

Developing Solutions for Developing Countries Competition

Please read these rules carefully, as many changes have been made to facilitate the competition during a pandemic. These may be different procedures than recent years.

Purpose:

- To promote the use of food science and innovative thinking as tools to improve the development, safety, and distribution of food in developing countries;
- To promote global awareness of issues related to food availability, nutrition and health;
- To build a cohesive community of the next generation of food science leaders and to use IFT as the catalyst for creating and supporting the community;
- To provide a link between government, international organizations, students and IFT regarding food problems in the developing world;
- To provide IFT student members with a platform to develop relationships with other students and food science professionals that have a common interest;
- To energize the best and brightest food science students to harness their energy and passion to explore the limitless opportunities to address global food challenges; and
- To leverage a holistic approach to address food system challenges.

Background:

The Student Association is committed to engaging student members from around the world and utilizing their scientific skills to serve a bigger cause. The IFTSA Developing Solutions for Developing Countries (DSDC) competition promotes the application of food science and technology and the development of new products and processes that are targeted at improving the quality of life for people in developing countries.

2020-2021 Theme:

In East Africa, one of the mostly widely eaten staple foods is 'Ugali' which is a thick porridge prepared by cooking a mixture of 70% extracted Maize/Corn flour and water. With the current COVID-19 pandemic and for long term nutrition goals, there is a need to shift from 70% extracted Maize flour (the maize is dehulled and degermed) to 100% whole grain Maize meal for consumers in East Africa so that the 'Ugali' prepared from this maize meal is more nutritious than the traditional type. Describe what changes need to be made in the milling process including various solutions to address expected increase in nutrition and rancidity and associated reduction in shelf life of the 100% whole grain Maize meal.

Eligibility:

1. At least one team member must hold student member status in IFT at the time of the submission of the preliminary report. All members of the finalist teams must be current IFT student members to compete in the finals at the annual meeting.
2. Entries must be students' work. Professors may be consulted and referenced but may not be a major contributor to the actual work.
3. Industry support such as donation of ingredients or use of equipment is allowed and encouraged but **should not** be acknowledged by any team in the oral presentation. Acknowledgment should be included in the final proposal.

4. Projects from product development or other classes are eligible in the competition-
5. MS, Ph.D., or summer internship projects **ARE** eligible entries in the competition.
6. Maximum number of applications accepted per university is **FIVE**. However, there is no limit on the number of members in each team.
7. Only a maximum of three (3) team members will present the product in the oral competition. Additional team members may be present to answer questions.
8. Each individual may only be a part of one (1) submission.
9. The chair of the competition will be excluded from participating on any competing team.

Awards:

- A total of six teams will make it to the finals. The 6 teams will all be judged against one another in the finals.
- Each finalist team will receive a travel reimbursement of up to \$1500 (N/A for virtual competitions).
- The 1st place winner will receive \$3,000, the 2nd place winner will receive \$1,500, and the 3rd place winner will receive \$500.
- The Student Association will present the first-place team with a personalized plaque after the IFT annual event. The top three finalist teams and their winning entries may be highlighted in *Food Technology*.
- In the event that IFT annual event is canceled in person, the winner will be announced during a livestreaming event either during virtual IFT or post virtual IFT.

General Competition Rules:

Entries must consist of a proposal for a new concept readily applicable to food or water in developing countries. This may include, but is not limited to, concepts such as a new food product, microbiological/chemical/biochemical method, distribution system, packaging material, food delivery system, nutrient fortification concept, new use of local ingredients for a safer, more nutritious product, etc.

The judges will be evaluating the rationale behind the proposal, the scientific value of the proposed concept, the technical problem-solving skills, the economic feasibility and the societal impact on developing countries. Ultimately, the entry must benefit the quality of lives of people in developing countries and should be applicable to such a setting. The competition theme will be released during the fall of the current competition year. The purpose of the theme is to promote issues that are relevant and urgent and to allow for a common ground when evaluating the entries.

Teams do not have to represent a certain IFTSA chapter, but at least one team member must hold student member status in IFT at the time of the submission of the preliminary report. All finalist team members must be current IFT student members. Multiple teams may participate from the same chapter or University.

Additional information:

- The focus of this competition is applying food science skills; therefore, judges will not award points for package graphics or other advertising material.
- Written proposals must be submitted via the submission portal at IFT.org in both Word and PDF format and received *on or before* deadlines stated herein, including those that fall on weekends or holidays.
- All parts of the competition will be conducted in English.
- If a team is chosen as a finalist, all participants of the finalist team agree not to claim any intellectual property rights (including patent rights) as to any material created in

connection with the competition. As the purpose of the competition is to create and develop ideas which can be leveraged in the developing world, all finalist submissions may be shared with the sponsoring company and affiliated groups.

If a competition rule has been breached, the competition chair will be allowed to present a report detailing the infraction(s) to the judges. The team captain/contestant will be provided a sufficient amount of time to defend their actions to the judges. The judges reserve the exclusive right to make a decision regarding the case, and to recommend an appropriate penalty, if the situation warrants. Judges will communicate their decision, which will be considered final, in a prompt fashion to both the chair and the team captain.

Procedures:

Preliminary Proposals:

1. Teams must submit a copy of their proposal via the submission portal on IFT.org (in both Word and PDF format) by February 1 at 11:59 PM CT.
2. The preliminary proposal is limited to three (3) pages, not including one (1) title page, one (1) page for graph representation of the entry (photograph, drawing, flow-diagram, etc.), one (1) appendix page used at the discretion of the contestants, and reference page(s).
3. The report must be typed, double-spaced, in 12-point font, Times New Roman font with 1" margins. All text and figures must fit on 8.5" × 11" paper.
4. The title page may only include the name of the product and the date of submission.
Please do not include any discriminating information on this page. Names of sponsor companies, any university, students, or other indication of team location are not acceptable on the title page, in the report, or on the product picture.
5. Complete the template provided with the following information and submit the document via the submission portal on IFT.org at the time of preliminary proposal submission.
 - a) Team members' names and IFT membership numbers
 - b) Sponsor companies, donors of goods, services, or money (if applicable)
 - c) The name, mailing address, phone number and e-mail address of a contact person to whom all correspondence should be directed.
 - d) Name of the school, name of entry, and advisor's name and contact info
6. References: All references cited within the proposal will be referred to with a number in or at the end of the sentence in which the reference was used. The list of references (which are not included in the three (3) page limit) should be included in a **separate Word and PDF file** submitted with the preliminary proposal. If a problem arises with reference credibility a judge may contact the Competition Chair for verification. The reference page should be formatted based on Journal of Food Science (JFS) guidelines.
7. A separate cover letter from a department professor or department head verifying originality of work and the team's compliance with the competition rules is to be submitted along with the preliminary proposal.

Evaluation of Preliminary Proposals:

1. Scoring for each proposal will be determined by at least three (3) judges with up to two (2) judges from the sponsoring company. The total judging will include members from academia, industry, and/or a government agency.
2. Each entry will be scored on a basis of 100 points, with the points to be distributed as shown here:

Preliminary Proposal Evaluations

100 points total:

Application Description	15 points
Technical Problem Solving	20 points
Safety/Shelf Life/Product Quality Assurance-Control	15 points
Originality	15 points
Impact	20 points
Economic Feasibility	15 points

- Judges will select a maximum of six (6) finalists
- All competing teams will be informed of only their respective judges' comments.
- Judges have the right to reject an entry if they believe it does not fit in with the competition's selected theme.
- Judges may not assign the same score to two different proposals they have judged, so that a clear ranking can be discerned.

Scoring for Selection of Finalists:

The finalists will be selected as follows by the Judges and Competition Chair:

- All point scores are converted into rank scores (highest score out of 100=1, second highest score out of 100=2, etc.)
- Rank scores are totaled for each team (one rank score per judge)
- The lowest six (6) scores are designated as the finalists
- In the event of a tie, the two lowest rank scores will be added for each group and the team with the lowest score will advance. If this fails, the judges will be asked to provide a decision

Finalist Procedures:

Finalists:

Responsibilities of finalists include the preparation of the following:

- A final written proposal
- A 15 minute oral presentation
- A 10 minute Q&A session

Finalist Evaluation

Final proposals will be scored on a basis of 250 points, distributed as follows:

- Final Written Proposal - 100 points
- Oral Presentation - 100 points
- Q&A Session - 50 Points

Final written proposal:

- Finalists must submit via the submission portal on IFT.org both Word (.doc) and PDF copies of their final proposals by June 1, 2021 at 11:59 PM CST.
- The maximum number of pages for the final written proposal is twenty-two (22). This number **DOES** include proposal body text, references, diagrams, figures, tables, flow diagrams, references and appendices. It does NOT include the one (1) title page and the one (1) picture/diagram page.

3. The report must be typed, double-spaced, 12-point font Times New Roman font with 1" margins. All text and figures must be on 8.5" × 11" paper.
4. The title page, for which there is no specific required format, must include the title of the proposal and date. A list of donors and other contributors that assisted the team should be included in the final proposal.
5. Include one page with a diagram or picture of the entry. Additional images throughout the report are optional.
6. Areas that **may** be covered, but not limited to, in the final proposal are:
 - a. Rationale
 - I. Why was the product/process chosen?
 - II. Identify and justify the need and relevance to the local region of the novel product/process
 - b. Product description/ Evaluation
 - I. Product description/use
 - II. Product formulation and ingredient/component functionality
 - III. (For virtual competition, please describe your latest/optimal formulation)
 - IV. Competitive framework
 - V. Sensory evaluation plan (actual sensory data is not required)
 - VI. Shelf life estimate (For virtual competition, please estimate realistically to the best of your abilities)
 - VII. Package selection and basis for selection
 - VIII. Nutrition Label (For virtual competition, please use online software to estimate to the best of your abilities if you do not have access to licensed nutrition software)
 - c. Process description/ Evaluation
 - I. Process description and basis for selection
 - II. Process flow diagram
 - III. Hazard Analysis – Critical Control Points (HACCP)
 - IV. Process limits
 - V. Operating cost
 - VI. Capital investment estimate
 - d. Safety/Regulations
 - I. Safety evaluation with respect to formulations, functionality, and processing
 - II. Legal implications of the product (ingredient labeling)
 - III. Hazard Analysis – Critical Control Points (HACCP)
 - IV. Good Manufacturing Processes (GMPs)
 - V. Home use – safety hazard?
 - VI. Local government regulations if applied
 - e. Impact on Developing Countries
 - I. Impact potential-problem to be solved
 - II. Economic Feasibility (discussion about supply chain, ingredient/equipment procurement, sustainability, etc. **Actual numbers are not required)
 - III. Readiness of application
 - IV. Extension and mass production possibilities
 - V. Delivery logistics

NOTE: These are suggestions and should only be considered if they are pertinent to the topic or aspect of your proposal. These headings/points may or may not be included at the team's discretion. Remember that originality is encouraged although addressing the relevant points is critical. If certain points deemed important by the judges for a particular proposal are not covered in the final paper, then that entry will be penalized accordingly

7. References should be added at the end of the proposal.
8. Each final proposal will be scored on a basis of 100 points, with the points to be distributed as shown here:

Final Written Proposal Evaluations

100 points:

Entry Description	5 points
Application Description	10 points
Technical Problem Solving	20 points
Safety/Shelf Life/Product Quality Assurance-Control	10 points
Originality	15 points
Impact (based on rationale)	25 points
Economic Feasibility	15 points

****Please note:** Changing the integrity of or making major deviations from the preliminary proposal may result in penalization at the discretion of the judges.

Oral Presentations:

Finalists will present a fifteen (15) minute oral report. The Q&A session will immediately follow the oral report.

1. A maximum of three team members will present the report.
2. A PowerPoint (or other type of presentation) is required. The Competition Chair is responsible for bringing/acquiring a laptop computer. The Chair will provide finalists with details concerning the PowerPoint computer presentation (format, version, disk type, file size, etc.). It is the responsibility of the presenting team to ensure that their presentation is in a compatible format to be shown on the computer provided. ****If virtual, the presentation software will be Zoom, and the presentation will be conducted through screenshare.**
3. The presentations will be open to the public ****if virtual, at a later date, due to capacity of the Zoom meeting space (only the Competition Chair, VP of Competitions, the team, and the judges will be in the presentation room).**
4. In order to help the judges make their decision, a picture, visual aids or a video displaying the product or process is highly encouraged but not required as part of the oral presentation.
5. Physical samples of products or packaging are **NOT** allowed in the oral presentation. Please do not bring them. (N/A for virtual competitions).

Oral Presentation Evaluation: 100 points

Presentation Quality and Organization	30 points
Communication and Interest Generated	25 points
Potential Impact on Developing Countries	35 points
Effectiveness of "Selling" the Product Idea	10 points

Q&A Session

Finalists will participate in a 15-minute Q&A session immediately following their oral presentation. The Q&A will be reserved for questions from the judges and related discussion. This event will be moderated by the DSDC competition chair and related personnel.

Q&A Session Evaluation: 50 Points

Judged on quality of answering questions thoroughly and concisely.

Product Defense

Each team will defend their product concept *individually* before the panel of judges. During the defense, the team will present their product to the judges, and the judges will have an opportunity to ask in-depth technical questions. These questions will focus on aspects of the product mentioned in the oral defense and in the final proposal. The defense will occur on a different day than the virtual oral presentation to give the judges time to consider the product. The team, judges, and chair will find a mutual time that works for everyone. The defense will occur using a virtual teleconference service, such as Zoom. Judges will not know the final scores or winners and will provide constructive feedback to each team.

1. Thirty (30) minutes will be allotted for each team. Teams will have 10 minutes to present their product to the judges, focusing on technical aspects of the product and formulation. The remaining twenty (20) will focus on an in-depth Q&A. A visual is required. If you have a photograph of your product, please provide it during this time. If not, please have someone on your team sketch what the product looks like. Other slides with relevant technical information (HACCP, process flow) are permitted as well.

The goal of the defense will be for the judges to engage in a technical dialogue with the team about their product. **Skits are no longer encouraged for the tasting session. Please come prepared to answer questions about your product.**

Judge Selection:

1. At least three (3) judges will evaluate preliminary proposal submissions and at least five (5) judges will evaluate the final proposals, oral presentations, and roundtable discussion. The judging panel may include members from academia, industry or a government agency. Up to two (2) judges may be from the sponsoring company
2. A judge will be appointed from each of our sponsors, whenever possible.
3. Judges are encouraged to serve a three-year term or find a suitable replacement if they are unable to participate.
4. Judges or sponsors may be solicited for determining each year's theme. The following year's theme must be decided in the fall following the end of the current year's IFT annual event.
5. Judge identities will remain anonymous until the final competition.
6. Judges are encouraged to evaluate products by point totals, not personal preferences.

COVID-19 Contingency:

In the case of a virtual competition, please try to complete the reports to the best of your ability, you may describe your product/processes as what you would have done ideally.

Product Development (PD) Competition Checklist

Check off items as completed:

Items to be completed for entry in PD competition

- ☐ Check IFT student member status for team.
- ☐ Check preliminary proposal format
- ☐ Submit a preliminary proposal (PDF) to the competition chair via the IFT.org submission portal by **11:59 p.m. CT on February 1, 2021**.

Items to be completed for PD competition finalist

- ☐ Check final written proposal format
- ☐ Submit a final written proposal (PDF) to PD Chair via the submission portal on IFT.org by **June 1, 2021, at 11:59 p.m. CT**.
- ☐ Prepare 15-minute oral presentation
- ☐ Check oral presentation format
- ☐ Prepare a 10-minute product defense
- ☐ Organize teleconference call times for oral presentation and product defense with Competition Chair

Questions:

Please contact the DSDC Competition Chair via email at iftsa.dsdc@gmail.com.

The enforcement, review, and changes of these Rules and Guidelines will be the responsibility of the Chair of the competition and designated IFT Staff member. Failure to comply with any of the rules of the competition may result in disqualification.