

# Use of Cultivation and Glyphosate During the Fallow Period and New Herbicide Registration in Tomato

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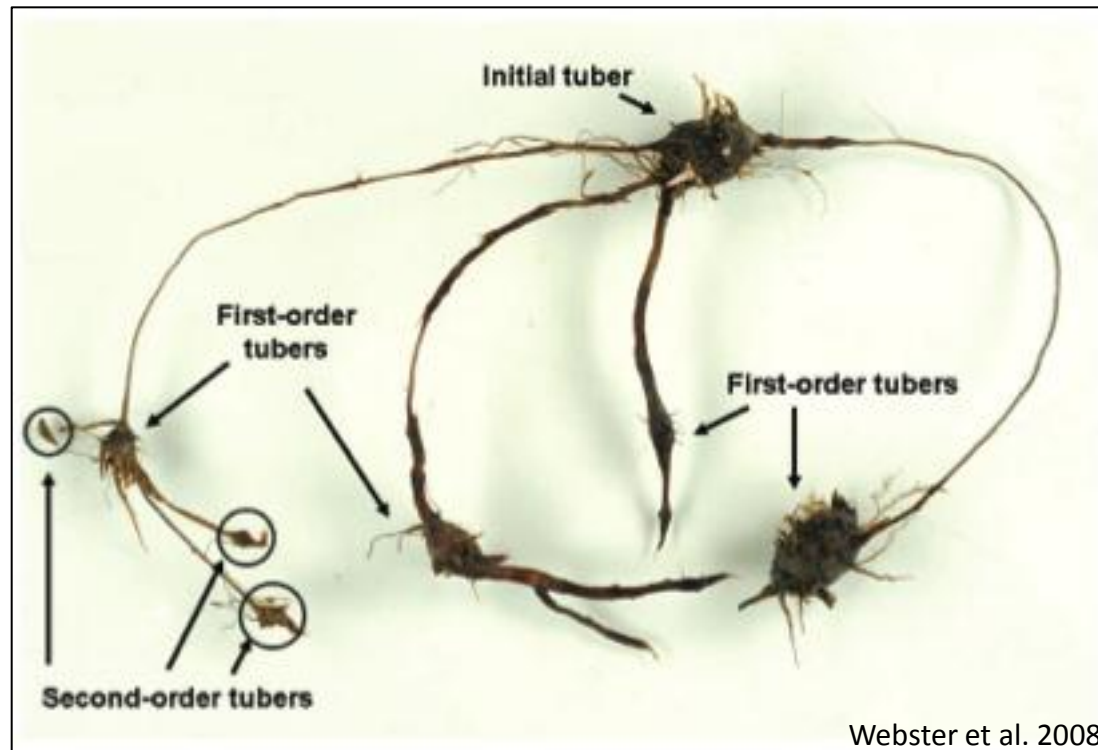
# Introduction

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- No “silver bullet” like methyl bromide for weed control currently on the market
- Methyl bromide alternatives for weed management requires multiple methods of control



- Nutsedge forms chains of tubers
- Cultivation will break the chains and apical dominance



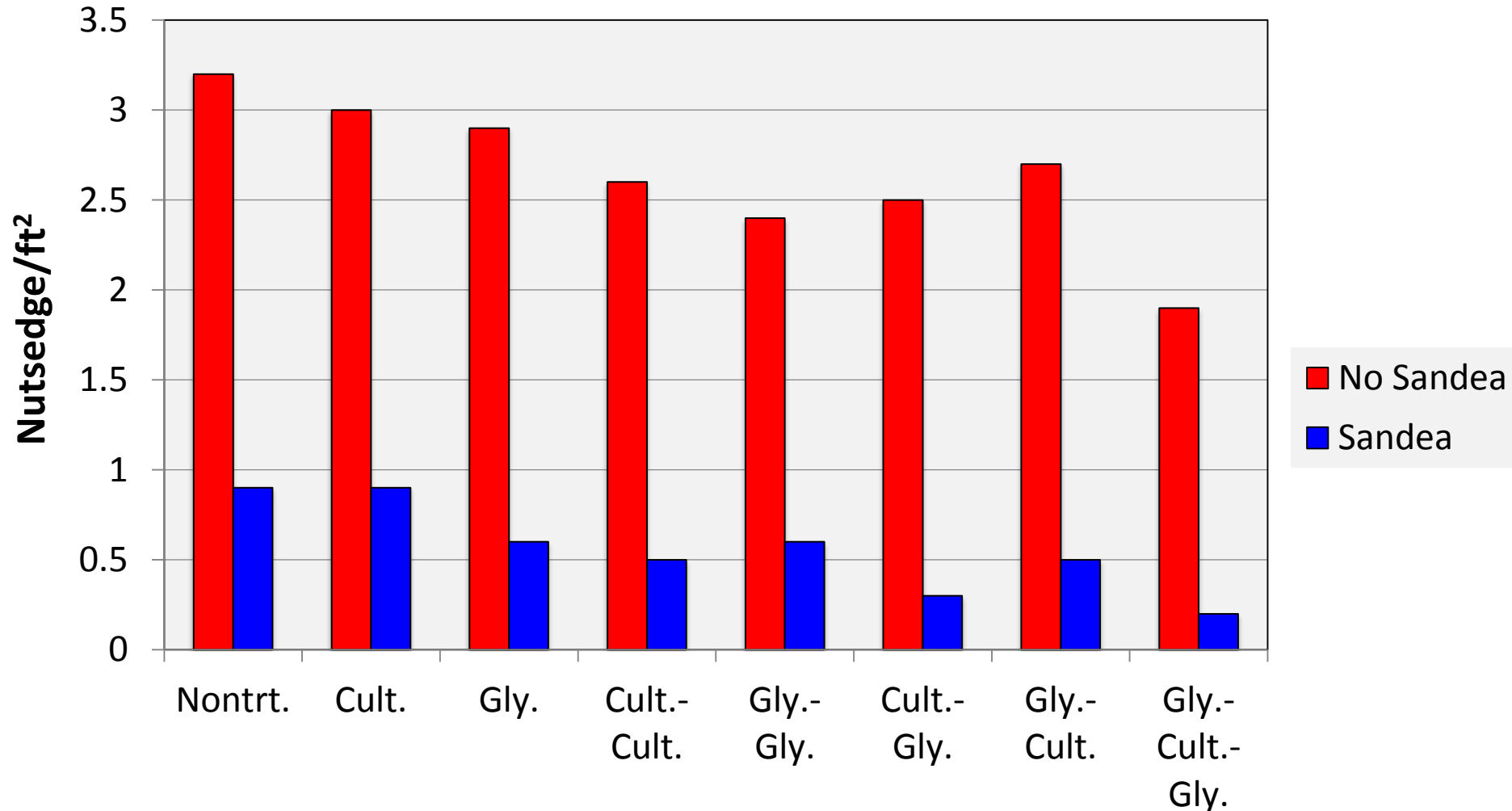
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- Glyphosate can translocate from the leaves to the tuber
  - However, translocation is only to the first of second degree daughter tuber



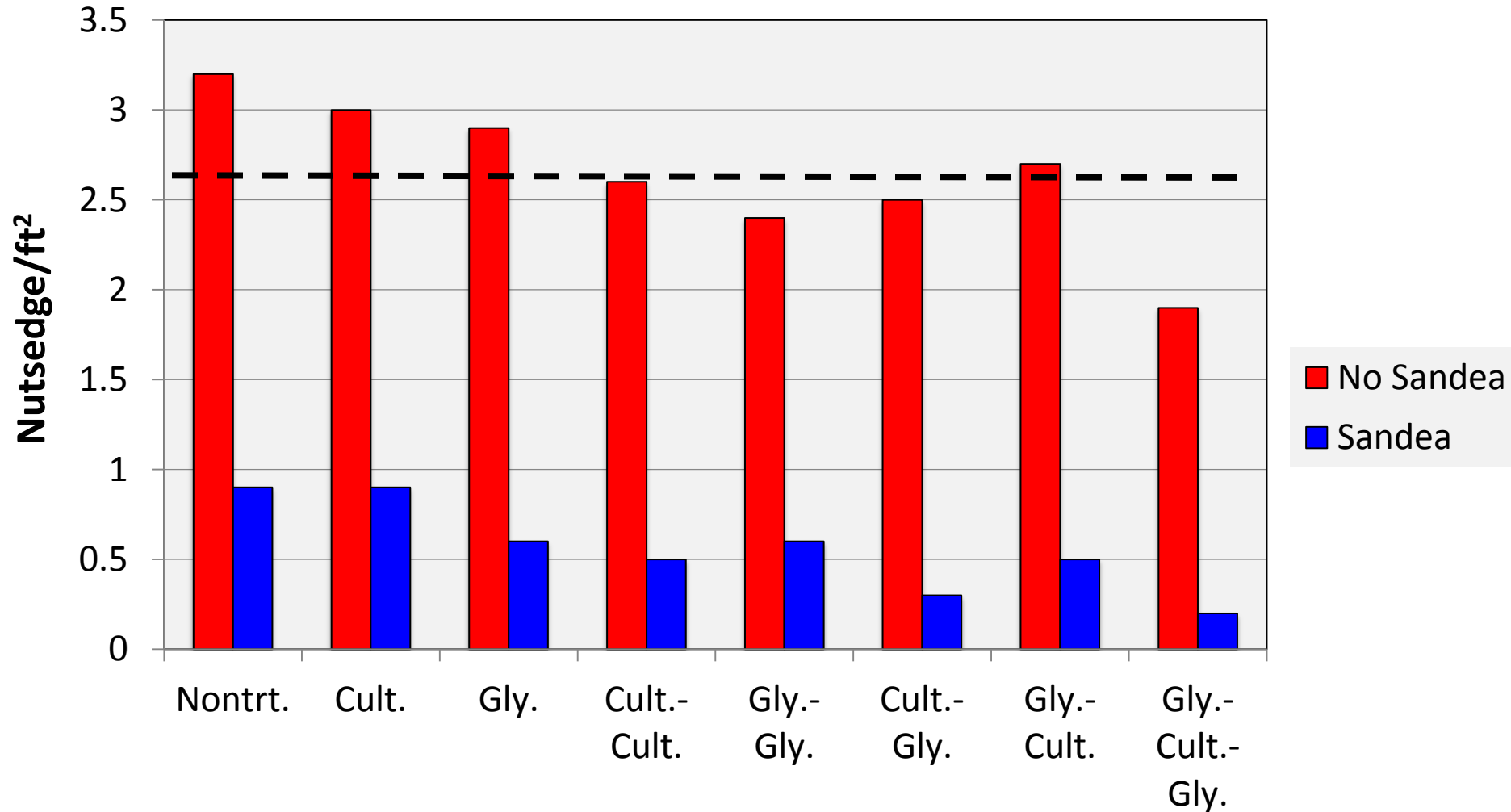
| Treatment            |                     |      |       |      |       |       |       |   |
|----------------------|---------------------|------|-------|------|-------|-------|-------|---|
| Wk. after initiation | 1                   | 2    | 3     | 4    | 5     | 6     | 7     | 8 |
| 0                    | Initial Cultivation |      |       |      |       |       |       |   |
| 5                    |                     |      |       |      |       |       | Gly.  |   |
| 6                    |                     |      | Cult. | Gly. | Cult. | Gly.  |       |   |
| 9                    | Cult.               | Gly. |       |      |       |       | Cult. |   |
| 11                   |                     |      | Cult. | Gly. | Gly.  | Cult. |       |   |
| 13                   |                     |      |       |      |       |       | Gly.  |   |
| 17*                  | Final Cultivation   |      |       |      |       |       |       |   |

\*Following final cultivation was fumigation at 21 WAI, PRETR herbicide at 25 WAI, transplanting at 26 WAI, and POSTTR herbicide at 29 WAI.

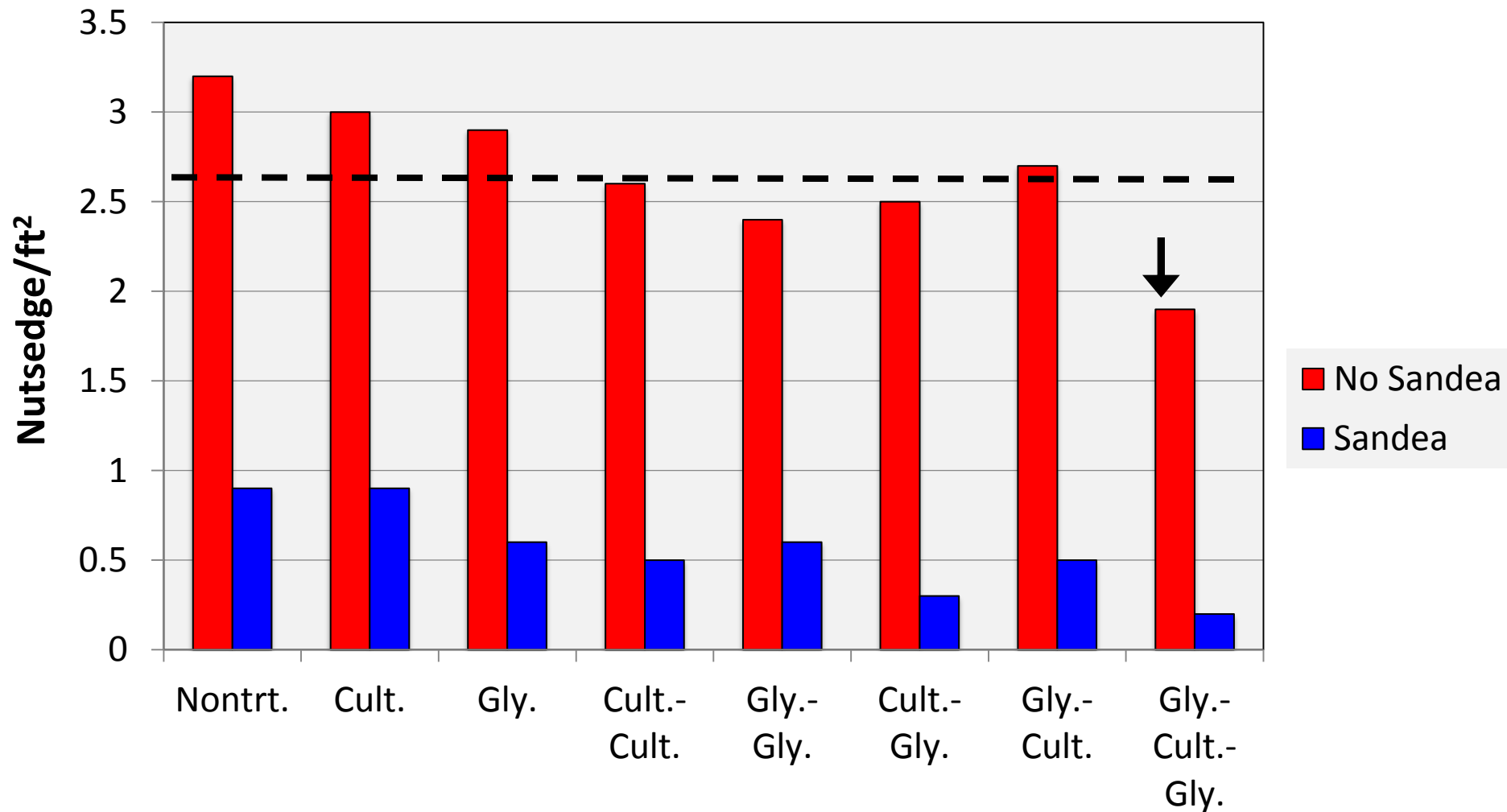
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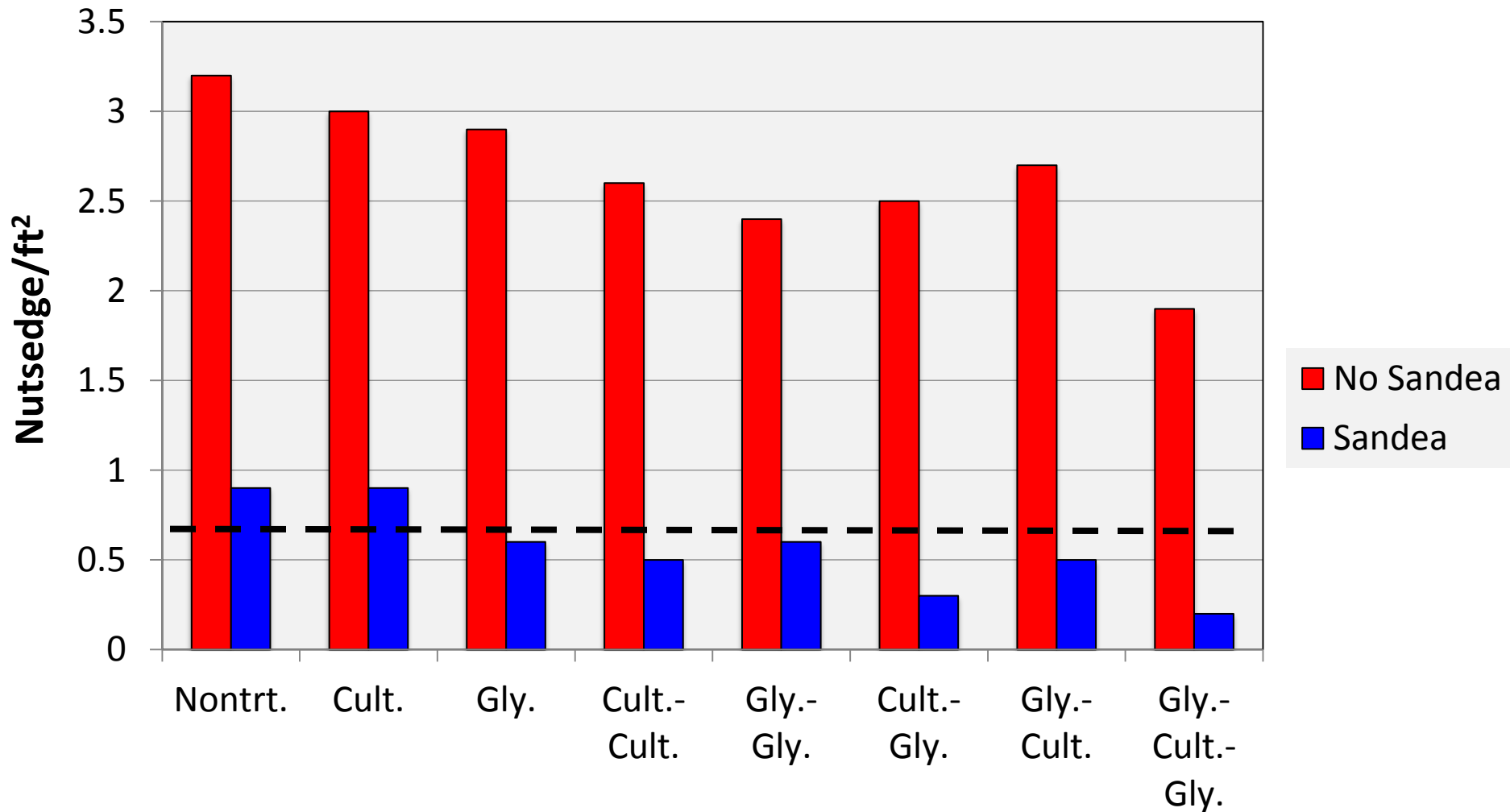


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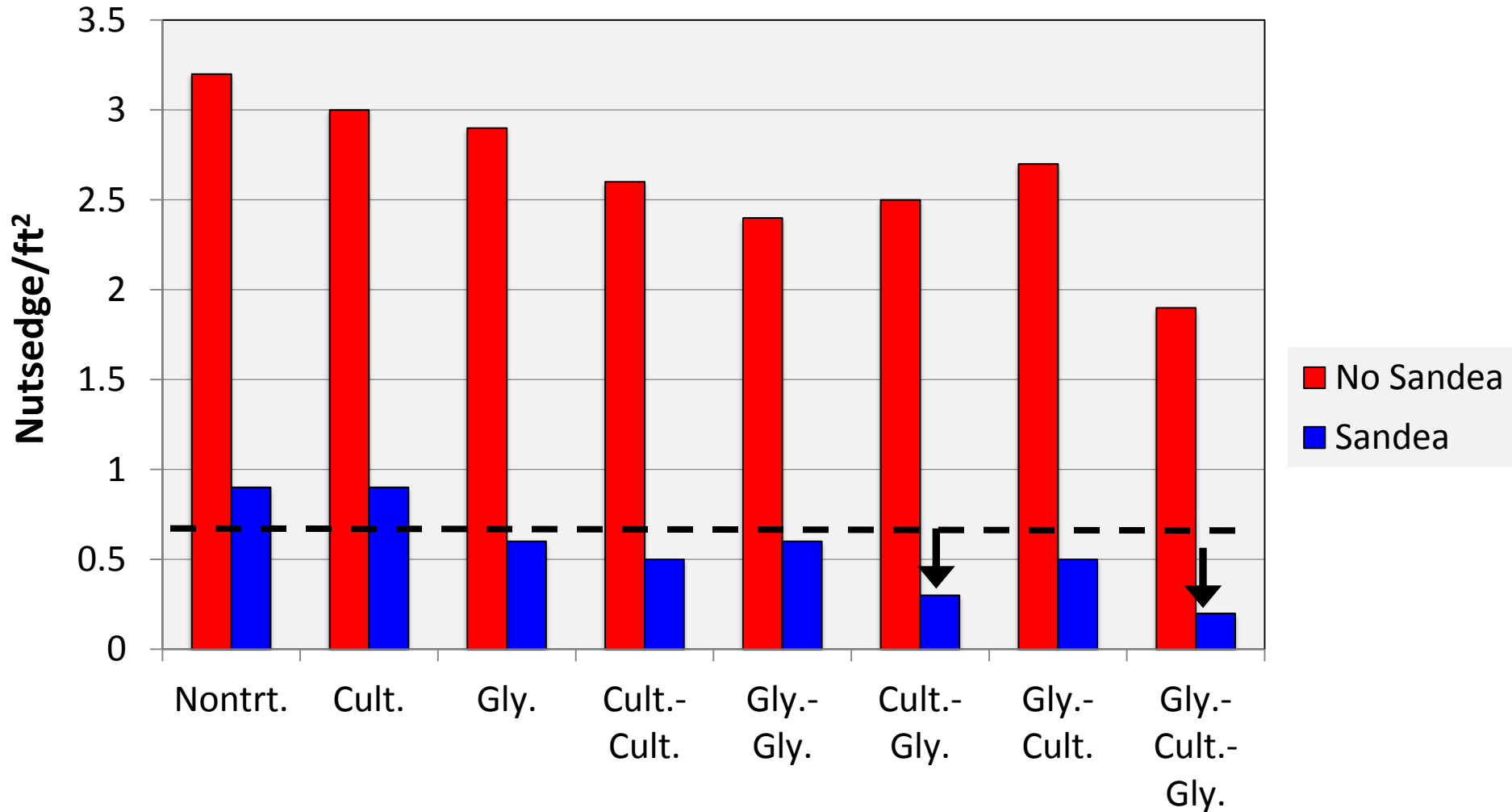




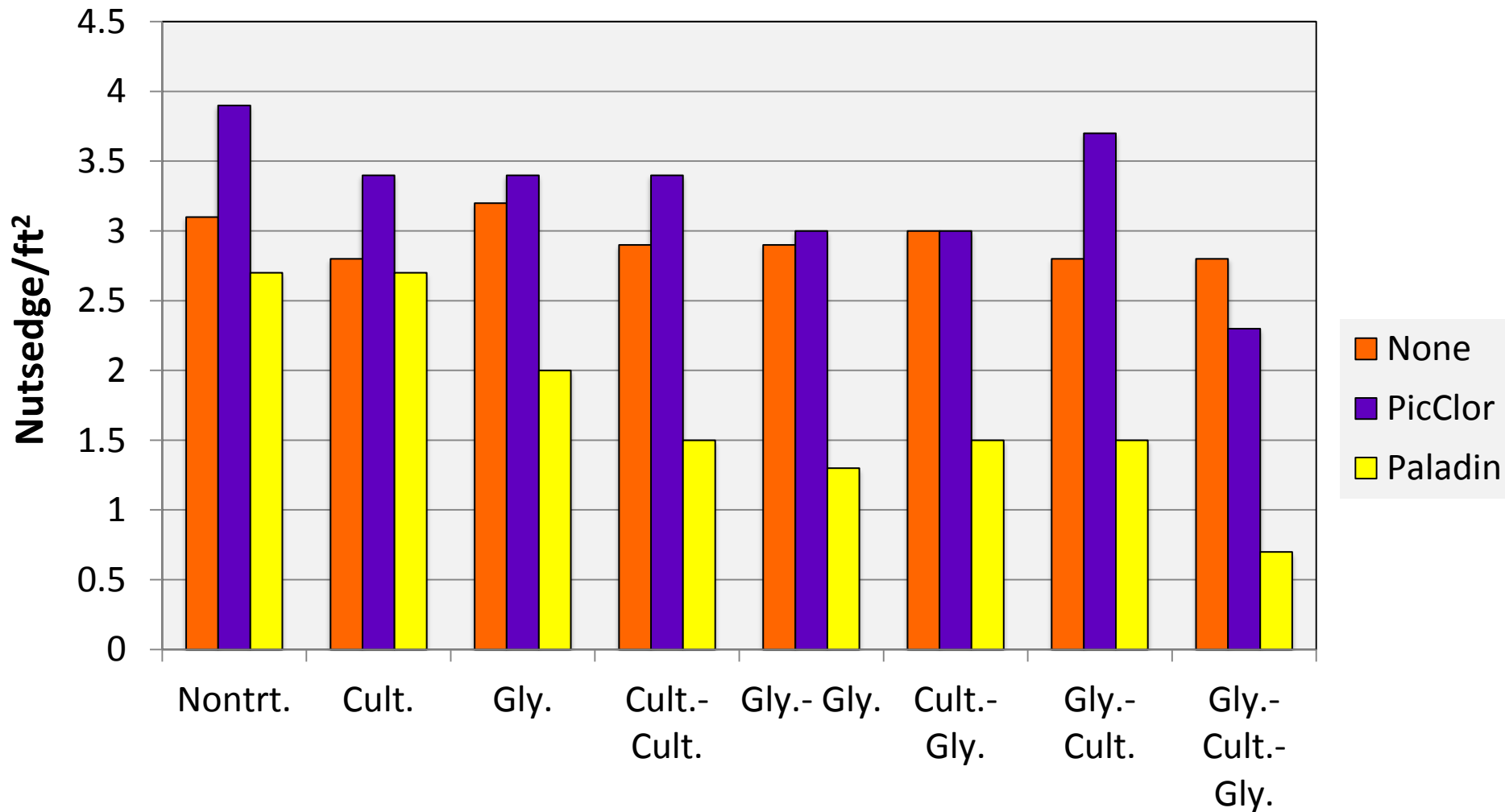
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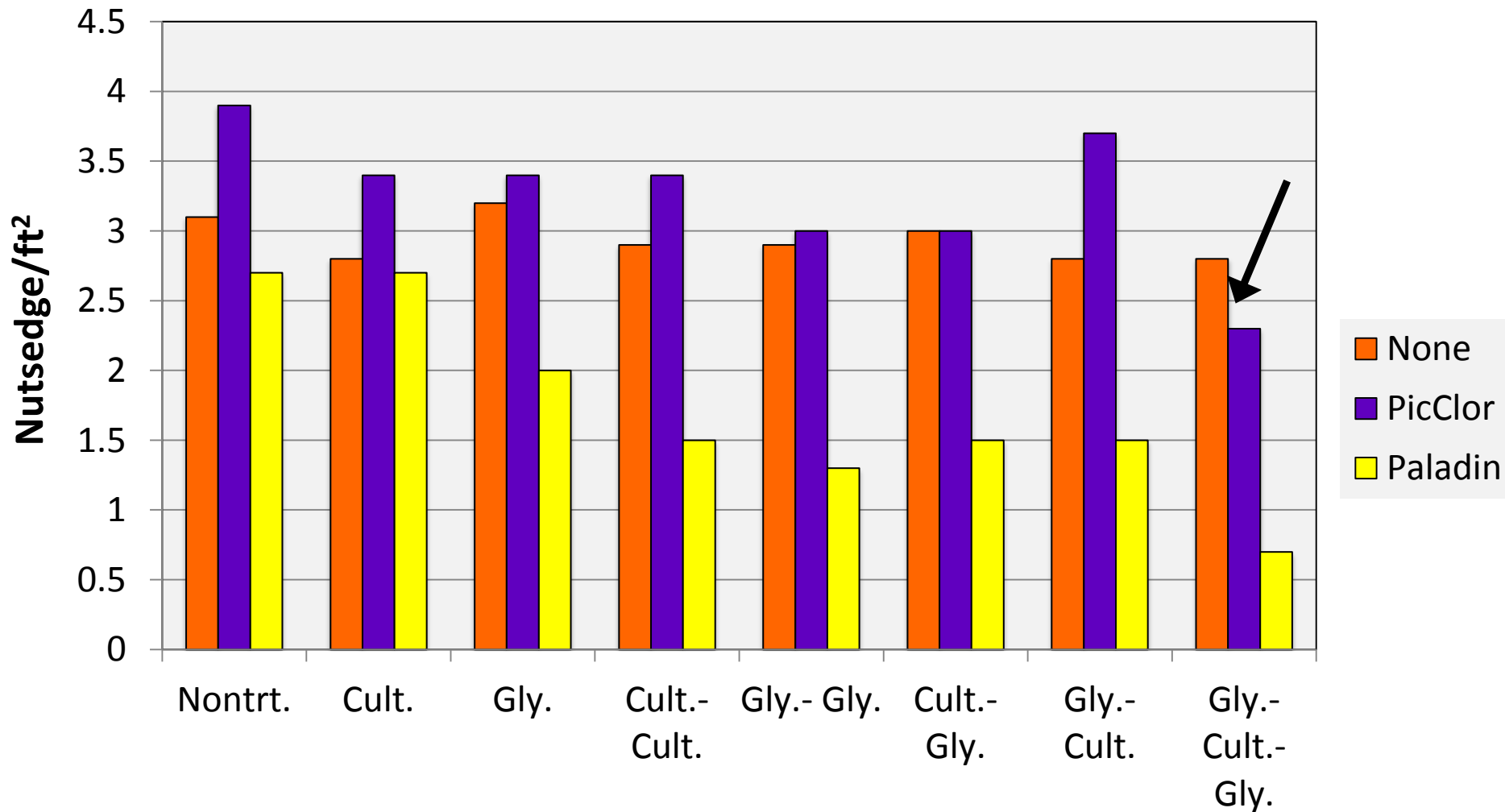
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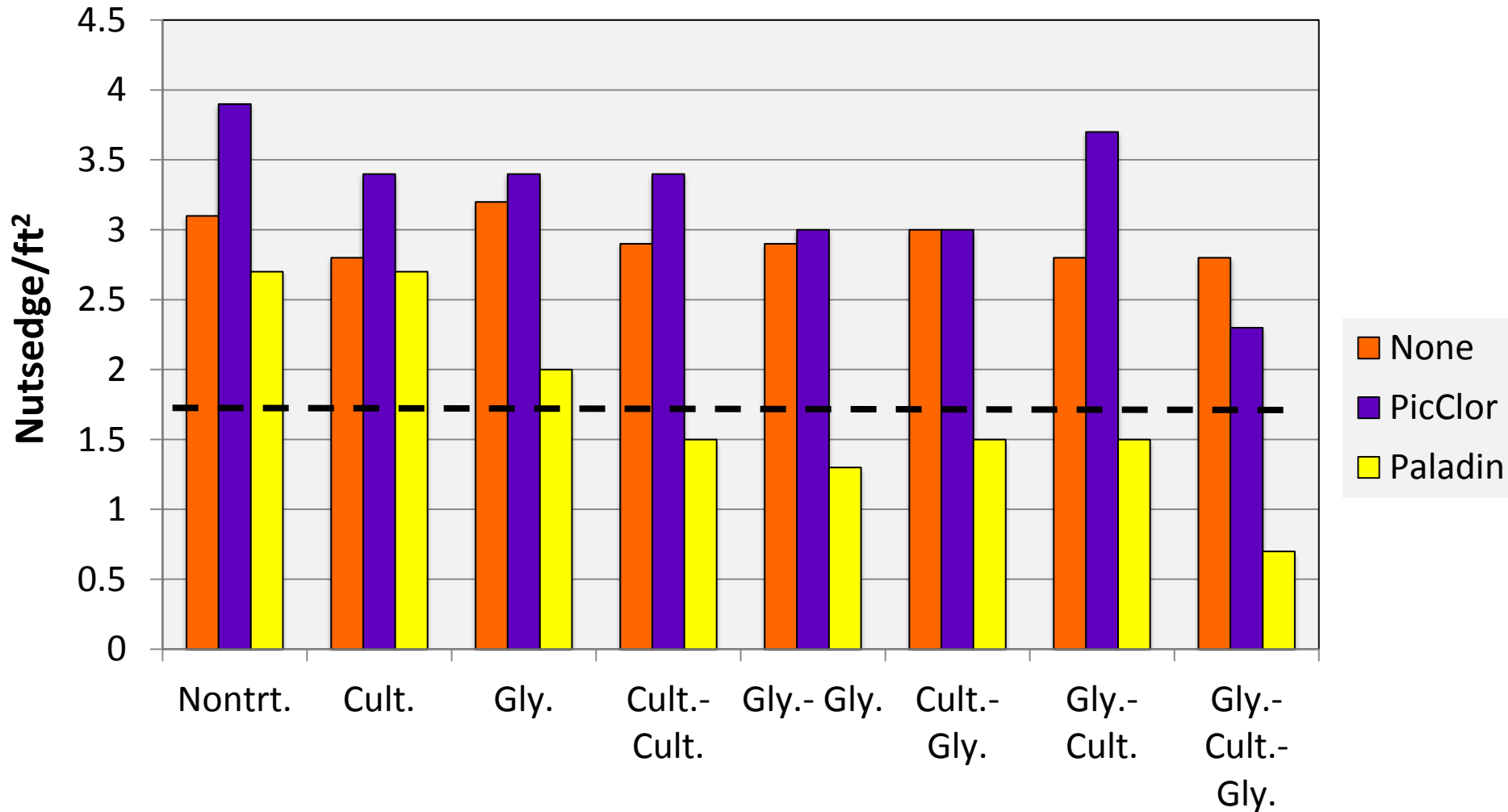
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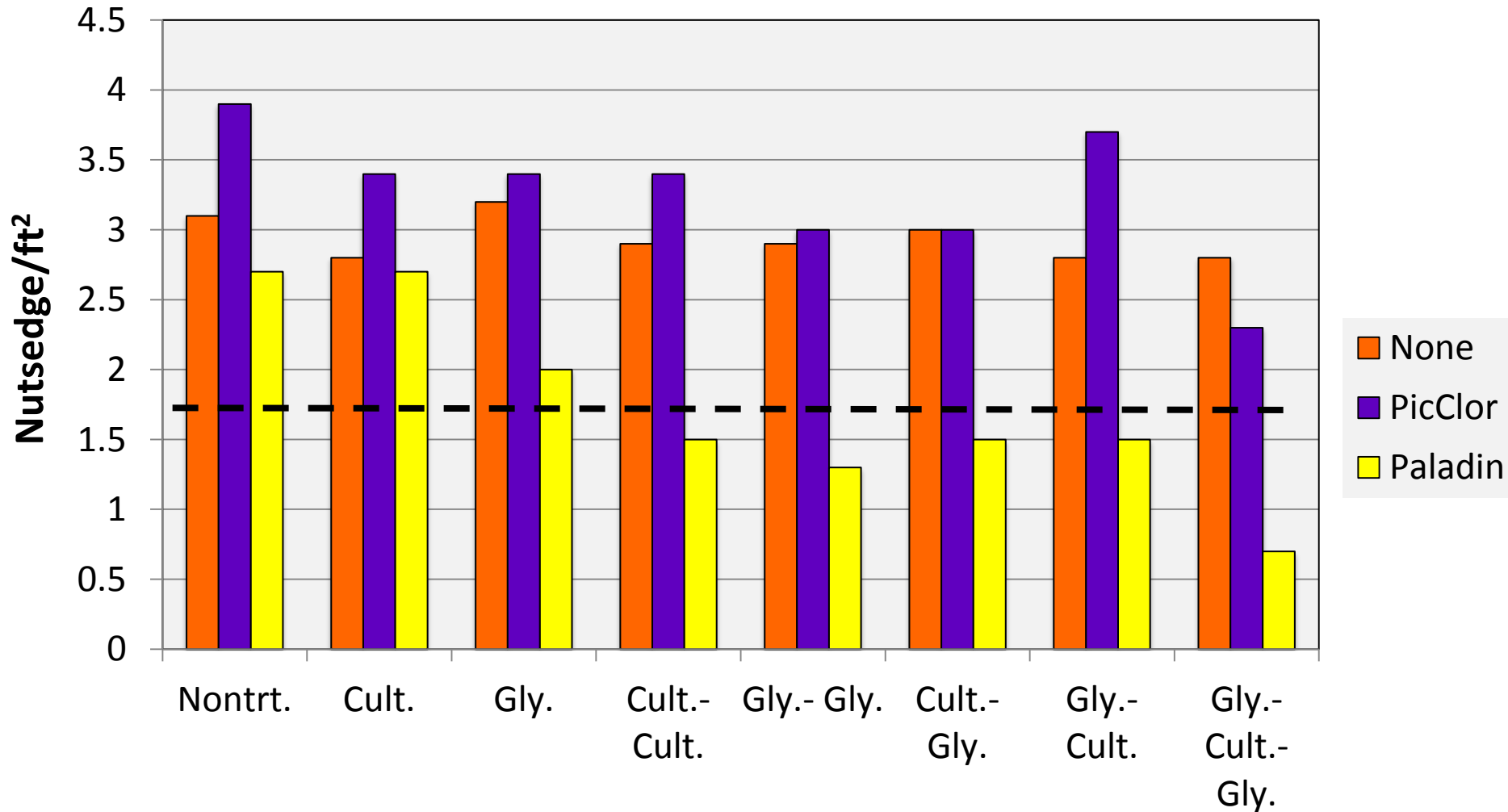
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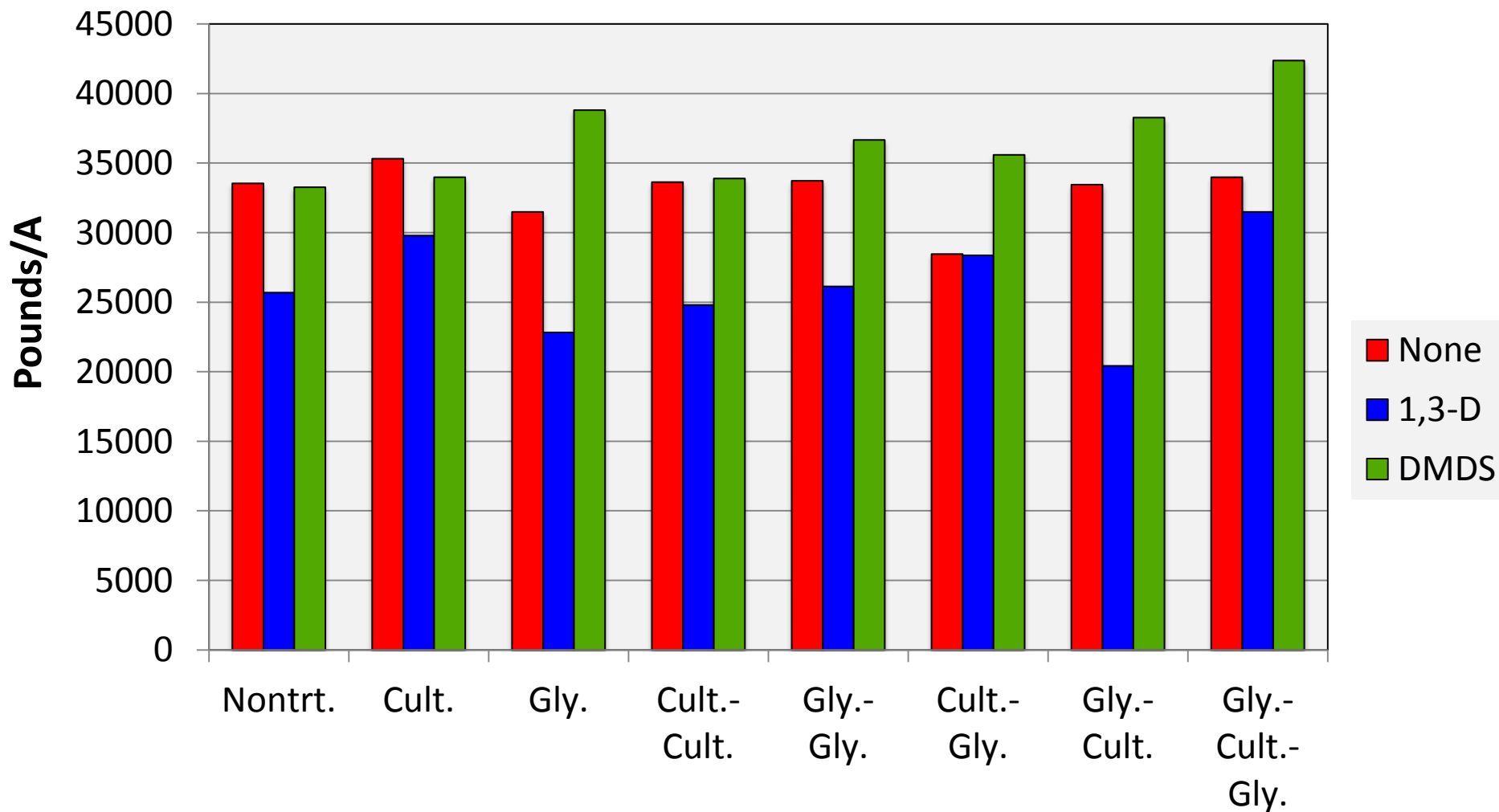
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# Effect of fumigants without Sandea on marketable yield.



# Conclusions

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- A single cultivation or glyphosate application during the fallow provides poor control of nutsedge
- Gly.-Cult.-Gly. had the greatest nutsedge control across all fumigants
- Cult.-Gly. or Gly.-Cult. had excellent control when combined with Paladin



# New herbicide registrations

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# League

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- Active ingredient: Imazosulfuron
- 4 to 6.4 oz./A
- No more than application per year
- PRE & POST control: yellow nutsedge, purslane, pigweed (except livid)
- Use only in a tomato-tomato rotation
- Also pepper (bell & nonbell) label

# Reflex

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- Active ingredient: fomesafen
- Up to 1 pt./A
- Do not use in Dade County
- PRE under the plastic
- Control of pigweed, eastern black nightshade, and grass species

# Spartan

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- Active ingredient: sulfentrazone
- 2.25 – 3.0 fl.oz./A (<1.5% OM, coarse soil)
- Transplanted tomato only
- PRE under the plastic



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