Sustainability of no-till and related global knowledge transfer experiences

BCPC 56th Annual Weed Review
Sophi Taylor Building, NIAB, Cambridge
14th November 2019

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@dikesmarshfarm

317.5mm Rainfall

23rd September – 11th November (7 weeks)

Background

- 560Ha – All Arable, family farm with Dad & Uncle
- 2 Distinct Soil Types :
  Blacktoft Series Silty Loam & Foggathorpe Series (Mg) Clay
  We are only 2 meters above sea level !
- Cropping: Winter Wheat, Oilseed Rape, Winter Beans, Spring Barley, Linseed
- Do own agronomy, on BASIS & FACTS Professional Register
- Annual Rainfall 625mm
- 100% No-till, apart form subsoil & mole drain as required
- 2016 Nuffield Scholar

Why no-till?

- Improve crop production economics: reduce labour, fuel, machinery costs = increased profit

- Increase available soil water (particularly in dry climates such as Australia)

- Increase soil organic matter – Carbon

- Reduce soil erosion

- Improve nutrient cycles

The soil

John Deere invented this in 1837...

COMMITTED TO THOSE
LINKED TO THE LAND

JOHN DEERE

ONE MAN
CHANGED FARMING
John Deere's plow helped open the prairie

Depth of topsoil on this spot, 1840.

Depth of topsoil on this spot when we broke ground, 1994.

6"
12"
18"
24"
30"
36"
42"
48"
54"
60"
66"
72"

ROUNDUP POWERMAX 4.5 SL
32 fl oz/a
2,4-D LV 4 3.8 L
16.8 fl oz/a
PRIME OIL - COC 98.47 L
1 % v/v
N-PAK - AMS 3.4 L
2.5 % v/v
7 DAYS PREPLANT

ROUNDUP POWERMAX 4.5 SL
32 fl oz/a
N-PAK - AMS 3.4 L
2.5 % v/v
EARLY POST

4   9

ZIDUA PRO 4.09 SC
6 fl oz/a
ROUNDUP POWERMAX 4.5 SL
32 fl oz/a
MSO ULTRA 100 L
1 % v/v
N-PAK - AMS 3.4 L
2.5 % v/v
7 DAYS PREPLANT

ENGENIA 5 SL
12.8 fl oz/a
ROUNDUP POWERMAX 4.5 SL
32 fl oz/a
OUTLOOK 6 EC
10 fl oz/a
MID POST

2   4   9   14   15

Conservation Agriculture

Minimum/no soil disturbance

Permanent soil cover (residue/cover crop)

Plant diversity/crop rotations

University Extension

Take Action

Argentine bottom-up approach

No Secrets

"More crop, less weeds – sustainably"
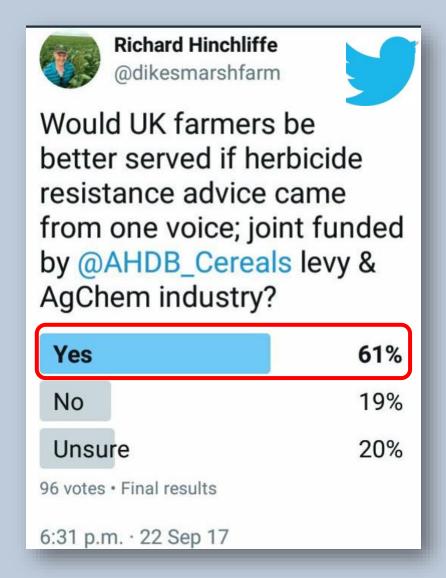
The example we should be following ?
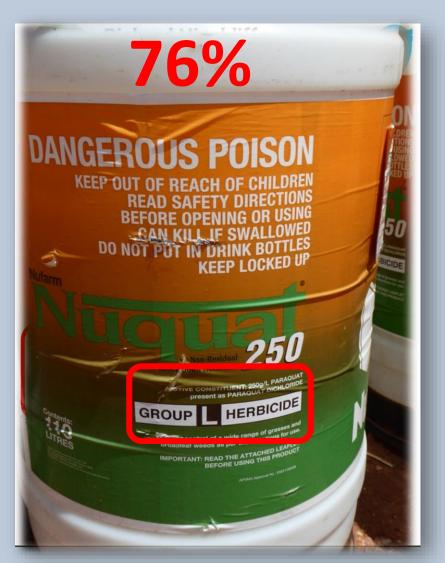
Recommendations (1)

76%

- Herbicide **boxes and labels should have the Herbicide Resistance Committee** (HRAC) **classification group shown** on them to aid herbicide rotation

- The agrochemical industry should help to educate farmers and agronomists about the HRAC classification system

Recommendations (2)

Would UK farmers be better served if herbicide resistance advice came from one voice; joint funded by @AHDB_Cereals levy & AgChem industry?

Yes	61%
No	19%
Unsure	20%

96 votes • Final results

6:31 p.m. · 22 Sep 17

• Industry recommendations for herbicide resistance **needs to come from 'one voice'** similar to the Weedsmart initiative in Australia, with **funding from growers' AHDB Cereals & Oilseeds levy and the agrochemical industry**.

Thank you for listening