

### 対象国開発分野における開発ニーズ(課題)

- ・パラグアイ国は未舗装道路が75%を占めており、そのため近年の集中豪雨等でぬかるみが発生し農作業中のトラック等がぬかるみにはまりスリップし動けなくなる事象が発生している。
- ・農業を主力産業にしているパラグアイ国にとって、この事象等により農作物や牧草収穫作業が非効率になっており、農業発展の阻害要因になっている。

### 提案製品・技術

- ・ぬかるみにはまりスリップし動けなくなった大型車両等の重量物を牽引する為に、ホイールローダー等の作業機械に装着可能な牽引用アタッチメントである提案製品「マッスルモンスター」を提供する。

### 調査概要

- ・調査期間:2024年5月～2025年1月
- ・対象国・地域:パラグアイ国
- ・調査概要:マッスルモンスターを活用して、農作業等でぬかるみにはまりスリップし動けなくなった大型車両等の重量物を牽引し、農作業の効率化を図り、パラグアイ国の農業課題の解決、農業発展に資する調査。本支援事業後に同国へのマッスルモンスター導入を通じたビジネス展開を図り、ひいては同国の農作業の効率化・高度化による農業発展を目指す。



マッスルモンスター

### ビジネスモデル

- ・学術面でのサポート(鳥取大学農学部等)、農機・重機アタッチメント製造・販売会社(東洋重機工業)、重機輸出業者(E & E カンパニー)と連携し、開発設計～試作～量産～販売まで一貫したサポート体制を構築している。
- ・農業国であり未舗装道路問題を抱える南米を主力マーケットと捉え、海外現地生産も見据える。

### 対象国に対し見込まれる成果(開発インパクト)

提案製品であるマッスルモンスターの活用により、パラグアイ国の農業従事者の農場・圃場における車両スタック時の迅速な牽引による課題解決を目指す。製品・技術の普及の結果、農業従事者の作業効率・生産性向上による農業収益拡大の便益をもたらすことを目指す。





# SDGs Business Needs Confirmation Survey for Rapid Salvage of Agricultural Machinery, Vehicles, etc. Stuck in Soft Ground in Paraguay

Agri Project Ltd. (Bekkai-cho, Notsuke-gun (Hokkaido))



## Development issues in the country/sector

• In Paraguay, 75% of the roads are unpaved, and this has led to muddy conditions during recent torrential rains, causing trucks and other vehicles engaged in agricultural work to become stuck in the muddy conditions and slip and slide. For Paraguay, where agriculture is the main industry, this has led to inefficiencies in crop and grass harvesting, and has become an obstacle to agricultural development.

## Products/Technologies of the Company

• We offer the proposed product "Muscle Monster," a towing attachment attachable to wheel loaders and other work equipment to tow heavy objects such as large vehicles that have become stuck in muddy areas and become stuck due to slipping.

## Survey Outline

- Survey period: May 2024 - January 2025
- Country/Area: Paraguay
- Survey Overview: This is a survey to solve agricultural issues and contribute to agricultural development in Paraguay by using Muscle Monster to tow heavy vehicles and other heavy objects that have become stuck in muddy areas due to slips and falls during agricultural work, thereby improving the efficiency of agricultural work. After this survey, we aim to develop business by introducing Muscle Monster to Paraguay, which will eventually lead to agricultural development by improving efficiency and sophistication of agricultural work in Paraguay.



Muscle Monster

## Business Model

• The company has established an integrated support system from development and design to prototyping, mass production, and sales, in cooperation with academic support (Tottori University Faculty of Agriculture, etc.), a manufacturer and sales company of agricultural machinery and heavy equipment attachments (Toyo Juki Kogyo), and a heavy equipment exporter (E&E Company). The company considers South America, an agricultural country with unpaved road problems, as its main market, and is also looking at local production overseas.

## Expected Social Impact in the Country

By utilizing the proposed product, Muscle Monster, the company aims to solve the problems of farmers in Paraguay by quickly towing vehicles when they get stuck on farms and fields. As a result of the dissemination of the product and technology, the project aims to bring benefits to farmers by increasing their work efficiency and productivity, thereby increasing agricultural profits.

As of April, 2024