

Agriculture practices supporting biodiversity conservation in Israel: A meta-analysis

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Agriculture vs. Biodiversity



Can there be Wild friendly agriculture ?



Land sharing vs Land sparing

Ecosystem services use and abuse



Agriculture Affects 40% of the planet's land area

Aim



Methods

Conservation Evidence, Cambridge university

The screenshot shows the homepage of the Conservation Evidence website. At the top left, the title "Conservation Evidence" is displayed with the tagline "Providing evidence to improve practice". To the right is a search bar with a magnifying glass icon. Below the search bar are navigation links: "Browse Evidence", "Journal", "Synopsis", and "About". A large banner image with green foliage contains the text: "Search our free summaries of scientific information to help make your conservation decisions more effective". Below the banner, a "Browse by category:" section features six icons and their corresponding action counts: Amphibian Conservation (129 Actions), Bat Conservation (78 Actions), Bee Conservation (59 Actions), Bird Conservation (455 Actions), Control of Freshwater Invasive Species (139 Actions), and Farmland Conservation (119 Actions). A right-pointing arrow is visible on the far right of this category section.

1. Decisions support tool
2. Evidence base
3. Conservation support assessment
4. Database by action \ target

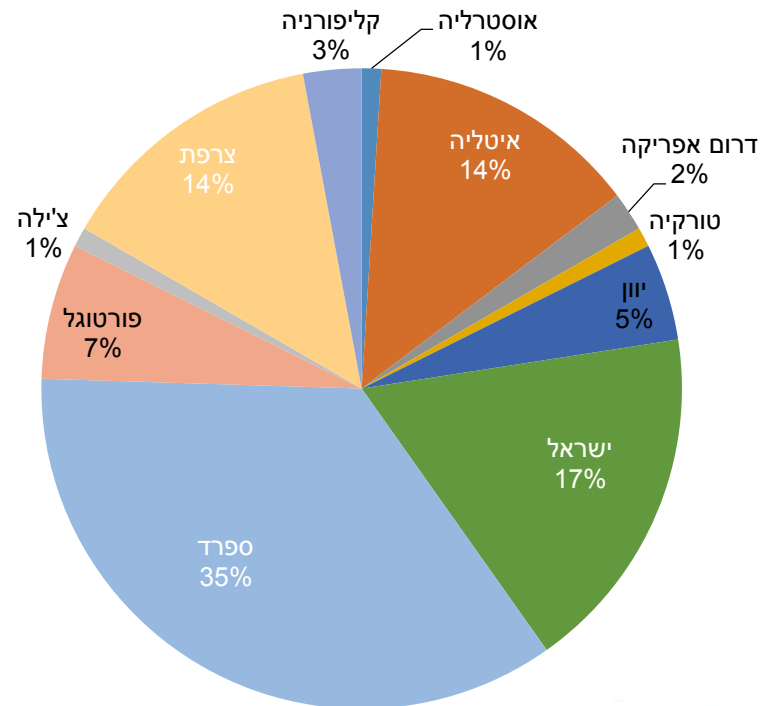
The Database

Of Mediterranean biodiversity conservation practice in agriculture

132 Research work
88 from Med- climate zone
17 from Israel

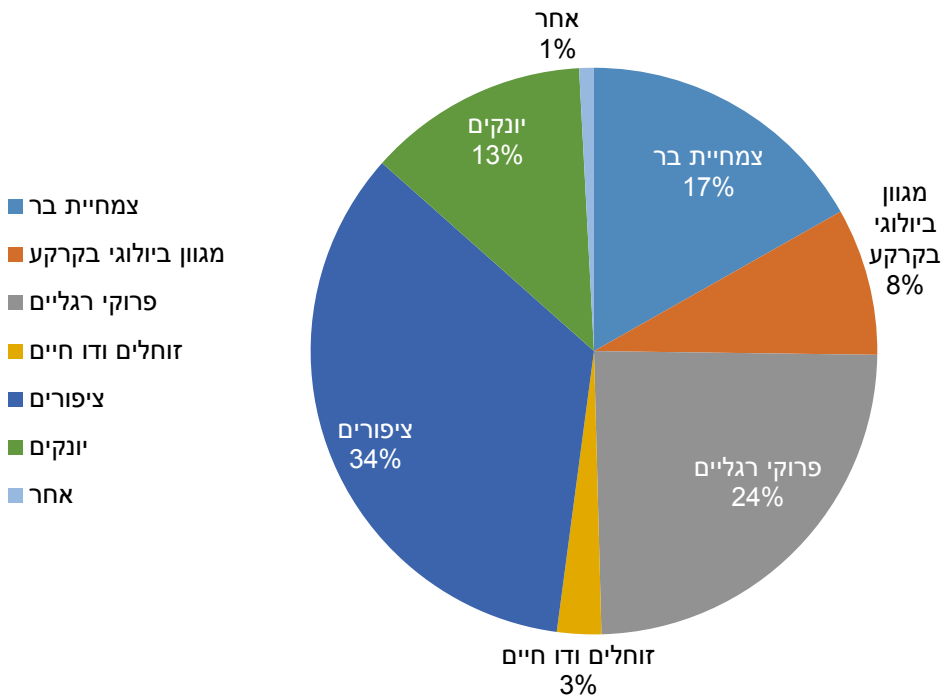
- Quantitative
- Field research
- Specific agriculture practice

המדינות שבהן נערכו המחקרים
העוסקים בחקלאות ומגוון ביולוגי רלוונטי לישראל



Over view of database

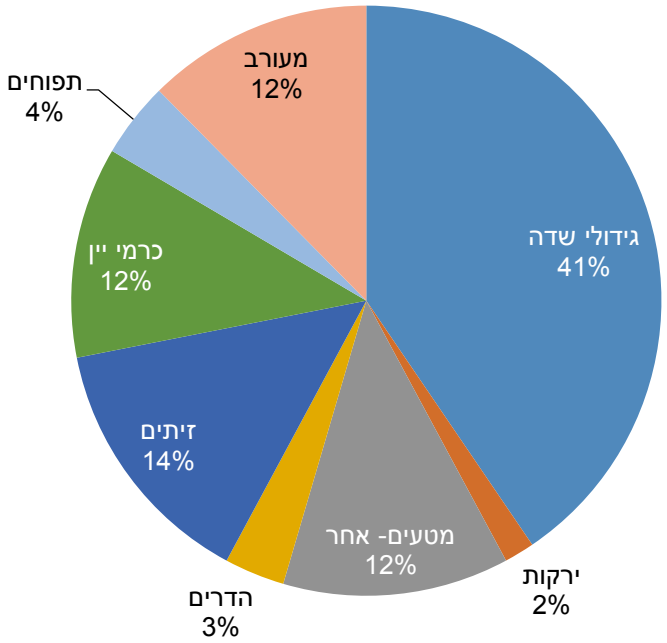
קבוצות טקסונומיות שנבדקו במחקרים
העוסקים בחקלאות ומגוון ביולוגי



Few research on Vegetable production – A dominant sector in Israel

34% dedicated to birds conservation – non in Israel

ענפים חקלאיים שנבדקו במחקרים
העוסקים בחקלאות ומגוון ביולוגי



Best practices

The Following practices were investigated for their support to biodiversity conservation

Practice	Number of research
Seed cycle & fallow	3
Keeping Stubble	4
Fertilizers	6
Size & form of the Ag. land	7
Ponds and rivers near agriculture land	8
Herbaceous field boundaries	11
Irrigation vs dryland	11
Fallow, set aside	11
Conservation tillage	11
Semi-natural Patches	14
Hedgerow: trees & shrubs	16
IPM	17
Landscape Mosaic	18
Cover crops in plantation	20



Evidence summery page

Ex. 1 – Semi-natural Patches on farmland

1. Practice deception
2. Main action
3. Number of research
4. Level of Conservation evidence
5. Relevance for: Agriculture branch | Taxonomic group | Conservation Action Goals
6. Possible influence over agriculture productivity
7. Evaluation on evidence (Table)
8. Description of evidence (Table)

Evidence assessment

Num. of research	strength	% out of supporting evidence	strength
up to 7	Low	up to 30%	Low
8 to 13	Medium	45%-31%	Medium
more than 14	strong	more than 45%	strong

Out comes 1

Strong Evidence for Biodiversity conservation practices:

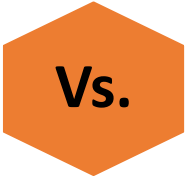


Based on:

Sum of supporting evidence
Percent of of all research work for specific practice

Out comes 2

Type of conservation action



Clear contribution

Mixed evidence

Future research

Knowledge gaps on 3 levels:

1. Good supporting evidence Not enough research work:

Ponds and rivers near
agriculture land
Herbaceous field
boundaries
Irrigation vs dryland
Keeping Stubble

2. Lack of knowledge in Israel:

Farm land birds
Vegetable production
Irrigation vs dryland

3. Interaction between practices

Conservation tillage
Organic & Biodynamic
IPM
Special element in the field



Thank you

