# Article information:

National high-resolution cropland classification of Japan with agricultural census information and multi-temporal multi-modality datasets - ScienceDirect  
<https://www.sciencedirect.com/science/article/pii/S1569843223000158>

# Article summary:

1. Cropland mapping using multi-temporal Landsat and Sentinel data, combined with agricultural census information, was used to map different crop types in Japan.

2. Deep learning and machine learning methods were compared for cropland mapping, with the use of random forests achieving high accuracy.

3. The final product offers the highest resolution and state-of-the-art cropland map at the parcel level, providing important information for evaluating agricultural productivity in Japan.

# Article rating:

Appears moderately imbalanced: The article provides some useful information, but is missing several important points or pieces of evidence that would be required to present the discussed topics in a balanced and reliable way. You are encouraged to seek a more balanced perspective on the presented issues by exploring the provided research topics and looking at different information sources.

# Article analysis:

该文章提出了利用农业普查数据和多时相、多模态数据集进行日本国家高分辨率耕地分类的方法。然而，该文章存在一些潜在的偏见和问题。

首先，该文章没有考虑到可能存在的误差来源。例如，由于遥感数据的限制，可能会出现云覆盖或阴影等问题，这可能导致分类错误。此外，在使用机器学习算法进行分类时，训练样本的质量也是一个重要因素。如果训练样本不足或不准确，则可能导致分类结果不准确。

其次，该文章没有探讨其他可能的方法来解决耕地分类问题。例如，可以使用无人机图像或高分辨率卫星图像来获取更精细的信息，并结合地面调查数据进行分类。

此外，该文章没有提供足够的证据来支持其所提出的主张。例如，在介绍深度学习技术时，并没有详细说明为什么这些技术比传统机器学习算法更有效。

最后，该文章似乎忽略了对可能风险和负面影响的考虑。例如，在进行大规模耕地分类时，可能会涉及到土地使用权和土地管理等方面的问题。如果这些问题得不到妥善解决，可能会导致社会不稳定和环境破坏等问题。

综上所述，该文章虽然提出了一种新的方法来解决耕地分类问题，但存在一些潜在的偏见和问题。未来的研究应该更加全面地考虑这些问题，并探索其他可能的解决方案。

# Topics for further research:

* Potential sources of error in agricultural land classification using remote sensing data
* Alternative methods for agricultural land classification
* such as using drone imagery or high-resolution satellite imagery
* Lack of evidence supporting the effectiveness of deep learning techniques over traditional machine learning algorithms
* Potential risks and negative impacts of large-scale agricultural land classification
* such as land use rights and management issues
* The need for more comprehensive consideration of these issues in future research
* Other possible solutions to agricultural land classification beyond the method proposed in the article.

# Report location:

<https://www.fullpicture.app/item/01e7ef2c82adceb758e94b56b07149bd>