food that they could afford. This also applies to those who do not even have the money to purchase unhealthy food, such as those in Africa; they would not be able to eat food and suffer from starvation, thus resulting in malnutrition. Considering both short-term and long-term consequences, a vicious cycle between poverty and malnutrition is to perpetuate. Equally important is issues regarding food shortages. In developing countries, there are periods prior to harvest called the "hungry season." In this period, a family must rely on crops harvested from the previous harvest, which are barely left at that point of the year. This means that families would be skipping meals numerous times until they make it to the harvest season. A further problem regarding food and hunger issues is the war and conflict that particularly prevail in the middle east and Africa. For example, the ongoing civil war in South Sudan has resulted in mass displacement as well as deserted fields. As a result, plummeting harvest and soaring inflation rates has left 3.5 million individuals bereft and hungry. The last factor that contributes to hunger and food problems in climate change. Because either droughts or floods are unpredictable but can easily result in the destruction of harvests, many individuals have been suffering from hunger. As such, we wanted to generate a solution that would relieve hunger while considering the four factors stated above.

長い間、食糧問題と飢餓問題は物議を醸している問題であり、私たちの社会に決定的な解決策をもたらすことを強いてきました。世界の飢餓につながる4つの主な要因があります。

1. 貧困 飢餓につながるだけでなく、体によくない食べ物をとっていることによるため、貧困を抜け出さないことには、この状態が続くことになる。
2. 食料不足 発展途上国では作物のとれない時期があり、その期間において人々は飢餓の問題に直面することとなる。
3. 戦争や紛争 戦争や紛争はインフレを引き起こし、それによって必要最低限の食糧を手に入れることが難しくなる。
4. 気候変動 食物を生産することが難しくなり、その期間においても飢餓の問題に直面してしまう。

### Solution of Issue / 解決策

As such, we wanted to generate a solution that would relieve hunger while considering the four factors stated above. With konjac jelly capsules, one would not only able to fulfill their nutrition requirements but also store the capsules for 3-6 months which are unlike other foods that are highly-susceptible to rotting. Thus, through our solution, we strive to provide a practical alternative to relieve hunger and uptake enough nutrition from food which is unaffected by the four factors that lead to hunger.

Since many countries with hunger issues also face difficulty due to water shortage, we came up with a solution that can fulfill the need of both nutrition and water for people all across the globe: nutritious jelly capsules. The capsules will be composed of konjac jelly powder, water, and "powdered food," and will be wrapped with edible wrappers that are biodegradable.

To start with, "powdered food" will be made out of only fruits and vegetables without any meat so that it is more preservable and accessible, for even people who do not or cannot consume meat due to various reasons. Although the "powdered food" does not contain any meat, it will be able to provide all six categories of nutrients: carbohydrates, fats, fiber, minerals, protein, and vitamins. Adding in a variety of fruits can supplement vitamins and minerals, vegetables can provide fats, fiber and carbohydrates, and lastly legumes can supply both fats and protein for people that consume the nutritious jelly capsules.

Next of all, konjac jelly will be used to thicken the "powdered food" and water mixture like gelatin. Konjac jelly powder is made out of the starchy root of the Amorphophallus konjac plant. We decided that using konjac jelly in place of gelatin would be more suitable for making the "nutritious jelly capsules" not only because it is already widely used in many Korean and Japanese cuisine or since many vegans avoid eating gelatin but also since it has various other health benefits. Many of the benefits are related to the fact that konjac plants contain large amounts of a soluble dietary fiber called glucomannan, especially in its roots. Glucomannan is known to be helpful for diabetes, cholesterol, and weight management as well as constipation. Thus, the addition of konjac jelly powder can be an additional supplement for fiber and a nature and vegan friendly ingredient of the jelly capsules that can provide various health benefits.

Finally, the jelly capsules will be wrapped with edible wrappers that are biodegradable and consumable. We thought that it is important to make even the wrappers of these food easily disposable and nature friendly since it is also crucial to prevent environmental pollution. Meanwhile, it is as much critical to keep the jelly capsules from being contaminated or damaged. Most importantly, the jelly capsules are very cheap when created in large amounts. Specifically, konjac jelly powder and edible wrappers are extremely inexpensive and "powdered food" also becomes remarkably affordable when produced in large amounts.

上記の4つの問題に対して、我々は解決策を提示します。私たちはコンニャクゼリーカプセルを導入したいと考えています。このゼリーは3〜6ヶ月間の消費期限内で、健康にいい食べ物です。6つの栄養素(炭水化物、脂質、食物繊維、ミネラル、プロテイン、ビタミン)が入っていて、とても安価です。だからこそ、このコンニャクゼリーカプセルは、経済的に裕福でない家庭でも購入することができます。

### Message to Audience / メッセージ

We hope that our presentation and proposal allow many people to look more into the roots and solutions to hunger problems, and inspire them to take significant steps so that no more children go to bed hungry, no more parents worry about what to feed their children, and no more individuals fear the word "hunger."

Even after this competition, our team will continue to seek practical, nature-friendly, and effective solutions that can win over the war of hunger vs. humanity. We hope that many more people join our mission in ending starvation, ending malnutrition, and ending hunger.

私たちの発表と提案によって、多くの人々が飢餓問題の原因と解決策をより深く考え、子供たちが空腹になることがなくなり、親が子供たちの食べものの心配することがなくなり、「飢餓」という言葉を恐れる人がいなくなることを望んでいます。

また、このFood Summitの後でも、私たちのチームは、飢餓と人類の争いを克服することができる、実用的で自然にやさしい、そして効果的な解決策を模索し続けます。我々は、飢餓の終結、栄養失調の終結、もっと多くの人々がこの使命に加わることを願います。