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Keys to Expanding Adoption of Soil Conserving Farming Systems in the Pacific Northwest: A Comparison of Low- and High-Adoption Counties

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Introduction

Idaho, Oregon and Washington (PNW) received over \$30 million for the STEEP Project during 1976-2009. However, the PNW still lags other regions in adoption of direct seeding and conservation tillage.

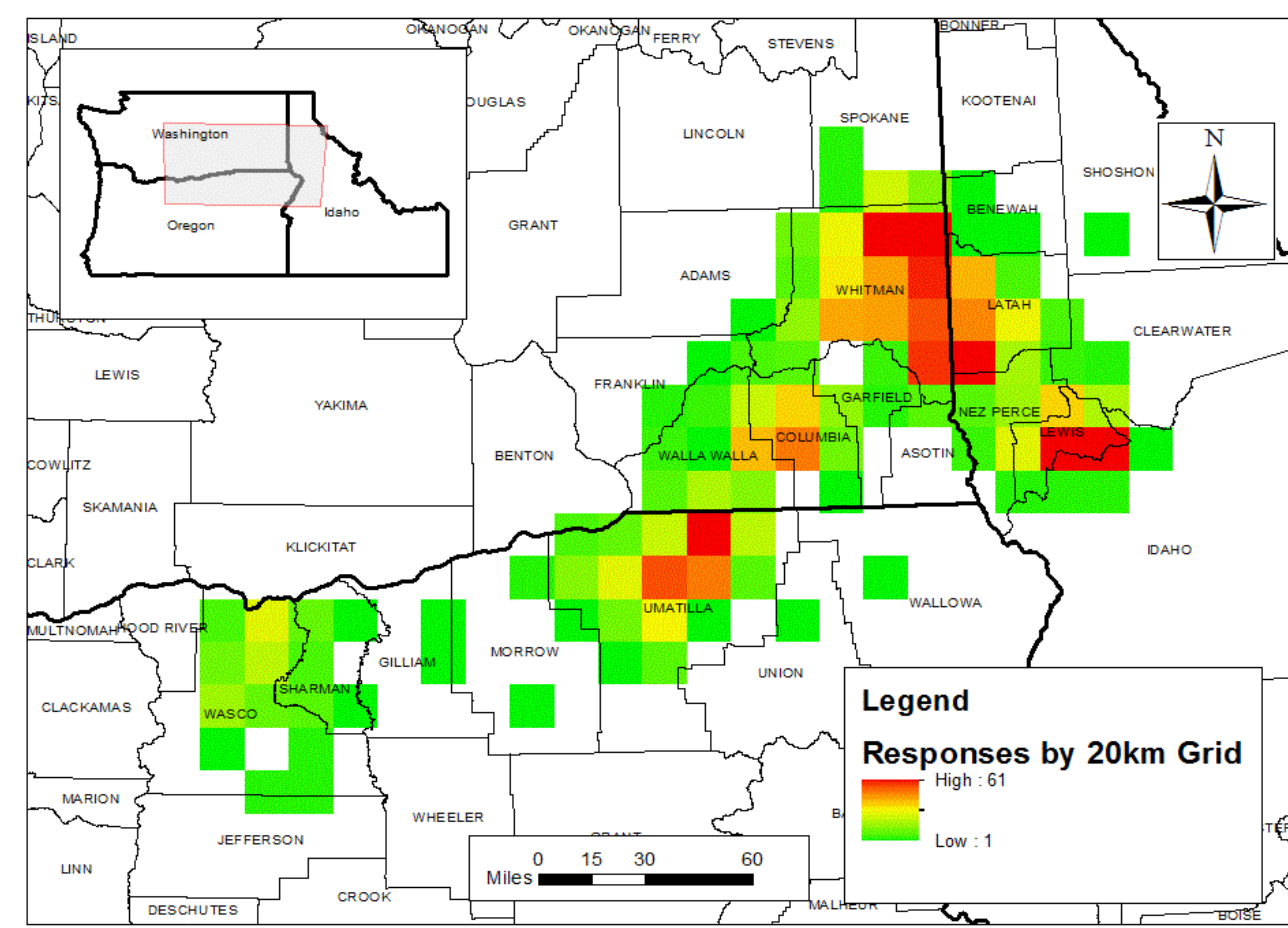
Based on CTIC direct seed rates three low-adoption counties are selected: Latah ID (12.8%), Umatilla OR (10.8%) and Whitman WA (12.0%). The high direct seed counties are, Lewis ID (33.4%), Wasco OR (69.7%) and Columbia WA (67.9%).

Objective

We investigate the reasons for inconsistent adoption of conservation tillage over counties in the PNW by identifying the contextual and individual differences between low- and high direct seed adoption counties.

Survey Tool

This study used a mail survey following the Dillman method. The target population in this study was individual farms of 80 or more acres in the selected counties.

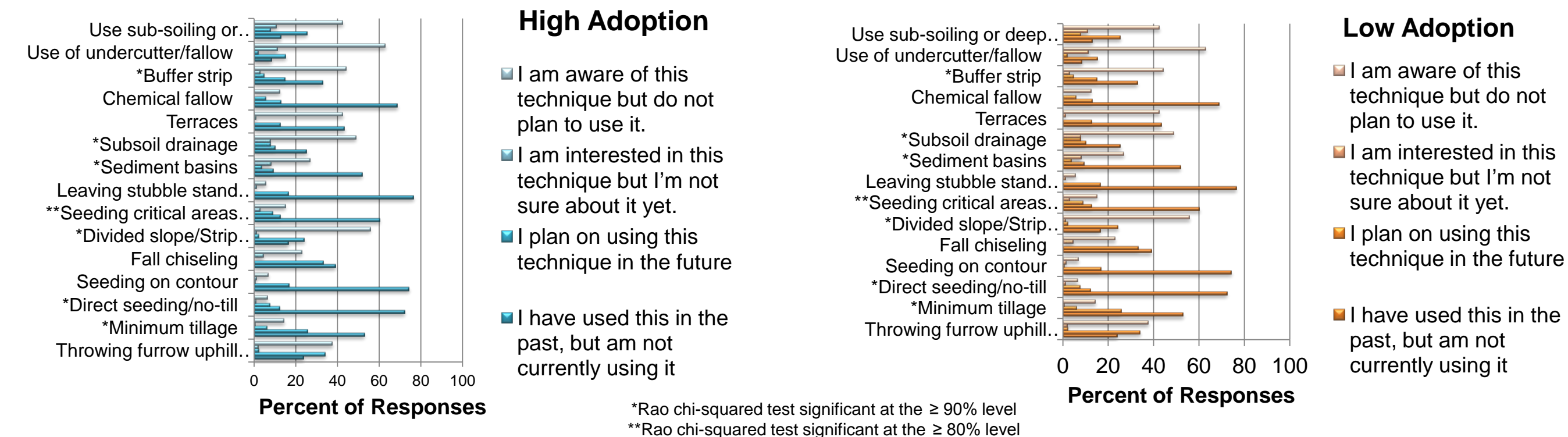


STEPP Survey Response Density

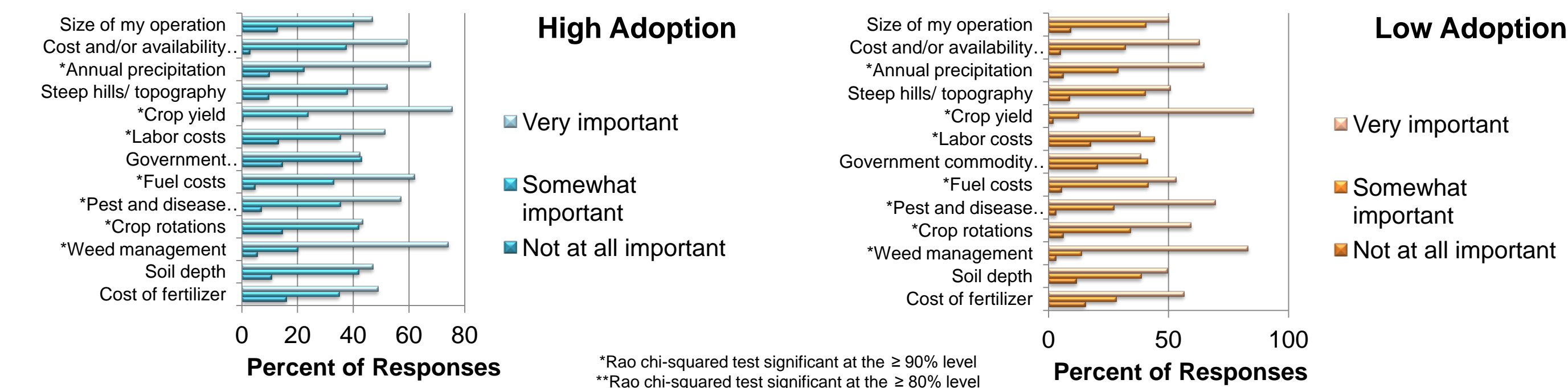
Comparison Analysis

The survey results are segregated into low and high direct seed adoption counties. We then created cross-tabulations of selected questions which may answer the posed research questions. The cross-tabulations results were tested for significance of difference between low and high direct seed adopting counties using the Rao-Scott Chi-Square Test of Significance.

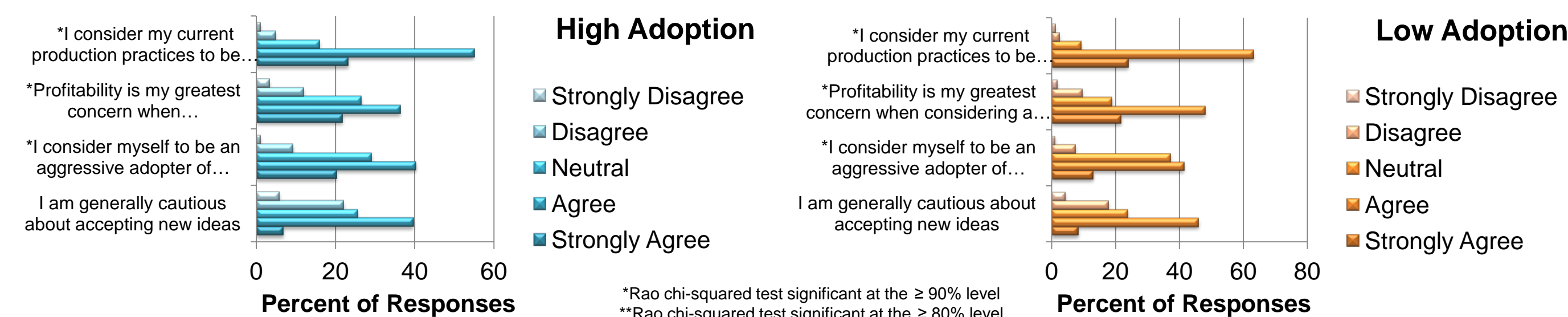
Q. This section lists a series of farming practices related to soil erosion control. Please circle your level of use or interest in each item. *In this questionnaire, the terms "no-till" and "direct-seeding" are used interchangeably because they describe generally similar practices, but farmers may prefer one term over the other.*



Q. How important are each of the following items for your decision to **primarily** choose a tillage practice (either traditional tillage or direct seeding)?



Q. Please indicate your level of agreement or disagreement with each of these statements.



Conclusions and Implications

Our research increases the understanding of socioeconomic changes attributable to STEEP research and reveals some of the reasons for inconsistent adoption of conservation tillage over counties in the PNW.

Producers in counties with high adoption rates of direct seed methods are more likely (having statistically different views than producers in low adopting counties):

- to be using no tillage and non-soil disturbance farming techniques of all types, including direct seed and other techniques,
- to choose their tillage practices based on concerns about fuel and labor costs,
- to view themselves as aggressive adopters and less concerned with profitability of those practices,
- to view soil erosion, sedimentation, and air quality as a problem in their area.

There were no statistical differences in how each group viewed:

- acceptable reductions in profit per acre to reduce soil erosion,
- the type of farmer-to-farmer interaction most influential in their choices.

Acknowledgements

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References

Dillman, D., J. D. J.D. Smyth, and L. M. Christian. 2009. Internet, Mail, and Mixed-Mode Surveys: The Tailored Design Method. John Wiley and Sons, Inc. Hoboken, N.J.

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