AGRICOH: An international consortium of agricultural cohorts

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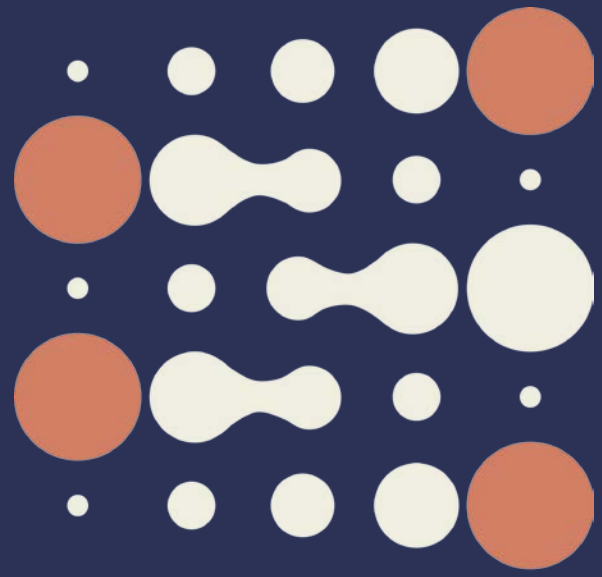
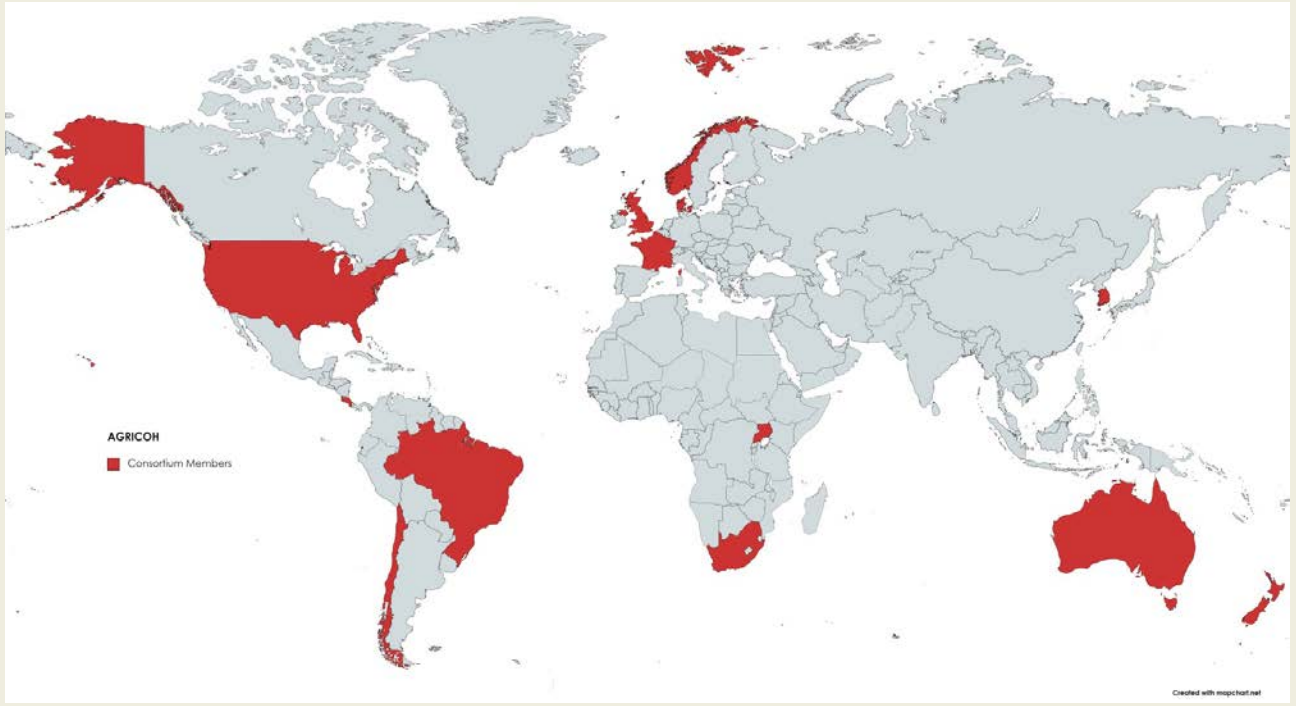


International Agency for Research on Cancer
World Health Organization

Introduction: What is AGRICOH?

- Initiated by NCI + IARC in 2010
- **Objective:** to support data pooling across agricultural cohorts, enabling investigation of rare exposure and/or outcome associations
- **Members:** 29 cohorts from five continents
- **Subgroups:**
  - Exposure Assessment
  - Cancer
  - Neurological
  - Reproductive
  - Respiratory
- **Steering Group Chair:** Joachim Schüz



Cancer Subgroup: Pesticides and cancer risk



	AGRICAN	CNAP	AHS
Cohort	*Agricultural Cancer Cohort*	*Cancer in the Norwegian Agricultural Population*	*Agricultural Health Study*
Population	Insured by Mutualité Sociale Agricole	Respondents to the agricultural census	Licensed pesticide applicators
n	127,282	137,821	51,167
Males, %	56%	84%	97%
Follow-up period	2005 – 2009	1993 – 2011	1993 – 2011
Follow-up, *median*	4 years	19 years	16 years
Age at baseline, *median*	67 years	51 years	46 years
Exposure assessment	Crop-exposure matrix[a]	Crop-exposure matrix[a]	Self-report
Ever used at least one pesticide, %	67%	45%	99%

Cancer Subgroup: Publication (2023)

Cancer Causes & Control (2023) 34:995–1003
https://doi.org/10.1007/s10552-023-01748-1

ORIGINAL PAPER

Exposure to pesticides and risk of Hodgkin lymphoma in an international consortium of agricultural cohorts (AGRICOH)

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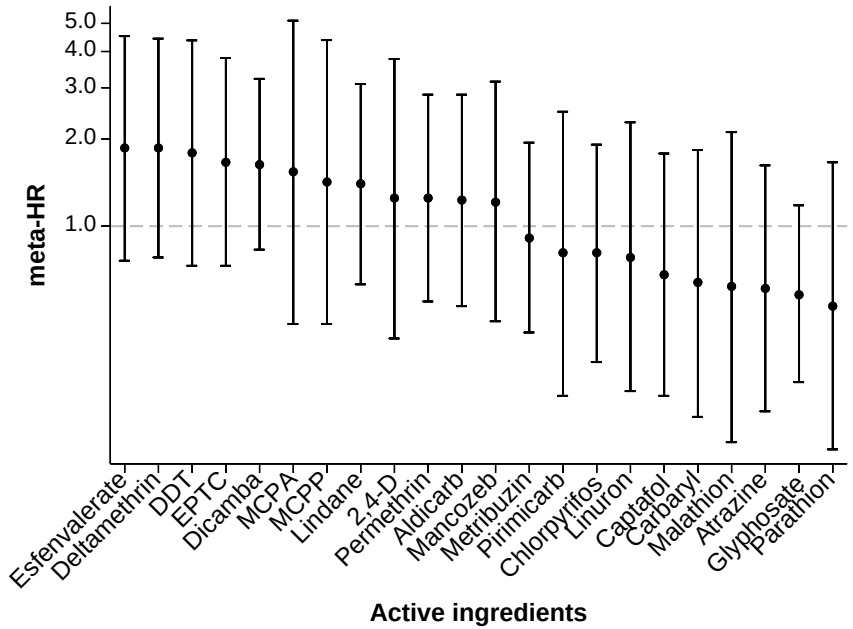

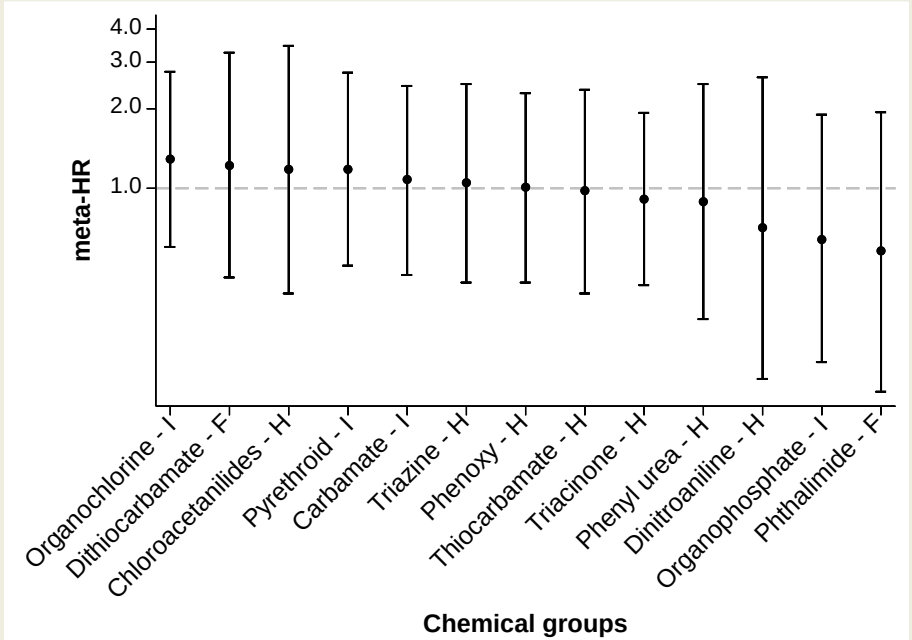

Summary

- Hodgkin lymphoma (HL) is a rare cancer
- Among 316 270 farmers, 91 cases of HL observed
- No clear evidence of cancer risks associated with active ingredients or chemical groups

Cancer & Exposure Assessment Subgroups: Ongoing Project

Pesticide exposure and the risk of breast cancer in AGRICOH

Exposure Assessment

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Hans Kromhout

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Epidemiology

International Agency Research on Cancer
World Health Organization

Principal Investigator
Joachim Schüz

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France	*France*	*Norway*	*USA*

KWF

KWF Dutch Cancer Society
502 930€, 2022-2025
PIs: H. Kromhout & J. Schüz

Rationale

- Females often overlooked in occupational studies of farmers
- Female farmers less likely to apply pesticides – but highly exposed during tasks in sprayed fields (“re-entry tasks”)

Objectives

1) Update exposure assessment to include: additional active ingredients, probability of exposure, and re-entry exposure
2) To estimate associations between exposure to specific pesticides (from use or re-entry) and breast cancer risk among female farmers and farmers’ wives
3) To evaluate whether the risk differs by ER+/-, PR+/-, pre/post-menopausal status

Key take-home messages

- No evidence for increased risk of Hodgkin lymphoma from 22 active ingredients studied
- Important to accounting for indirect exposure for female farmers (not mixing/applying pesticides) in order to investigate the risk of breast cancer