BrAPI 2

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Authors

- **Peter “BrapMan” Selby** ✉
  0000-0001-7151-4445 · BrapiCoordinatorSelby
  Cornell University · Funded by NIFA-DSFAS 2022-67021-37024

✉ — Correspondence possible via GitHub Issues or email to Peter “BrapMan” Selby <ps664@cornell.edu>.

Abstract

The Breeding API (BrAPI) project is an effort to enable interoperability among plant breeding databases. BrAPI is a standardized RESTful web service API specification for communicating plant breeding data. This community driven standard is free to be used by anyone interested in plant breeding data management. This manuscript describes updates and outlook for the current version of BrAPI.

Introduction

The Breeding API (BrAPI) project is an effort to enable interoperability among plant breeding databases [1].

- DIGITAL ECOSYSTEM
- Justification for a second paper
- Highlight Community Growth
- Hackathons
- sabbaticals
- Updates for V2
- Auth Data Access Control - super simplified - highlight data privacy and security elements
- Project structure - Modules
- Standardization of endpoints across objects - said in a non-tech way

Success Stories

6+/- success stories highlighting BrAPI usefulness in breeding cycle

- Field Book for starting data collection
  - Project Explanation
  - BrAPI integration
  - Layman description how it can help breeding program
- QBMS for the beginnings of analytics
  - Project Explanation
  - BrAPI integration
  - Layman description how it can help breeding program
- brapi sync
  - Project Explanation
  - BrAPI integration
  - Layman description how it can help breeding program

Discussion

- how can BrAPI help breeders (specifically small breeders)
- Looking ahead - what needs to be done further
- Analytics
- HDP
- GraphQL?
- Field mgmt - treatments etc
- Drones, image processing, HTP
- ChatGPT integration - BreedersGPT

- Weather & soil - why it won’t be in BrAPI

Conclusions and Impact

- High level summary of the project/consortium
- BrAPI is fitting into this gap, it doesn’t need to fit these other gaps
- Call to action - Join us!

References

1. **BrAPI—an application programming interface for plant breeding applications**
Peter Selby, Rafael Abbeloos, Jan Erik Backlund, Martin Basterrechea Salido, Guillaume Bauchet, Omar E Benites-Alfaro, Clay Birkett, Viana C Calaminos, Pierre Carceller, Guillaume Cornut, ...
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