

Appendix D
Covariate Associations

APPENDIX D

Data Displays for the Covariate Associations

The following figures graphically display relationships between the dependent variables and measures of dioxin for the covariate associations. The panels are arranged as follows:

Panel	Group	Assumption	Dioxin Measure
a	Ranch Hand	Minimal	Initial
b	Ranch Hand	Maximal	Initial
c	Comparison	--	Current
d	Ranch Hand	--	Current

Dioxin measures are presented in original units, but spacing of intervals is based on the logarithm (base 2) scale, similar to the statistical analysis. The dependent variable is also presented in original units. For presentation purposes, spacing for the alcohol variables (current alcohol use, lifetime alcohol history, current wine use, and lifetime wine history) is based on the square root scale. For continuous variables, current dioxin values of 0.0 ppt are displayed as 0.3 ppt. For these variables, the reference line, which spans the range of dioxin, indicates the general relationship between the (transform of the) dependent variable and \log_2 dioxin.

For discrete variables with two levels, back-to-back histograms are presented for the two covariate strata. Table 5-1 provides sample sizes for each histogram. Dioxin values given on the vertical axis represent the midpoints of the dioxin intervals (e.g., the dioxin value of 64 ppt represents the interval 32.0 ppt to 128.0 ppt). For discrete variables with more than two levels, histograms for each covariate category are presented along the same axis. Different patterns represent separate covariate strata. Table 5-1 provides sample sizes for each histogram. Dioxin values given on the horizontal axis represent the midpoints of the dioxin intervals, similar to the dichotomous discrete variable case.

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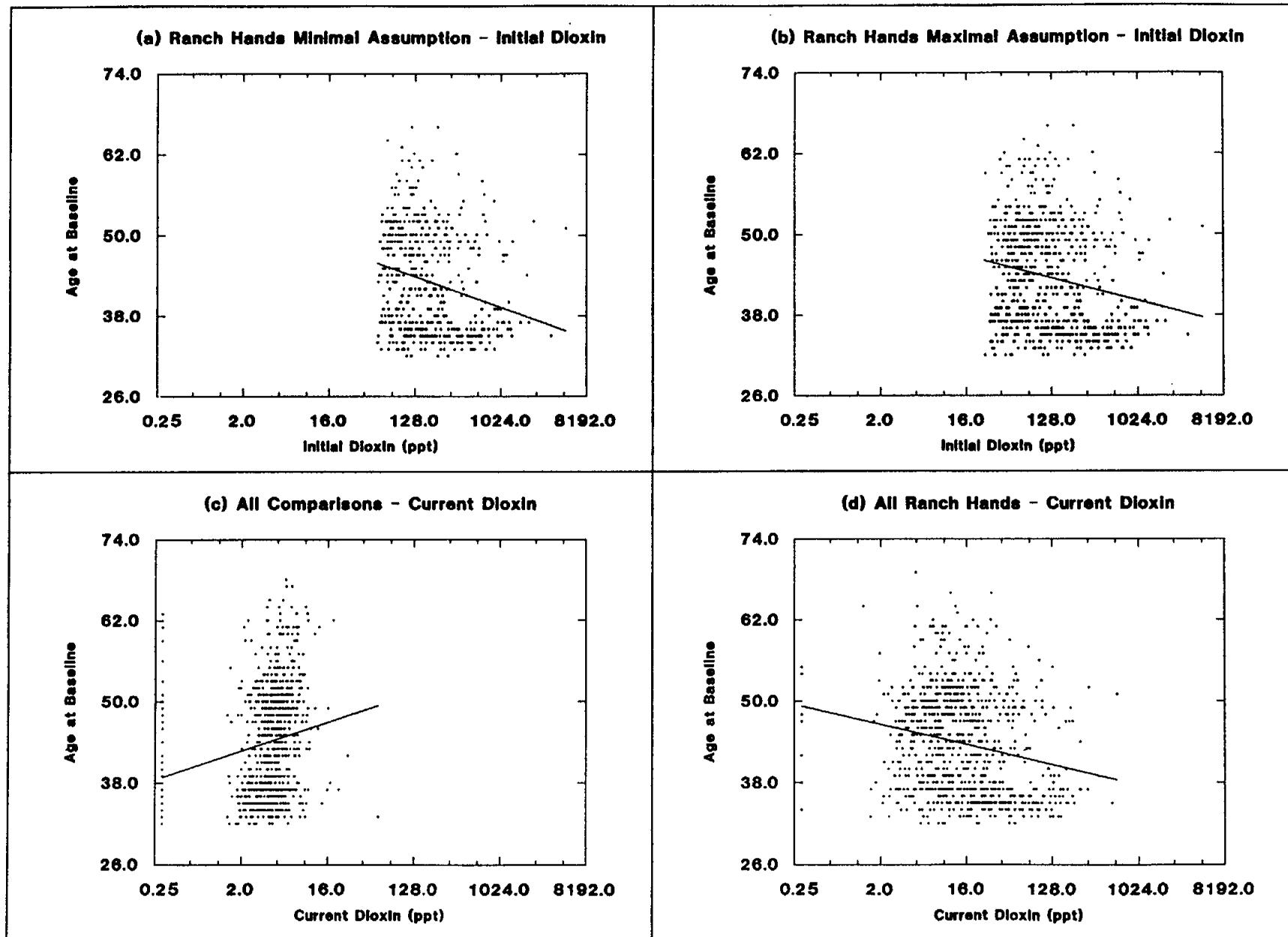


FIGURE D-1. Age (Continuous) versus Dioxin

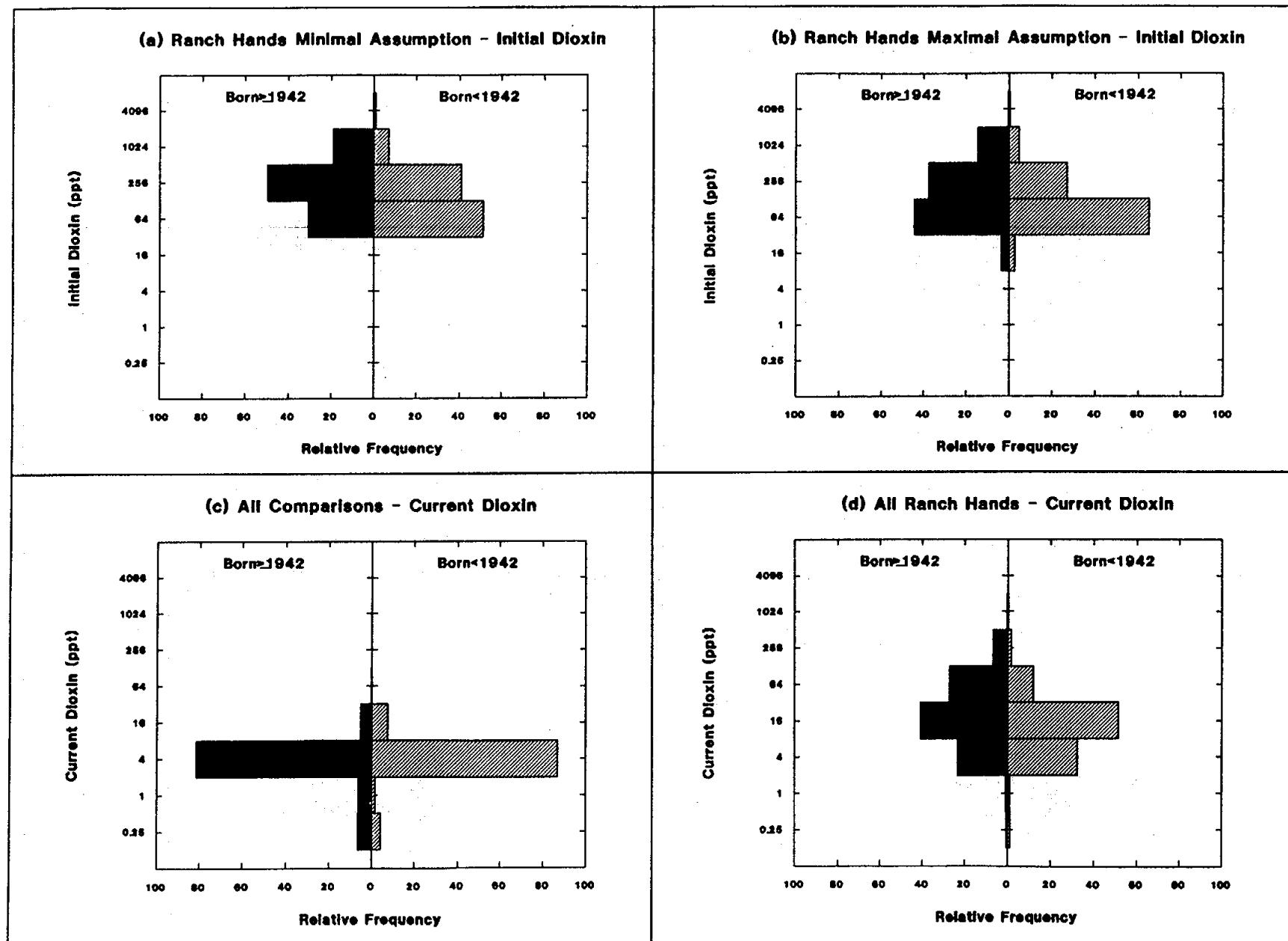
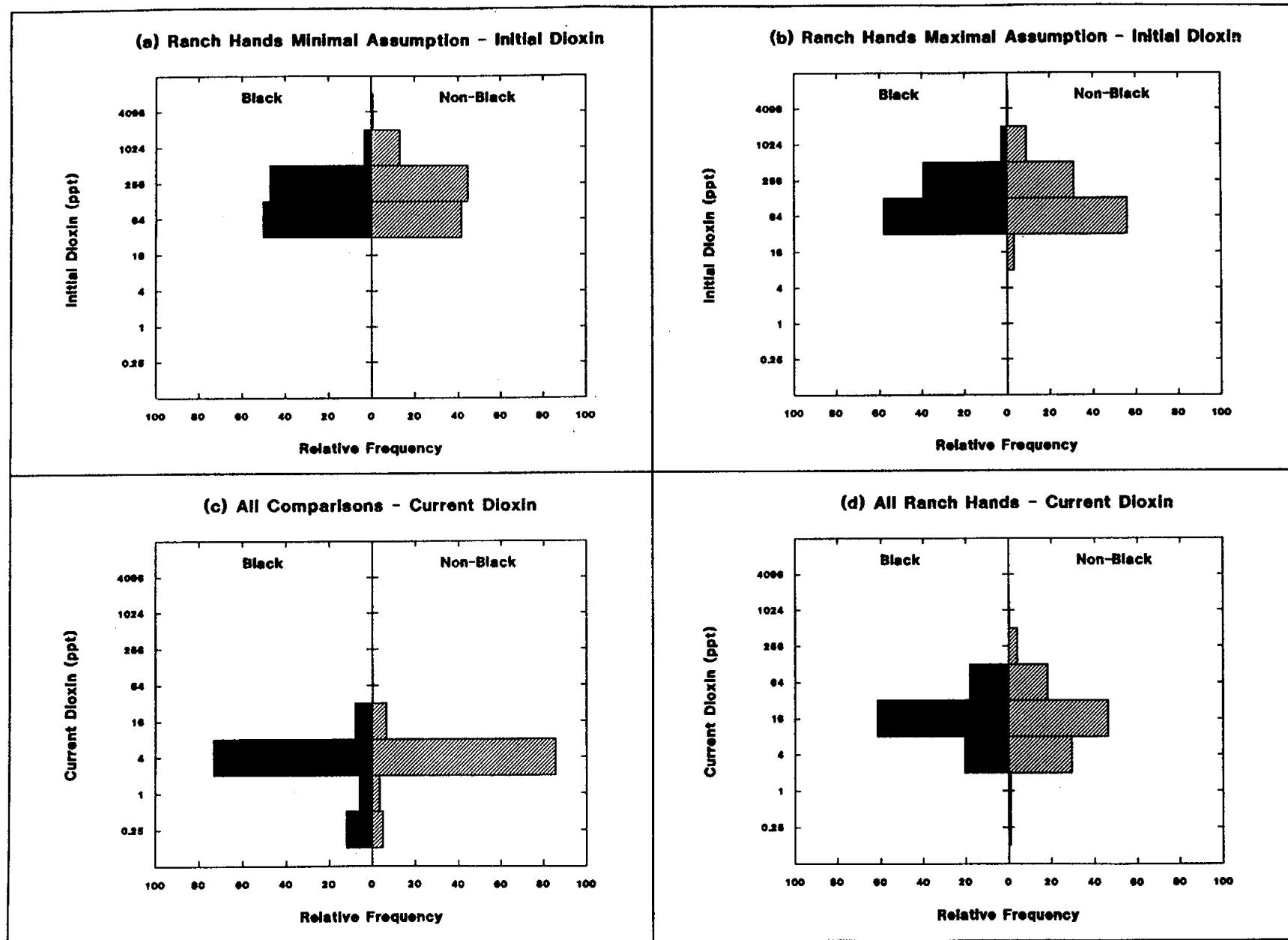
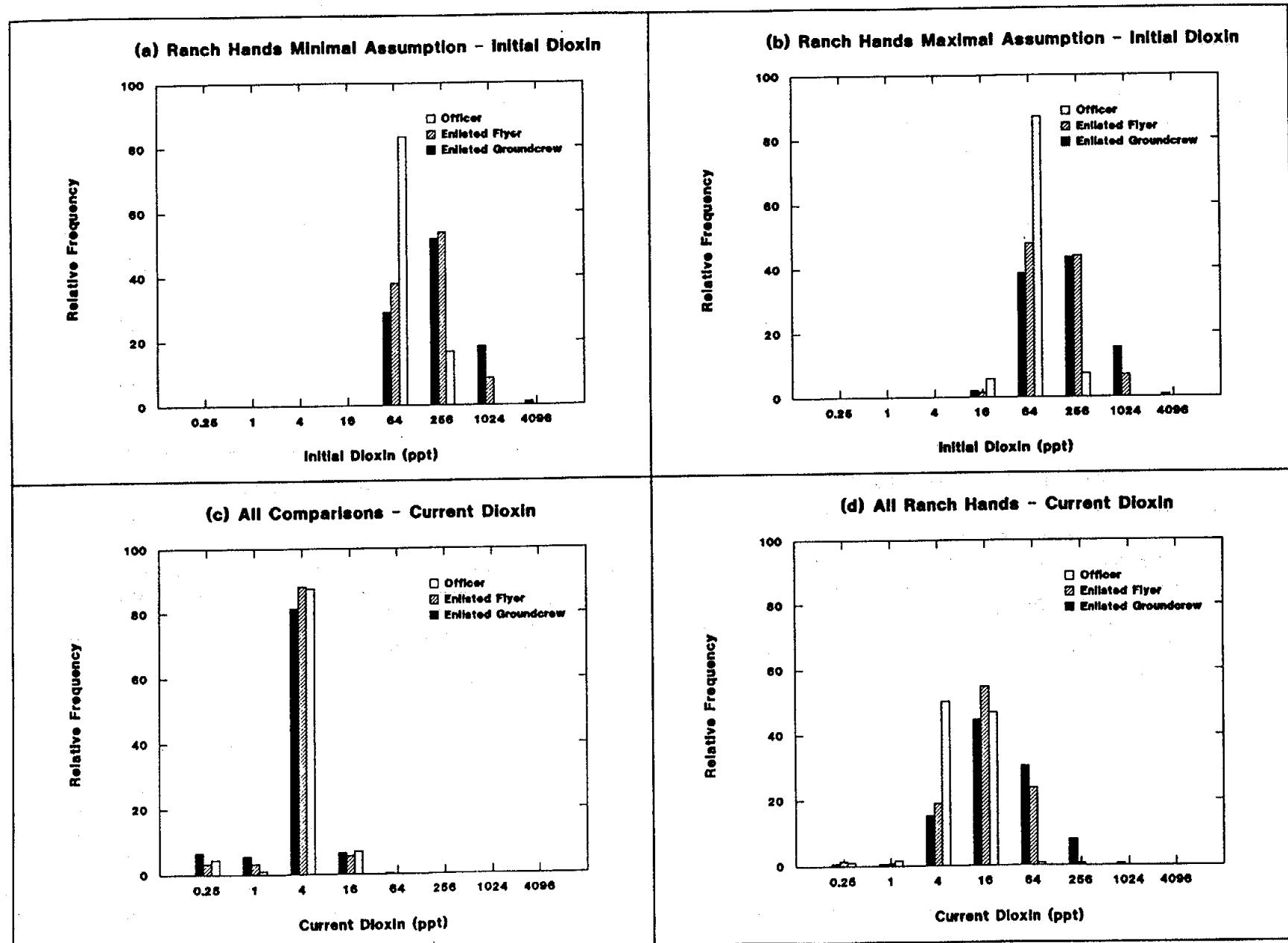


FIGURE D-2. Age (Discrete) versus Dioxin

**FIGURE D-3. Race versus Dioxin**

**FIGURE D-4. Occupation versus Dioxin**

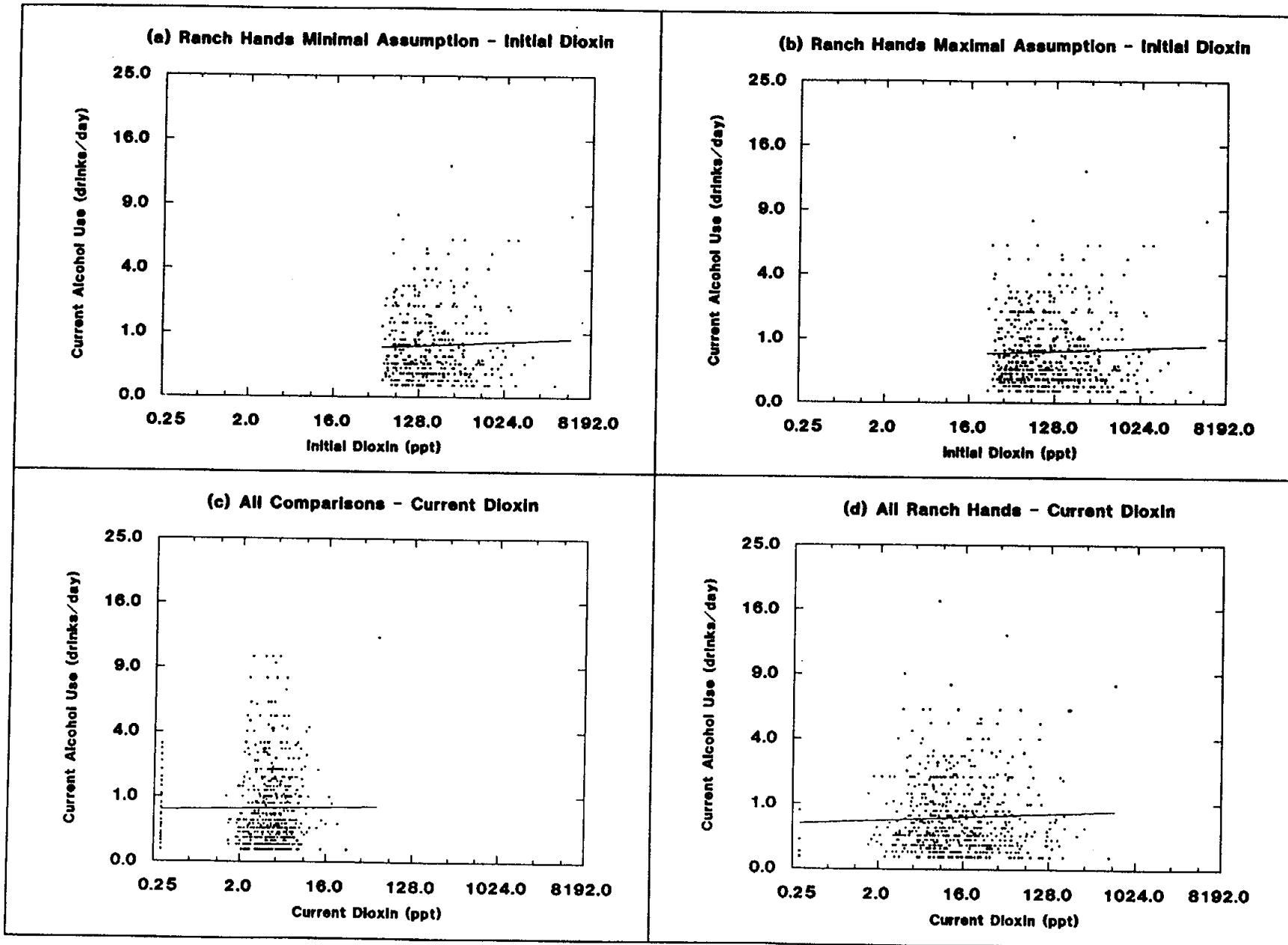


FIGURE D-5. Current Alcohol Use (Continuous) versus Dioxin

D-9

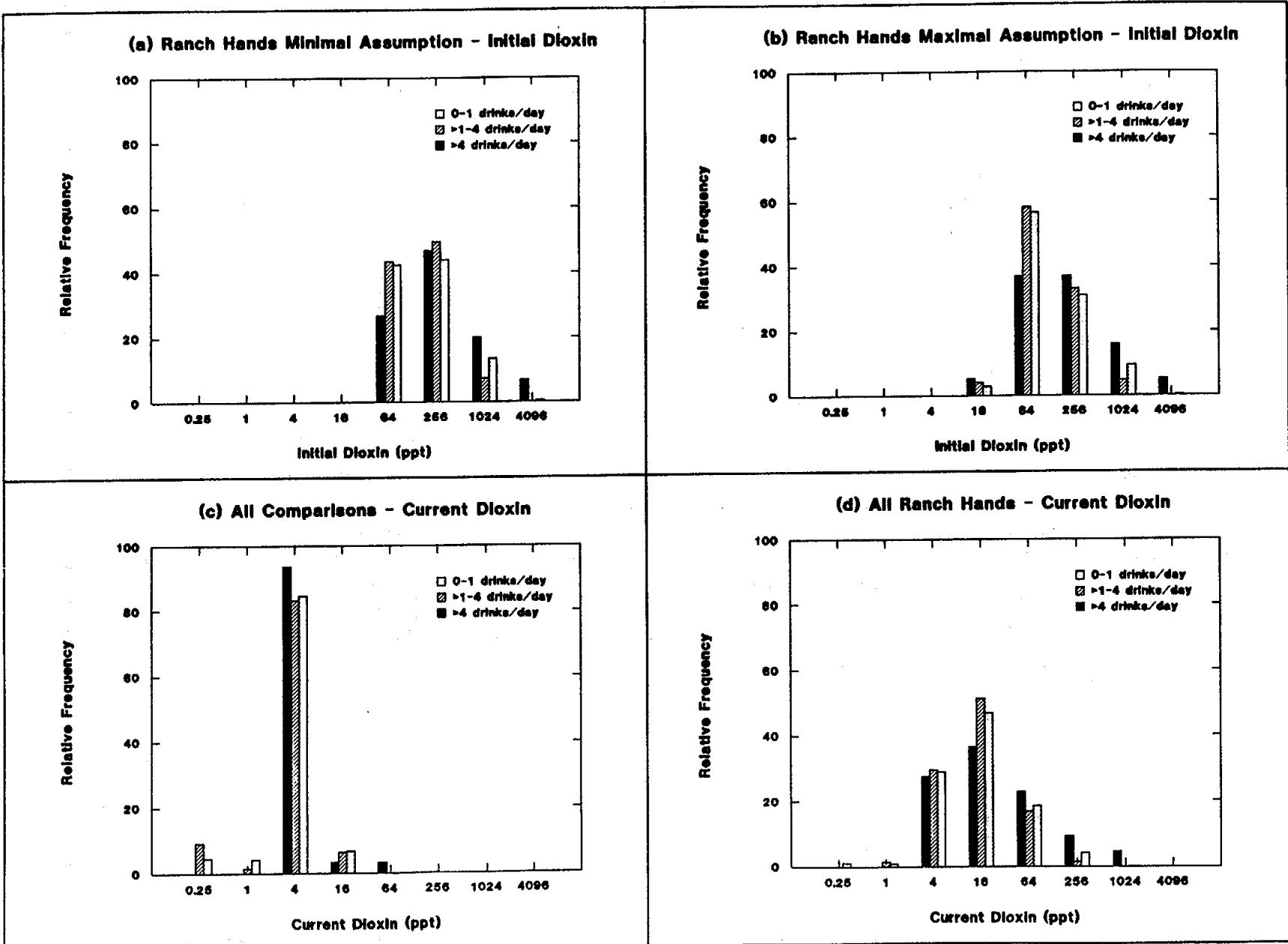


FIGURE D-6. Current Alcohol Use (Discrete) versus Dioxin

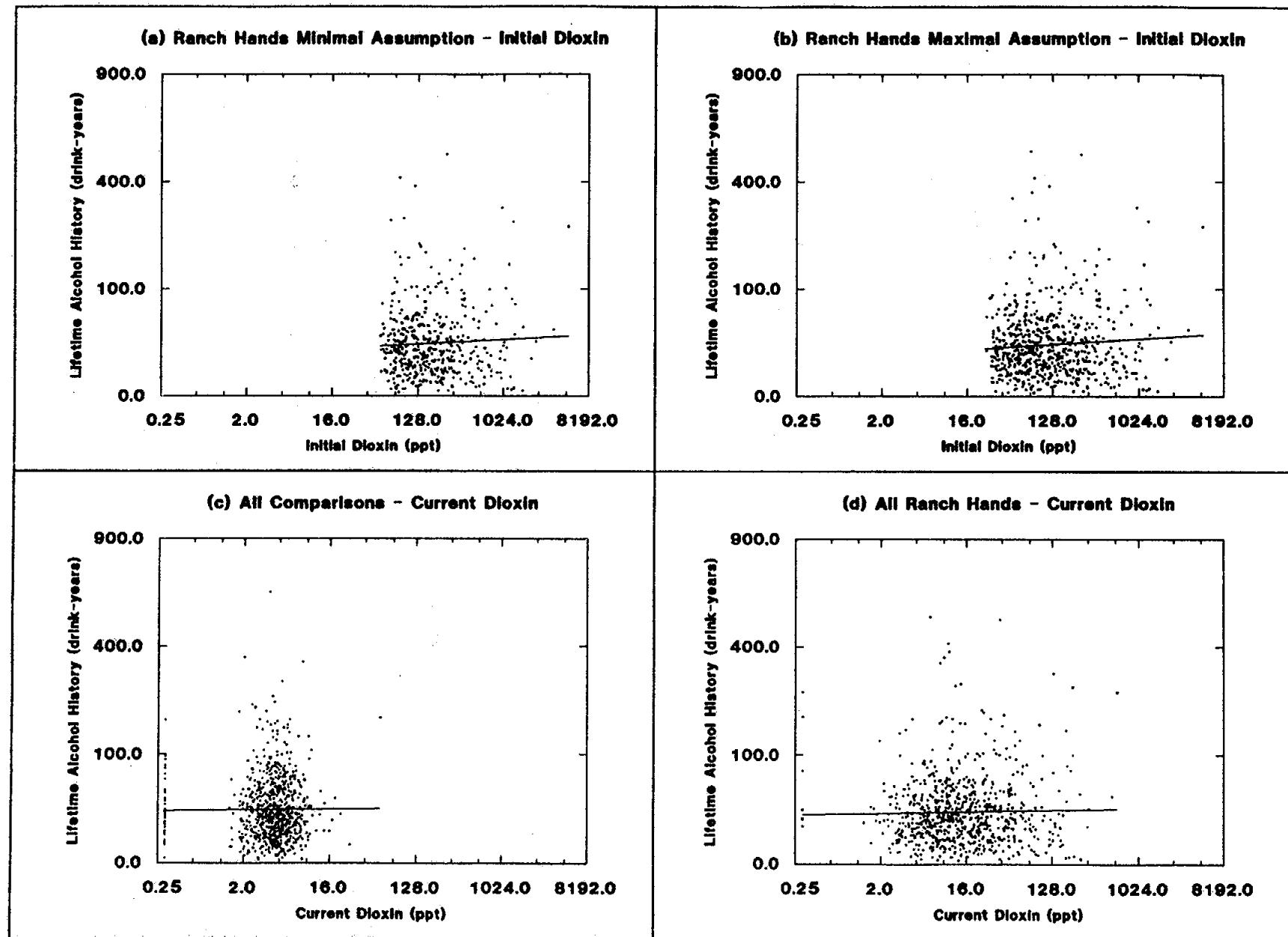


FIGURE D-7. Lifetime Alcohol History (Continuous) versus Dioxin

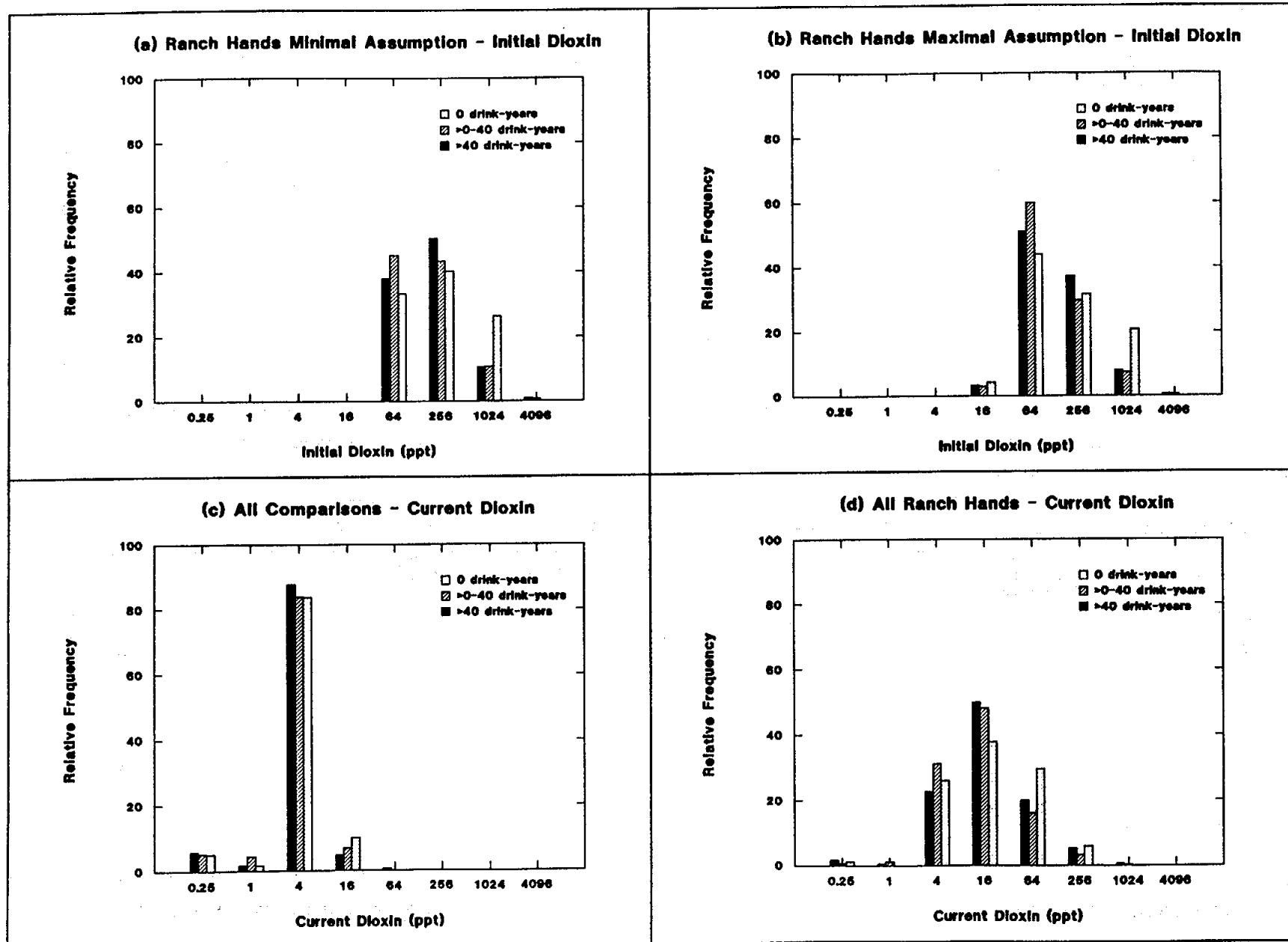


FIGURE D-8. Lifetime Alcohol History (Discrete) versus Dioxin

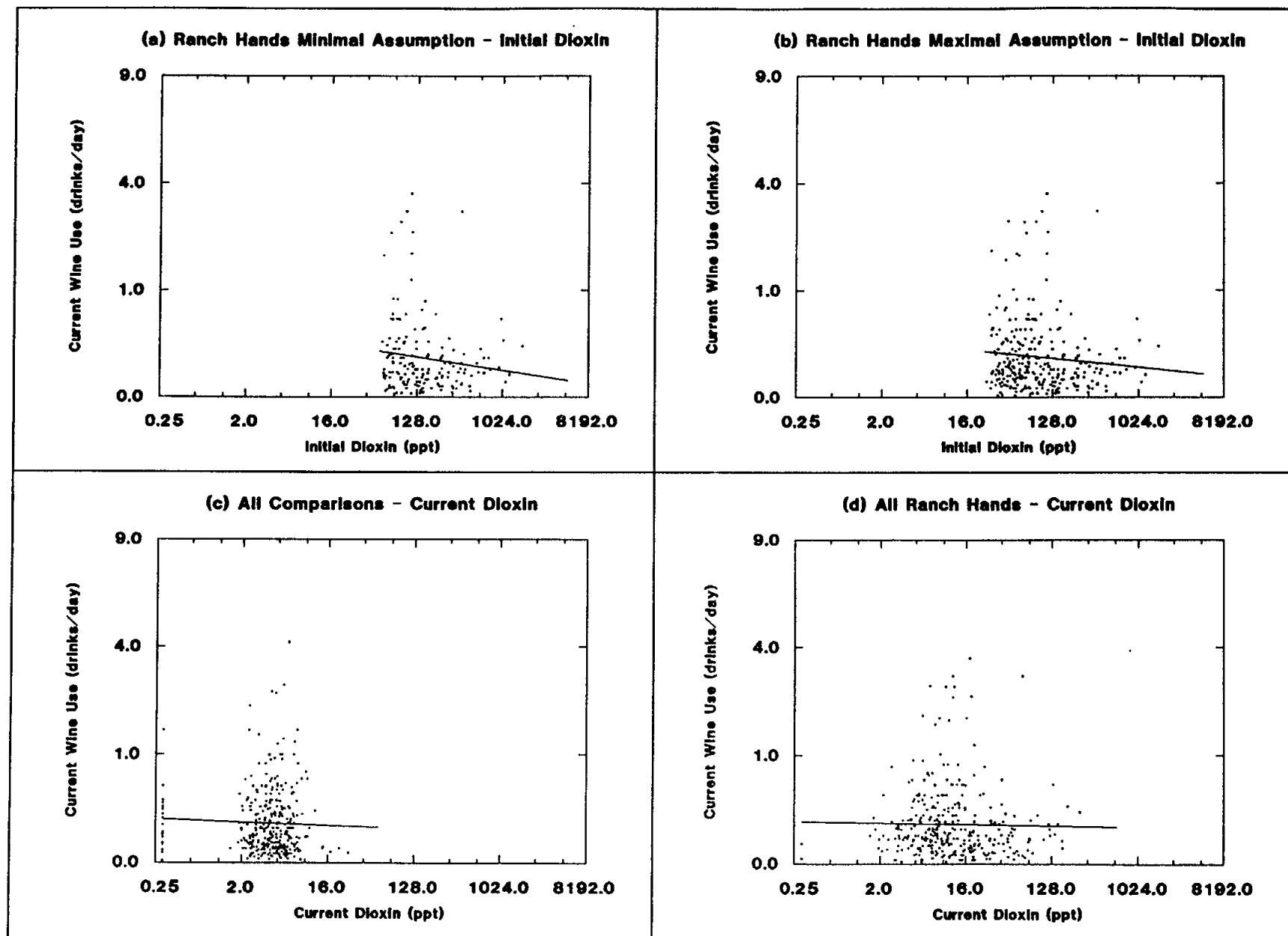
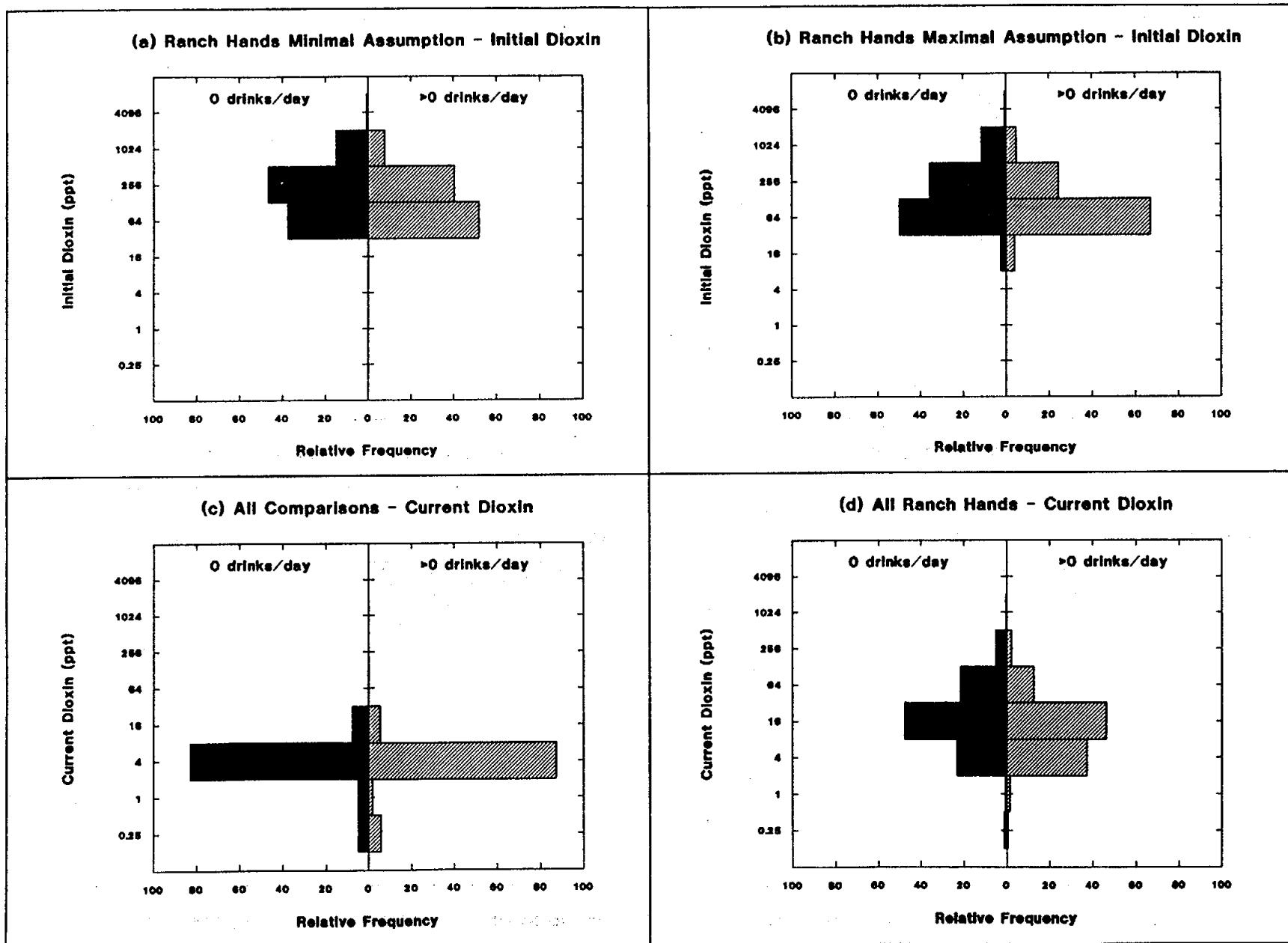


FIGURE D-9. Current Wine Use (Continuous) versus Dioxin

**FIGURE D-10. Current Wine Use (Discrete) versus Dioxin**

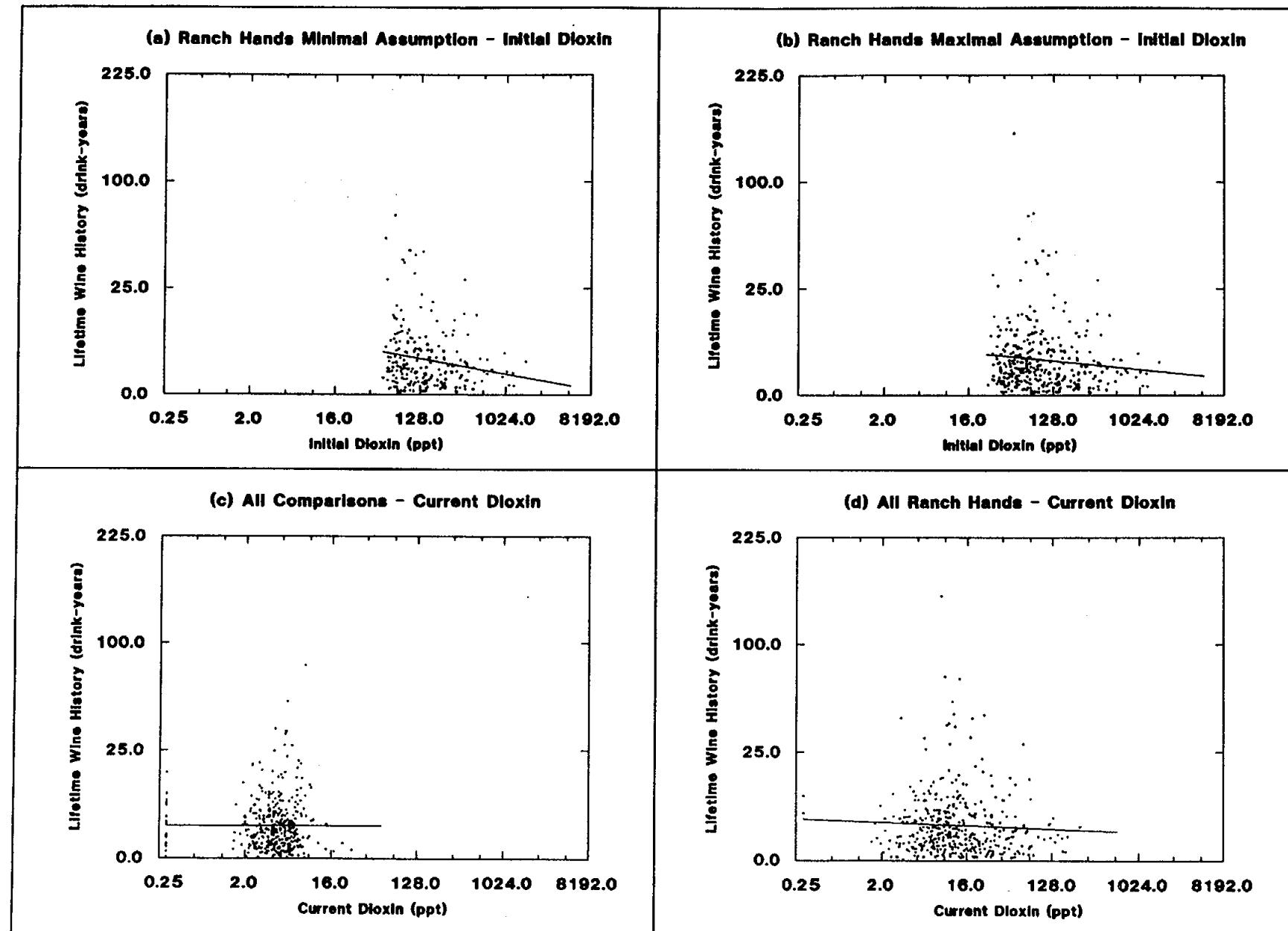


FIGURE D-11. Lifetime Wine History (Continuous) versus Dioxin

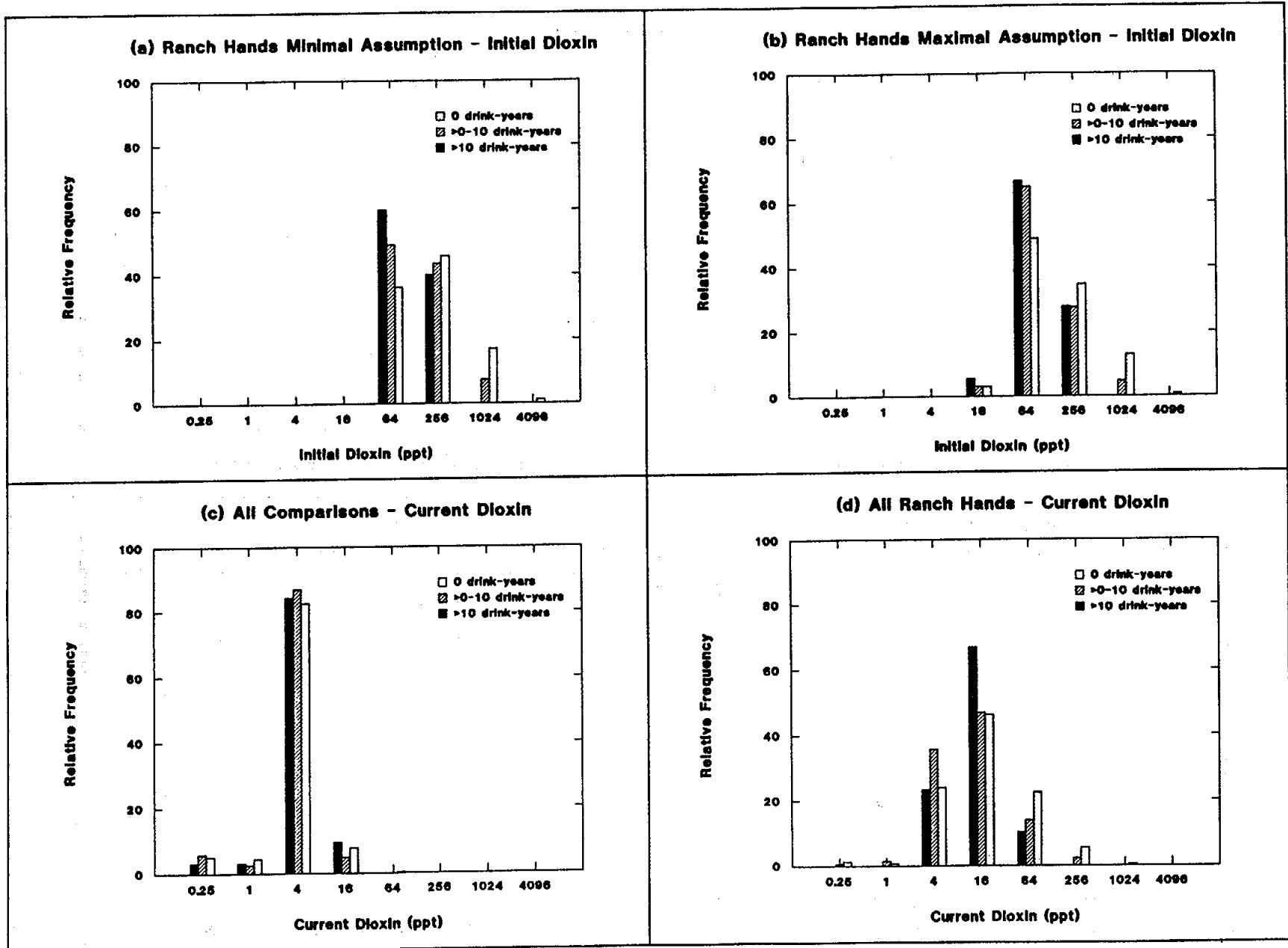


FIGURE D-12. Lifetime Wine History (Discrete) versus Dioxin

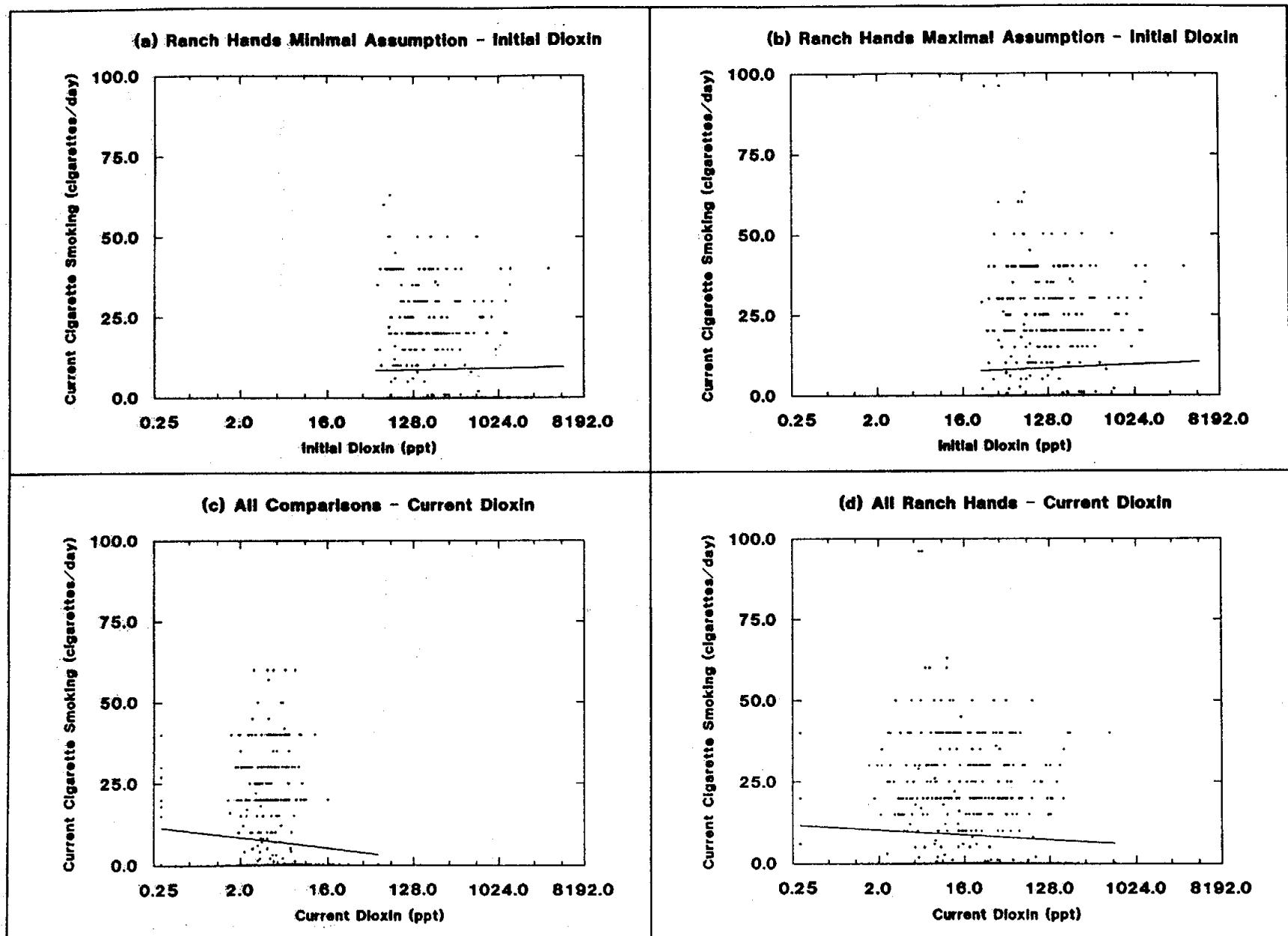


FIGURE D-13. Current Cigarette Smoking (Continuous) versus Dioxin

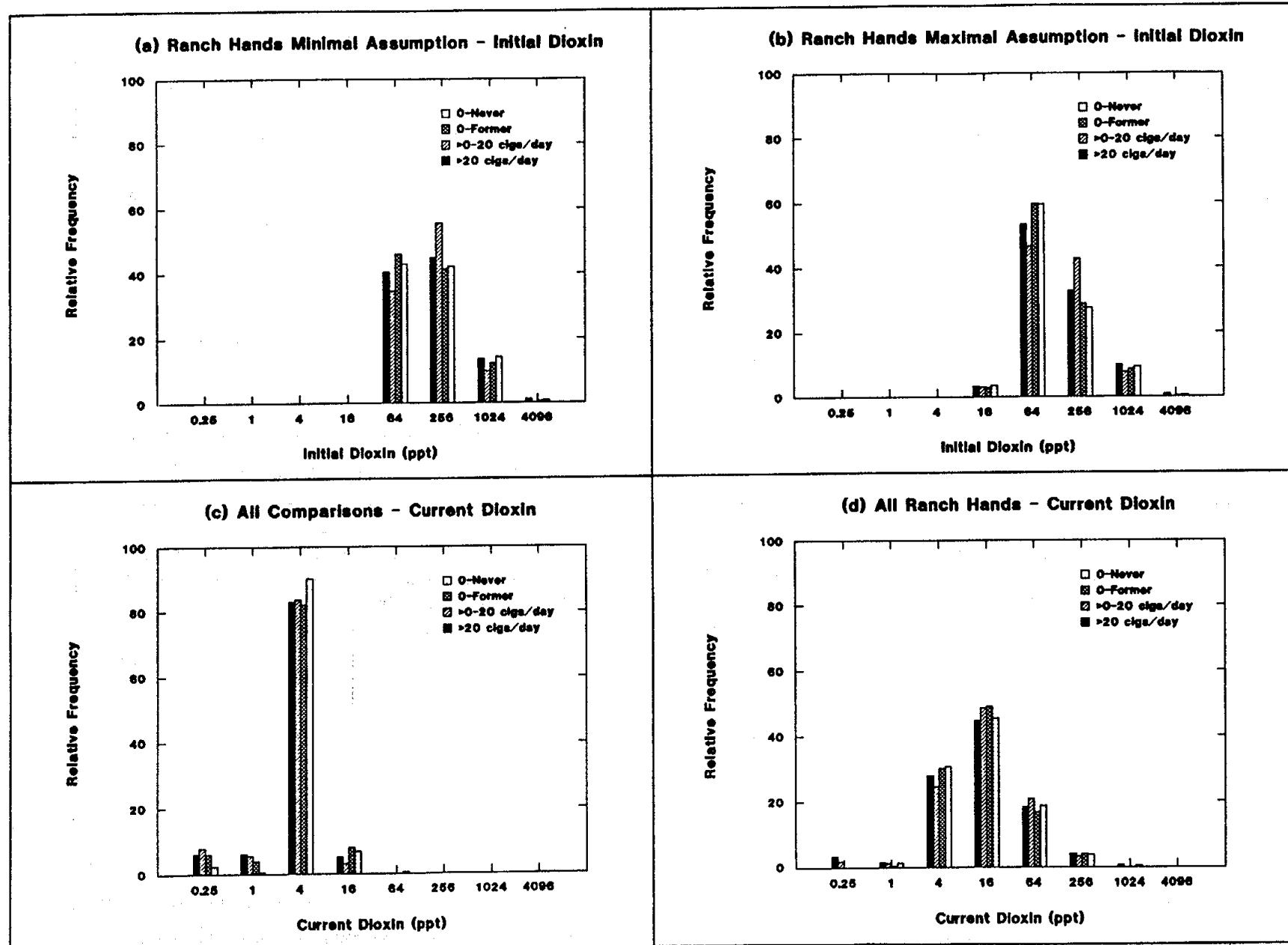


FIGURE D-14. Current Cigarette Smoking (Discrete) versus Dioxin

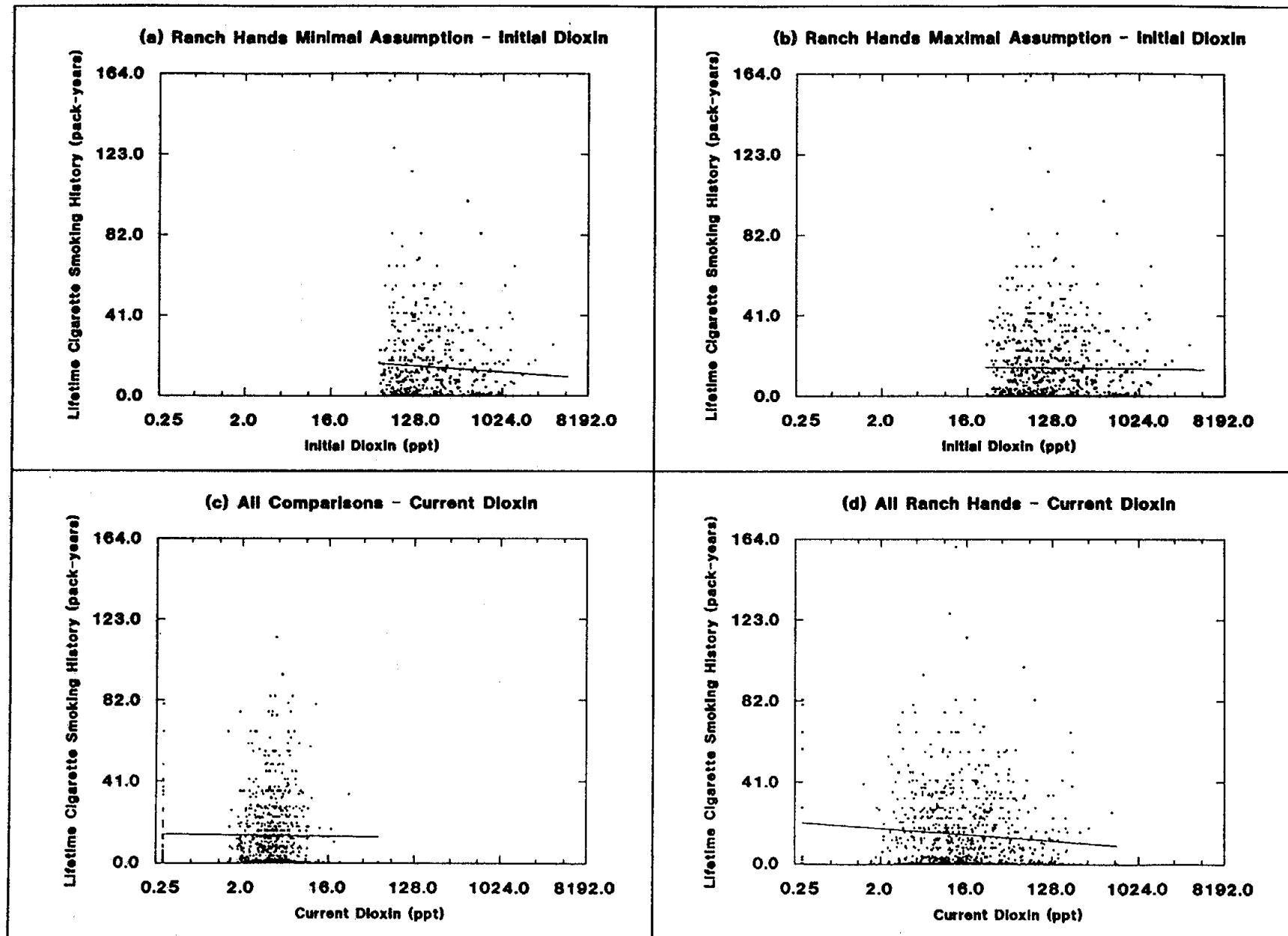


FIGURE D-15. Lifetime Cigarette Smoking History (Continuous) versus Dioxin

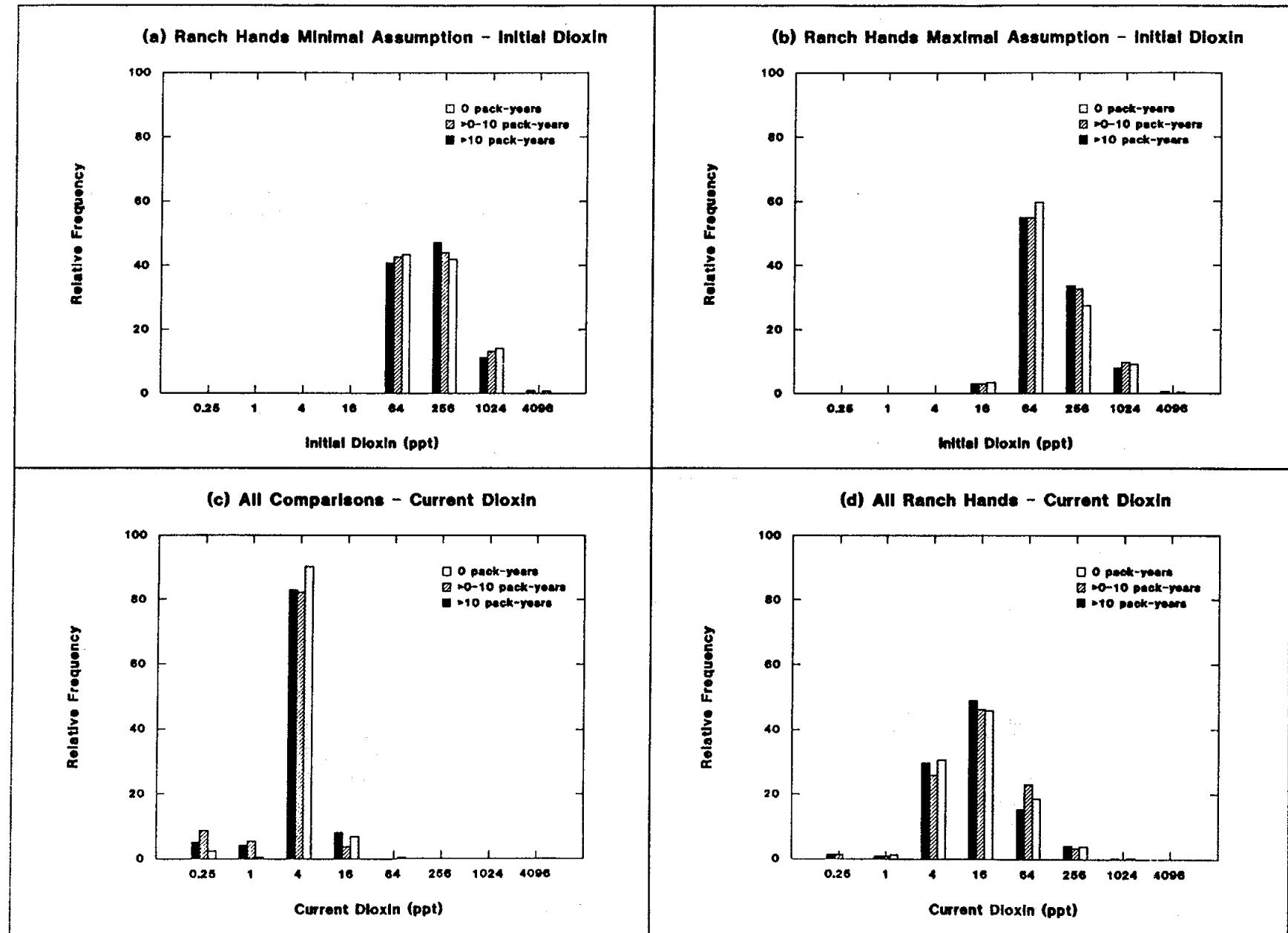


FIGURE D-16. Lifetime Cigarette Smoking History (Discrete) versus Dioxin

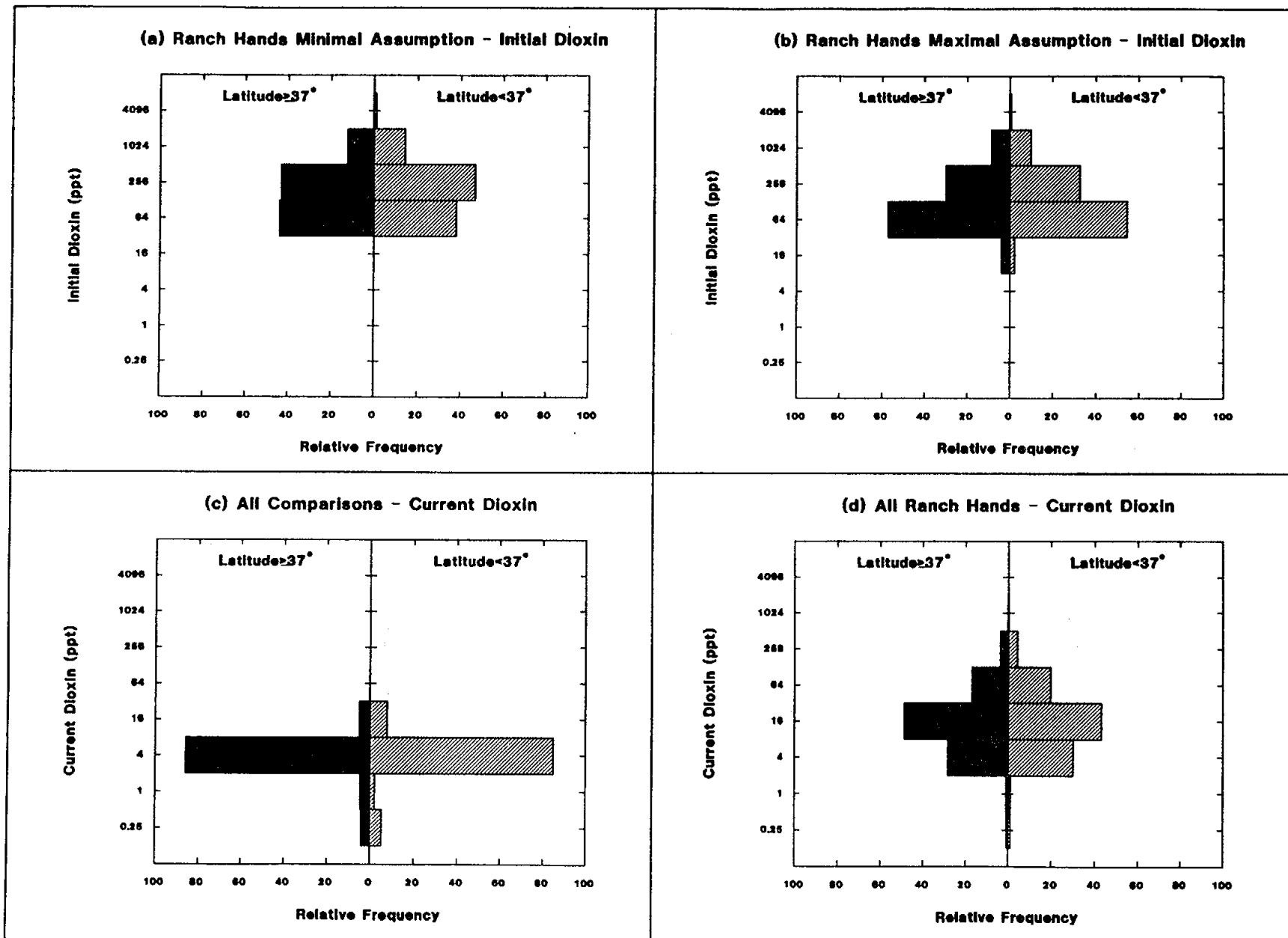


FIGURE D-17. Average Lifetime Residential Latitude versus Dioxin

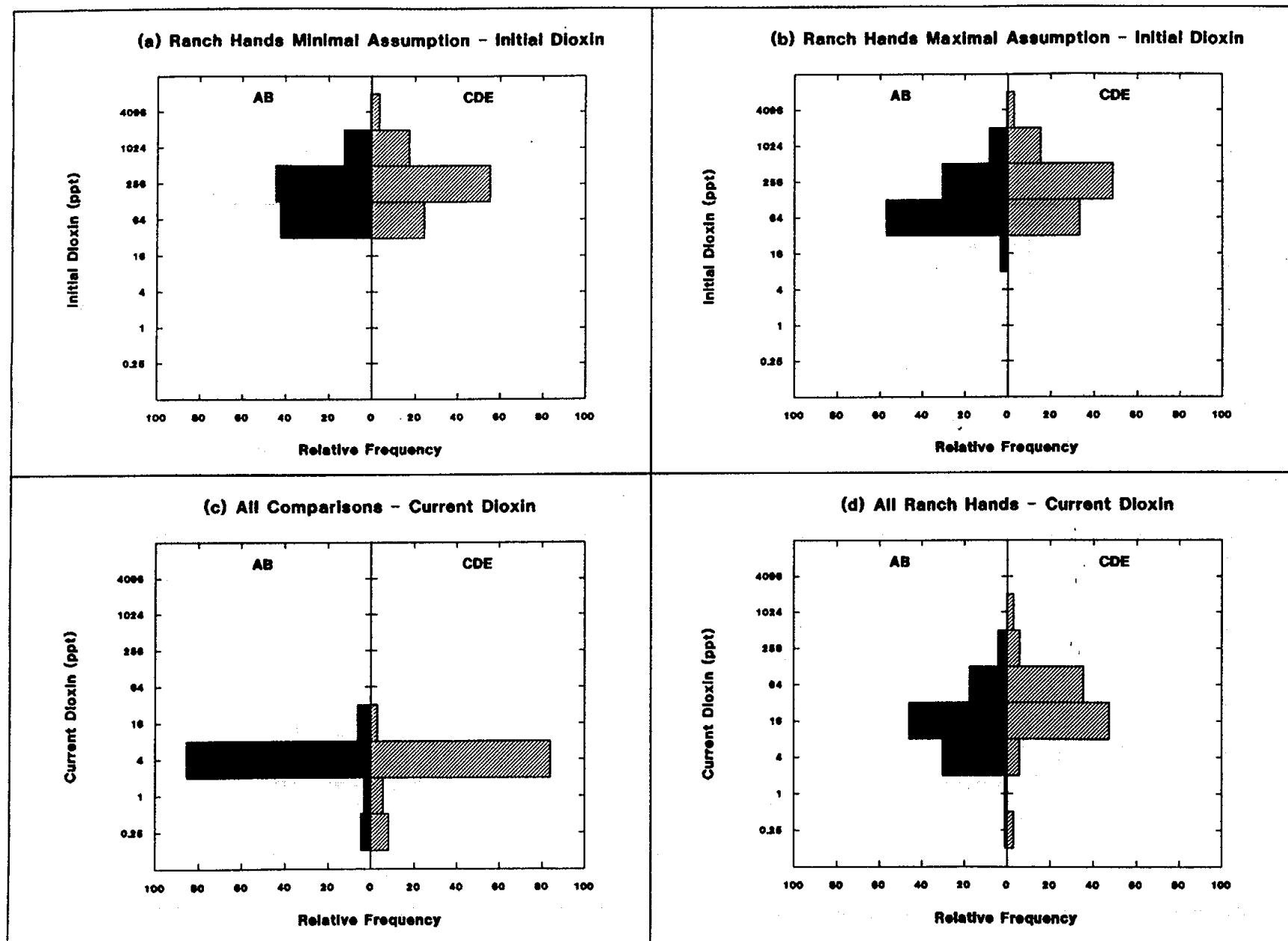
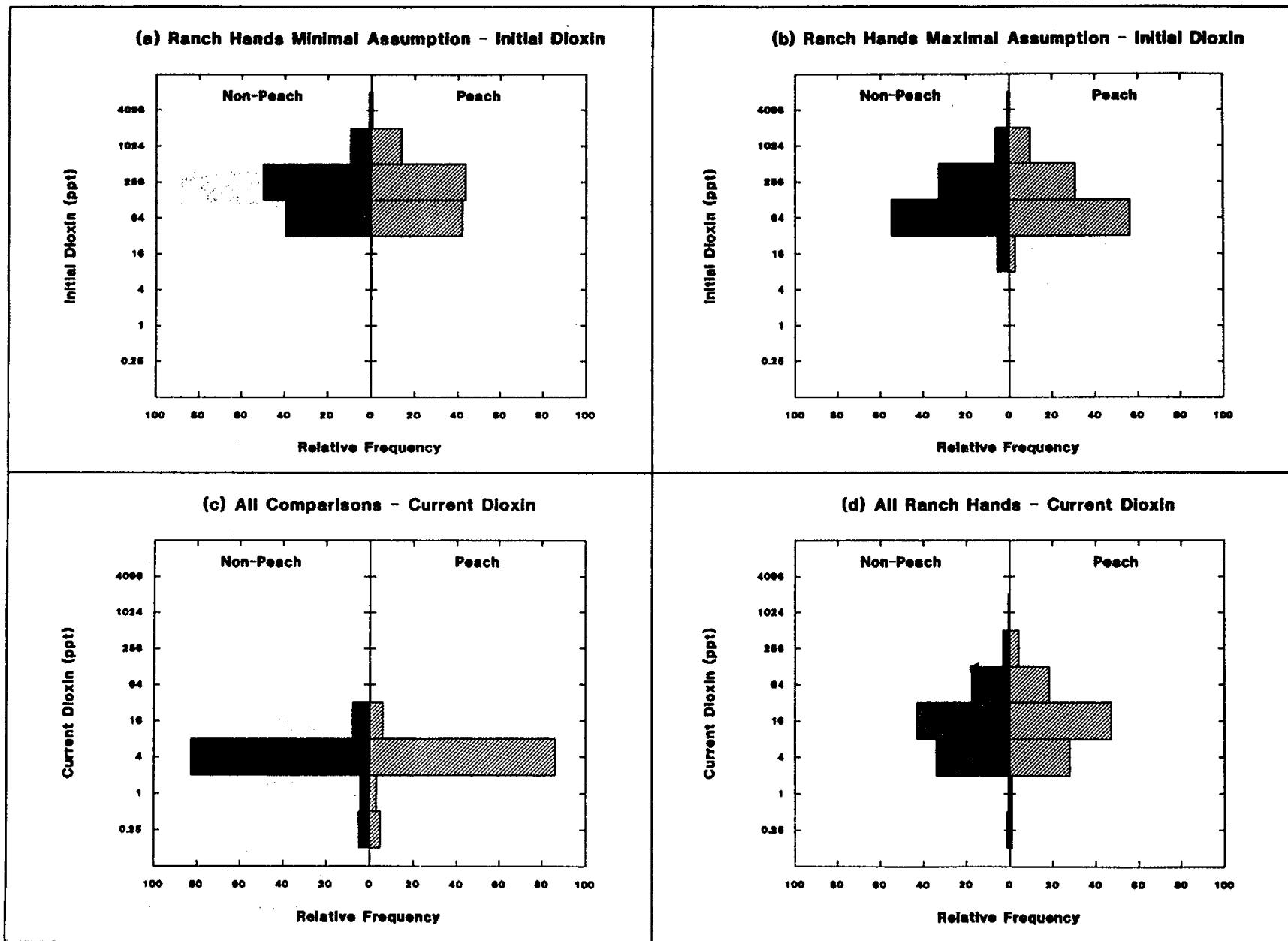
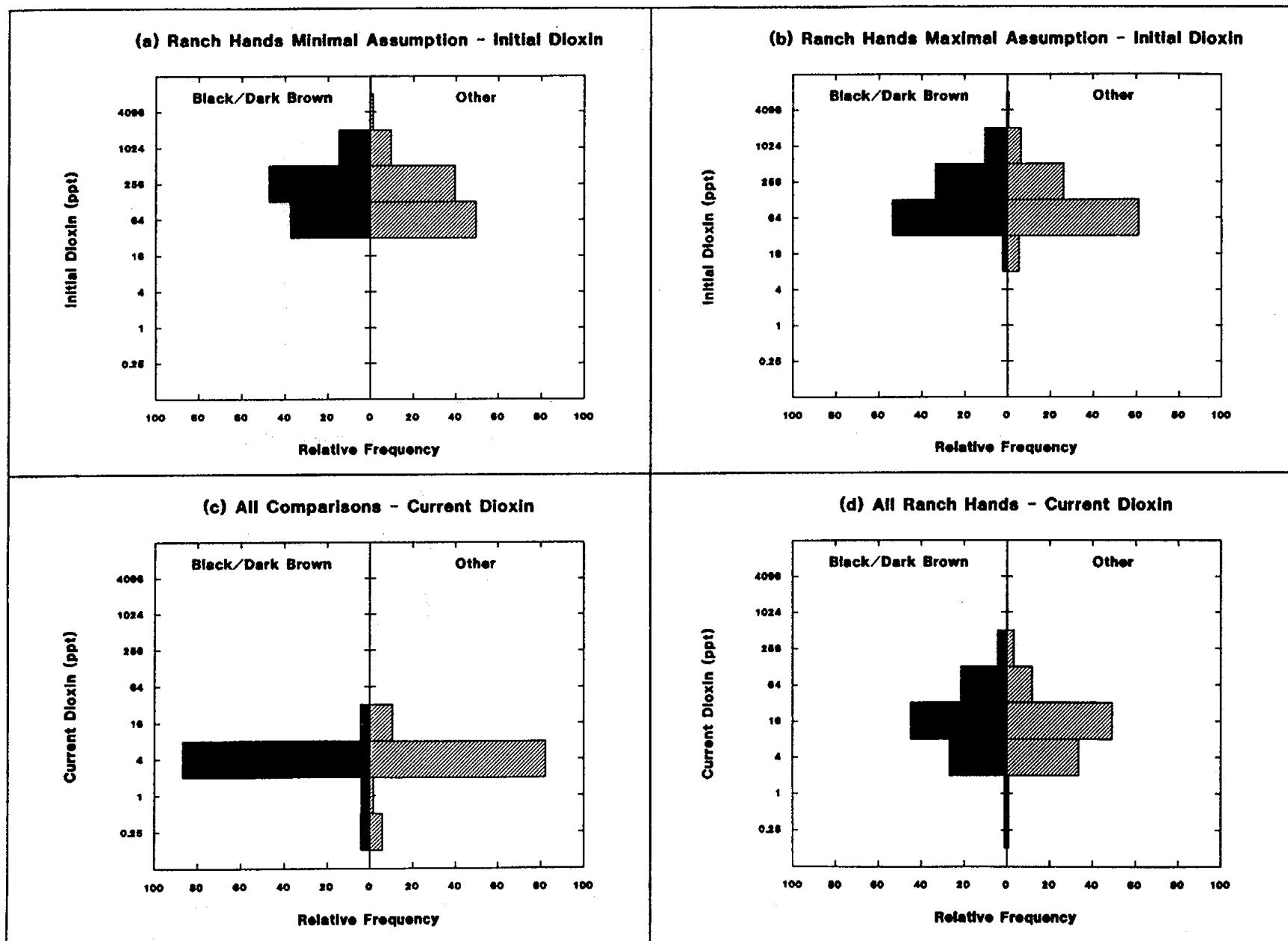
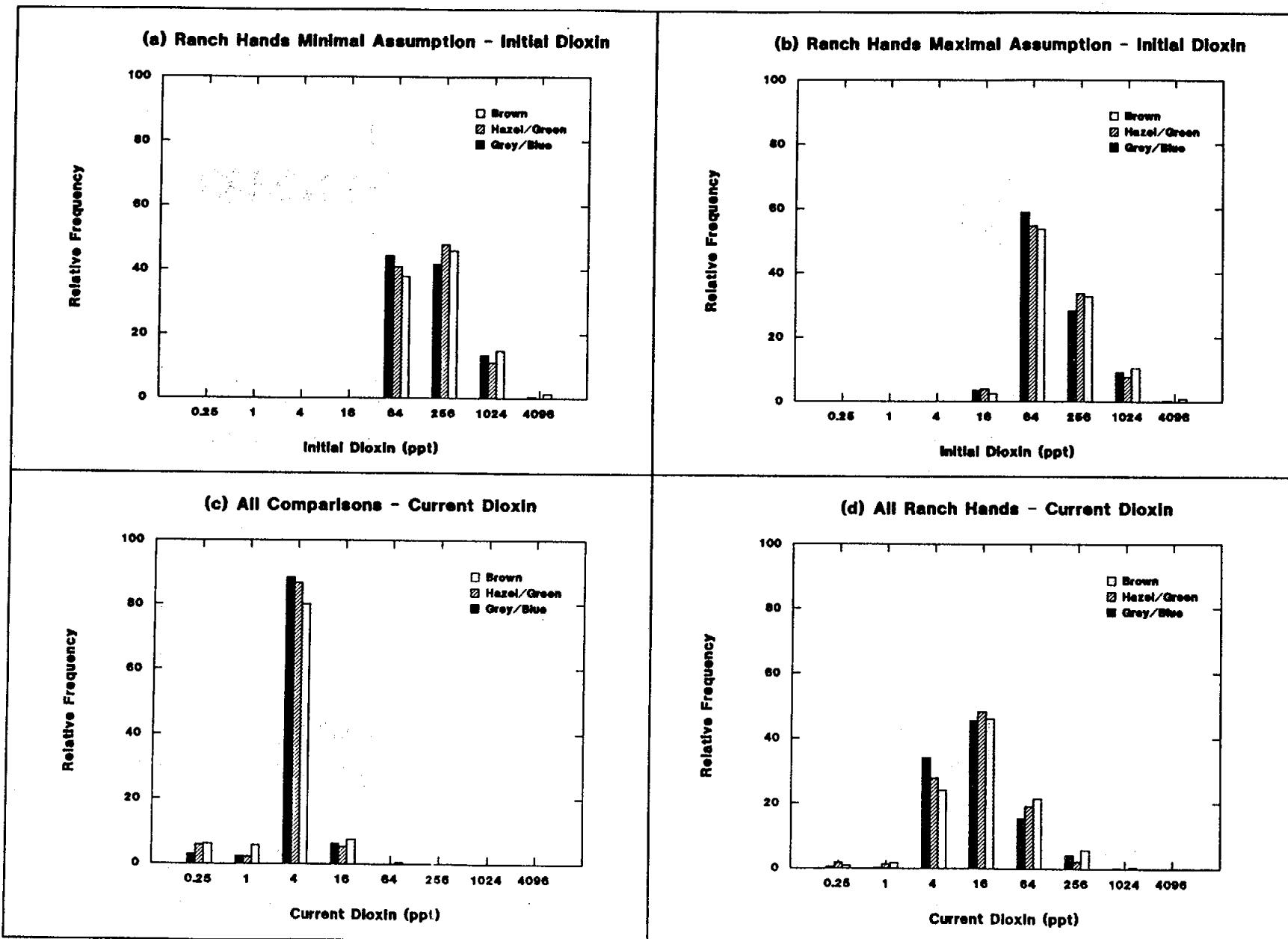


FIGURE D-18. Ethnic Background versus Dioxin

**FIGURE D-19. Skin Color versus Dioxin**

**FIGURE D-20. Hair Color versus Dioxin**

**FIGURE D-21. Eye Color versus Dioxin**

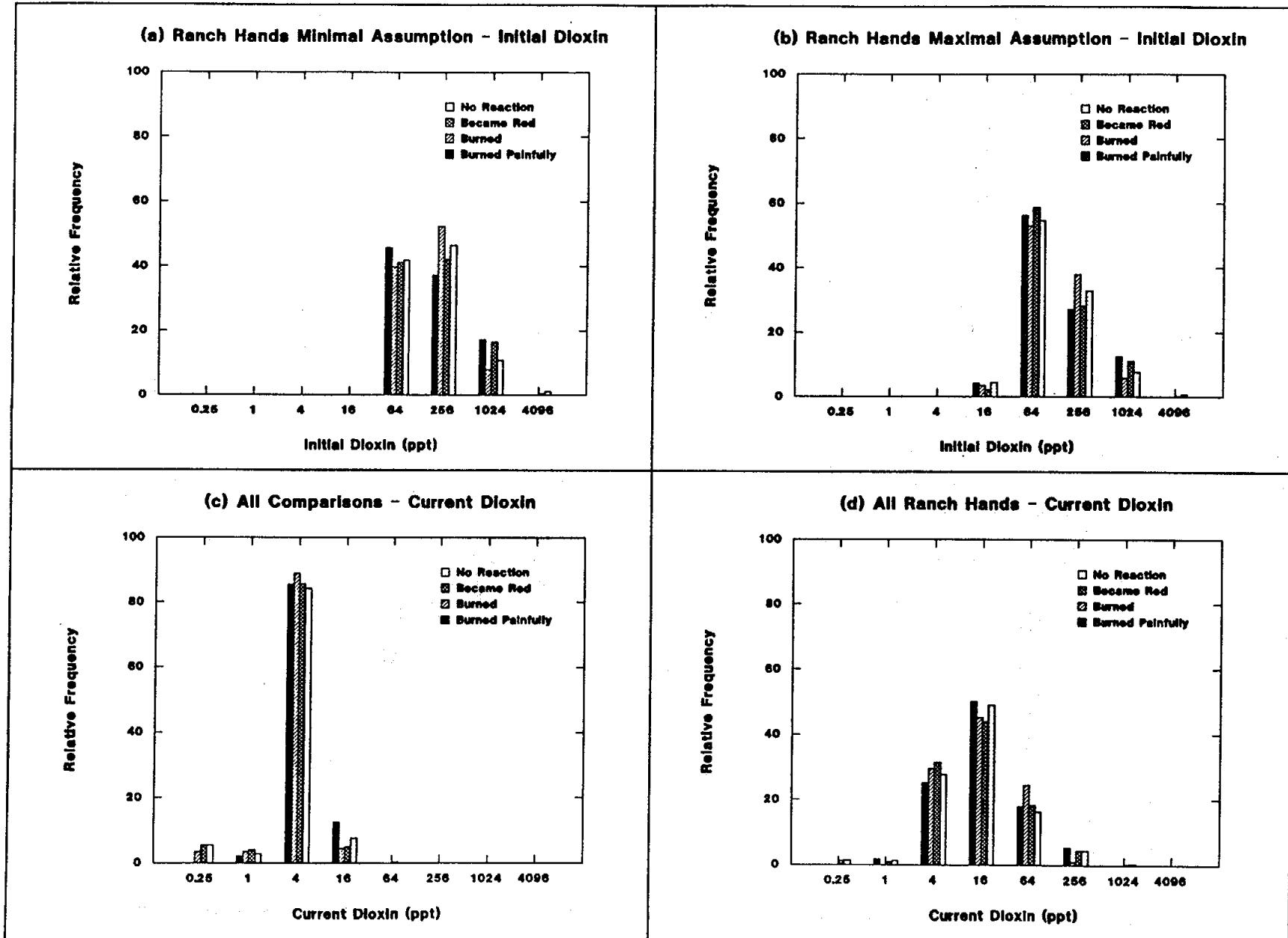


FIGURE D-22. Reaction of Skin to Sun After at Least 2 Hours, After First Exposure versus Dioxin

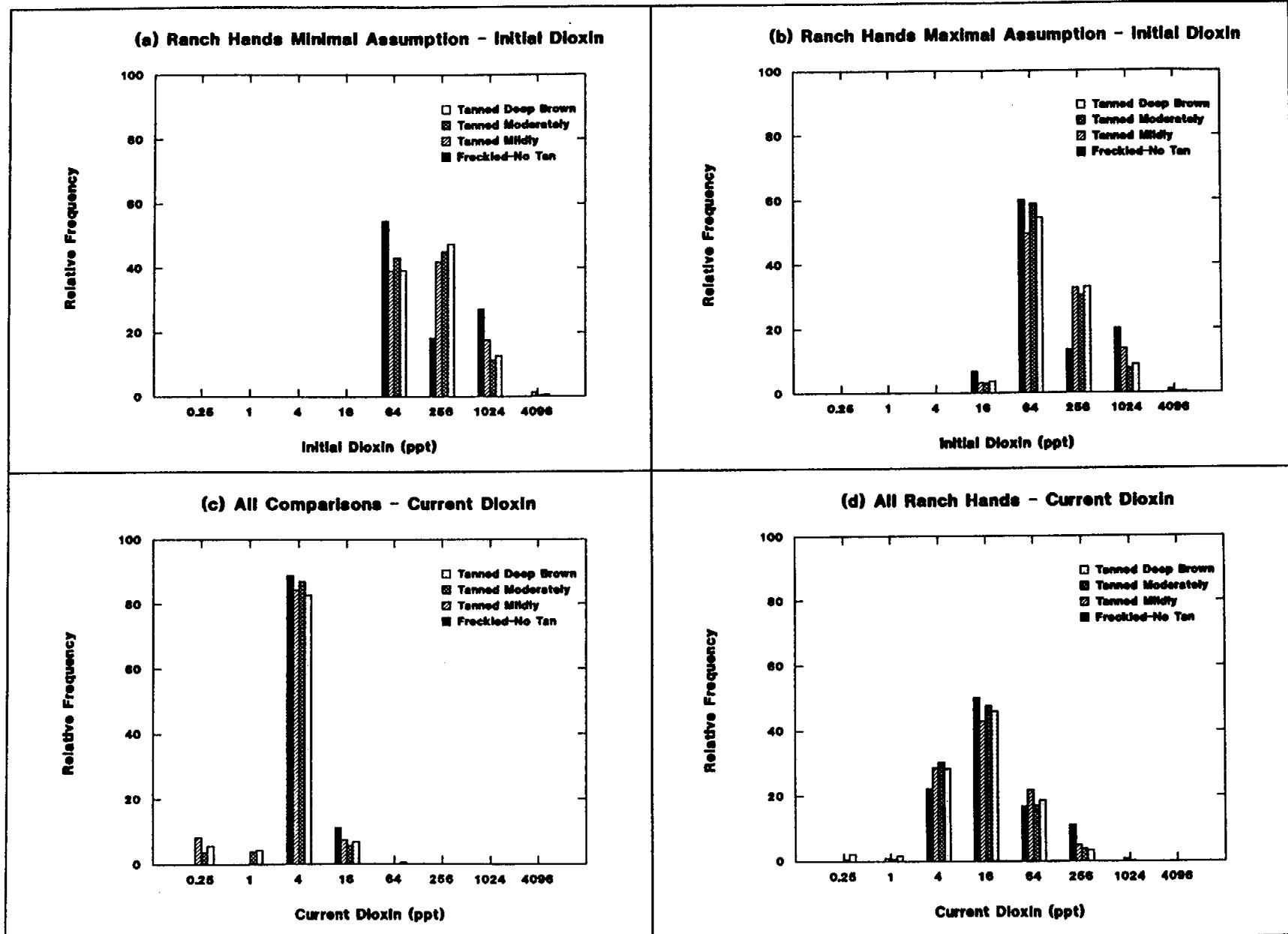


FIGURE D-23. Reaction of Skin to Sun After Repeated Exposure versus Dioxin

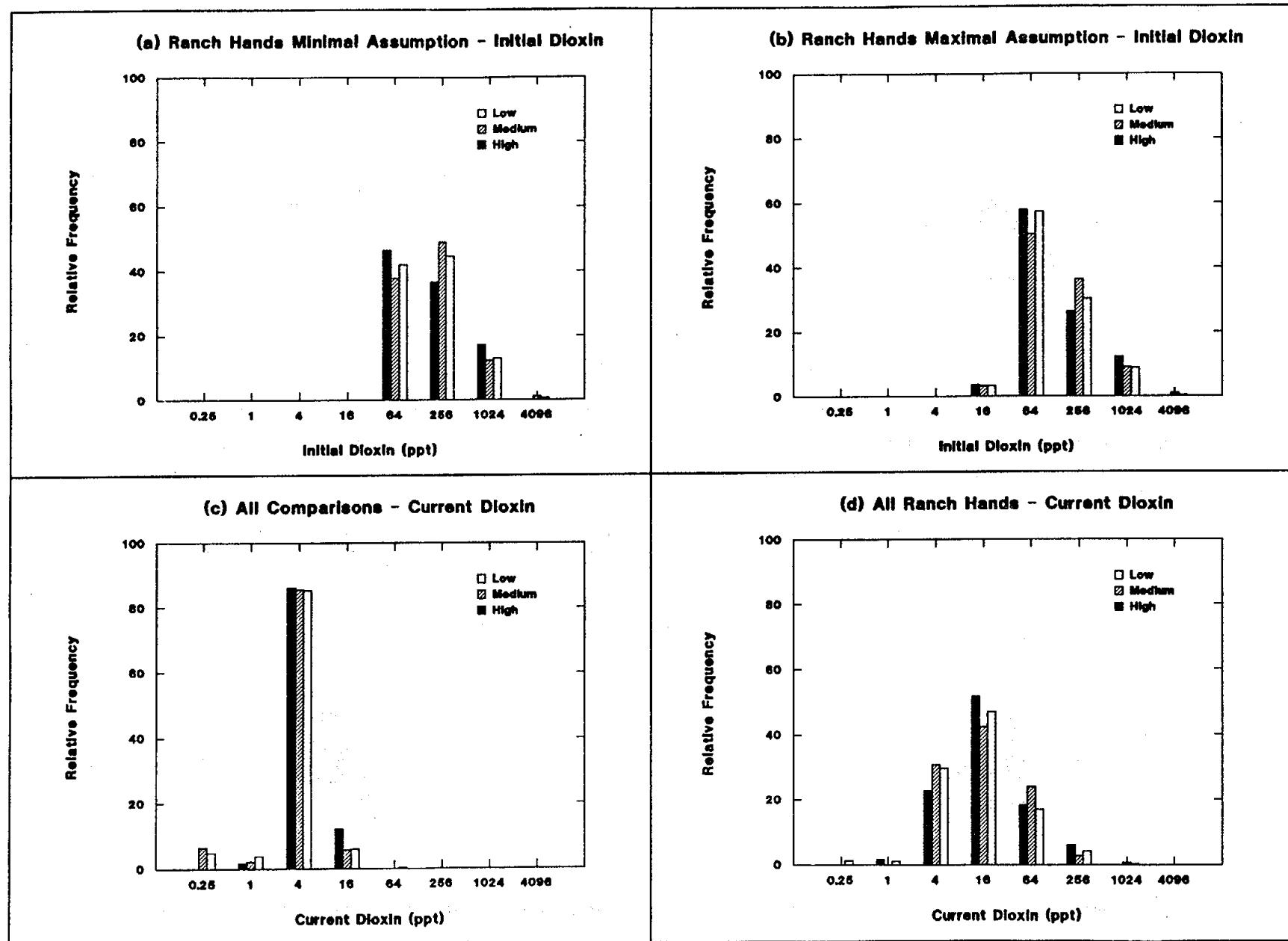
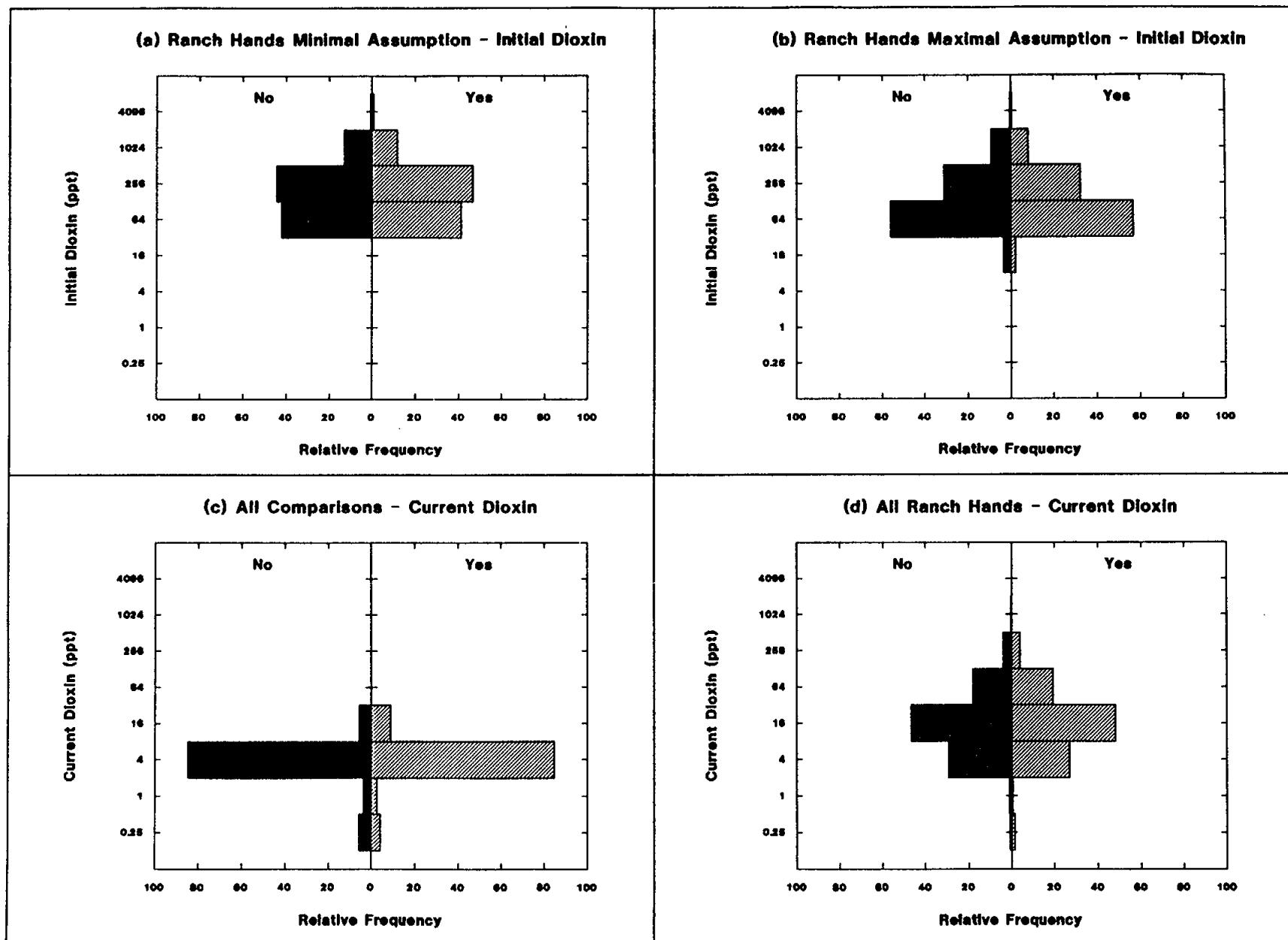


FIGURE D-24. Composite Sun Reaction Index versus Dioxin

**FIGURE D-25. Asbestos Exposure versus Dioxin**

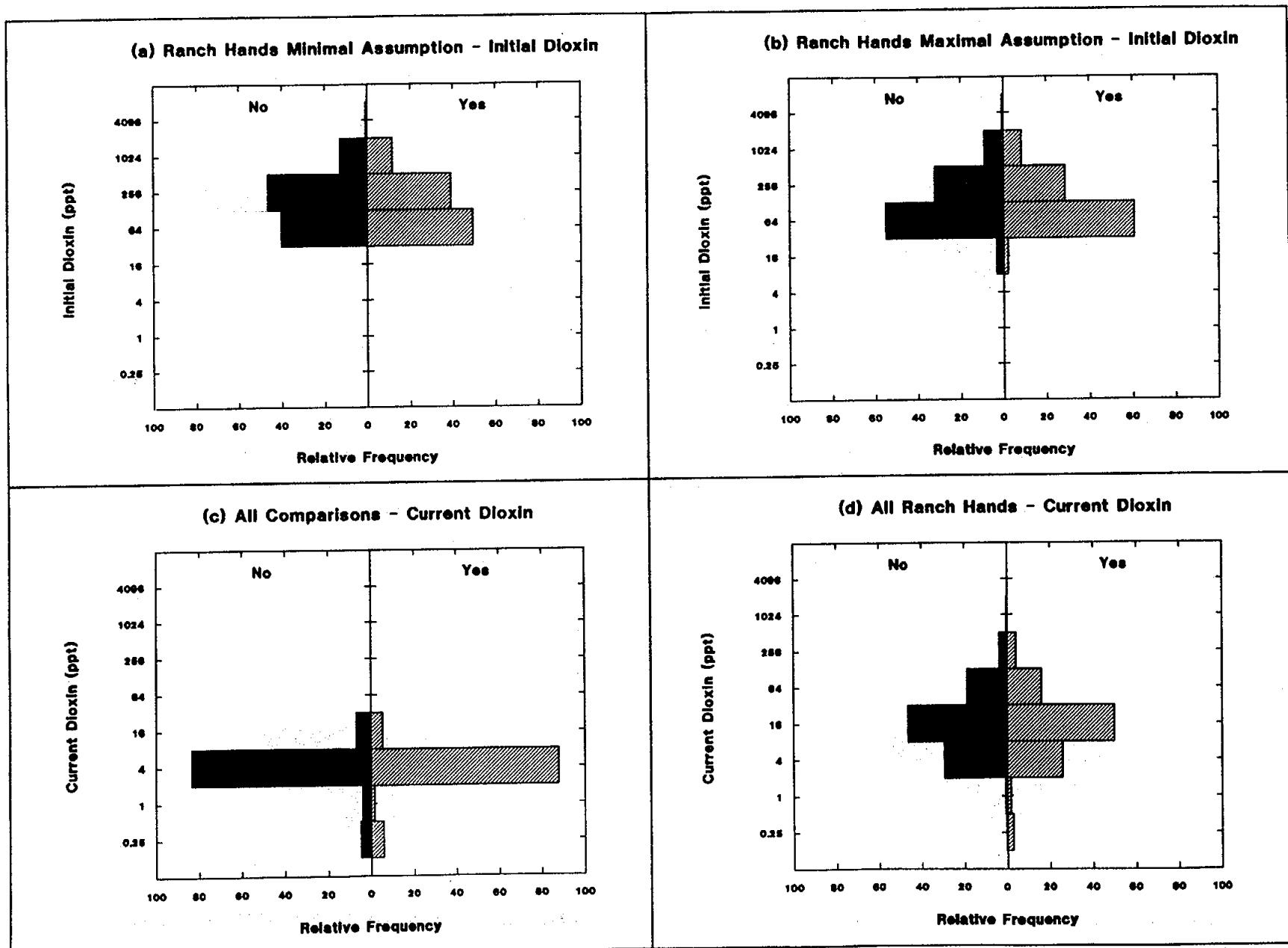
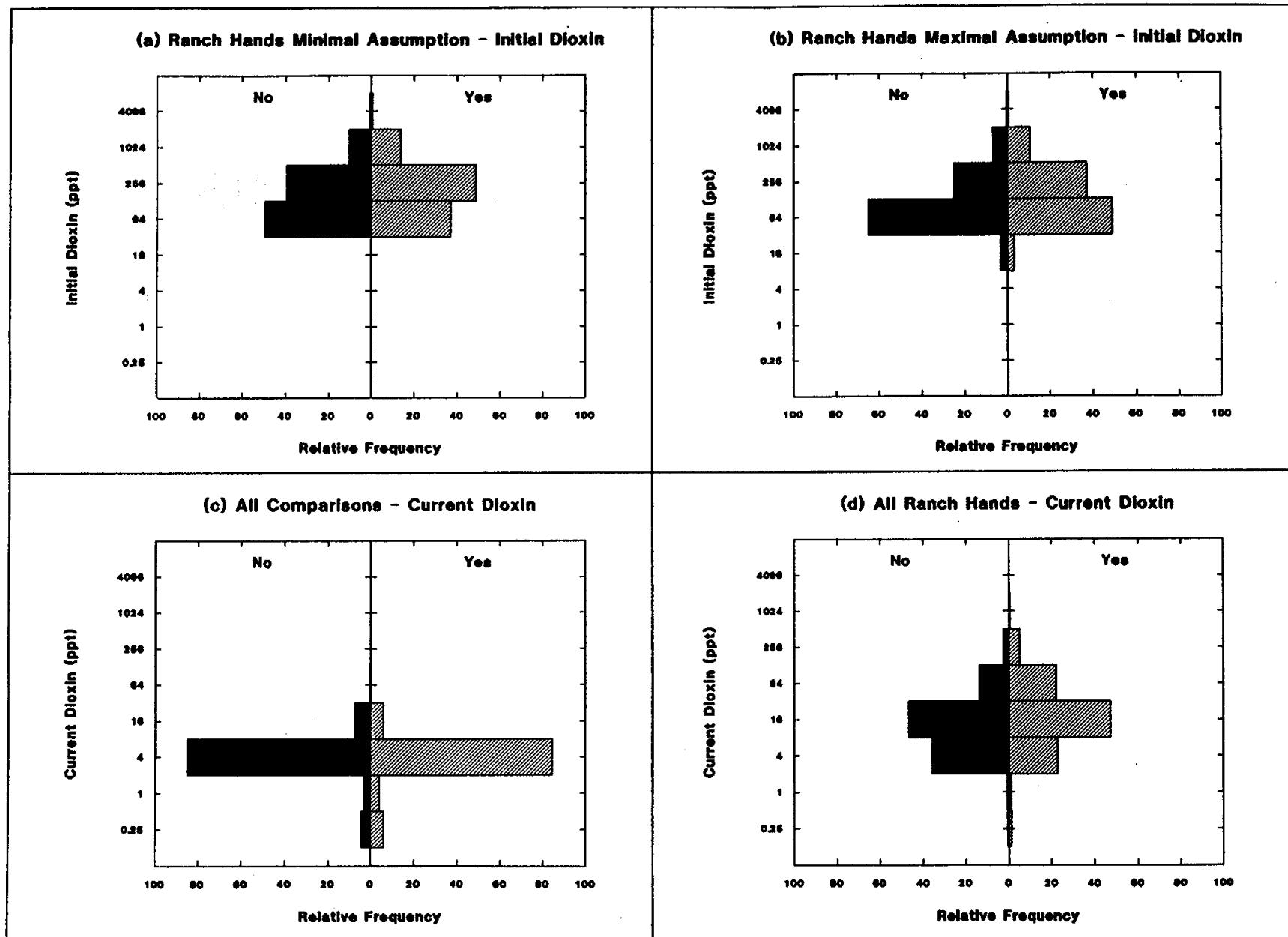


FIGURE D-26. Ionizing Radiation Exposure versus Dioxin

**FIGURE D-27. Industrial Chemical Exposure versus Dioxin**

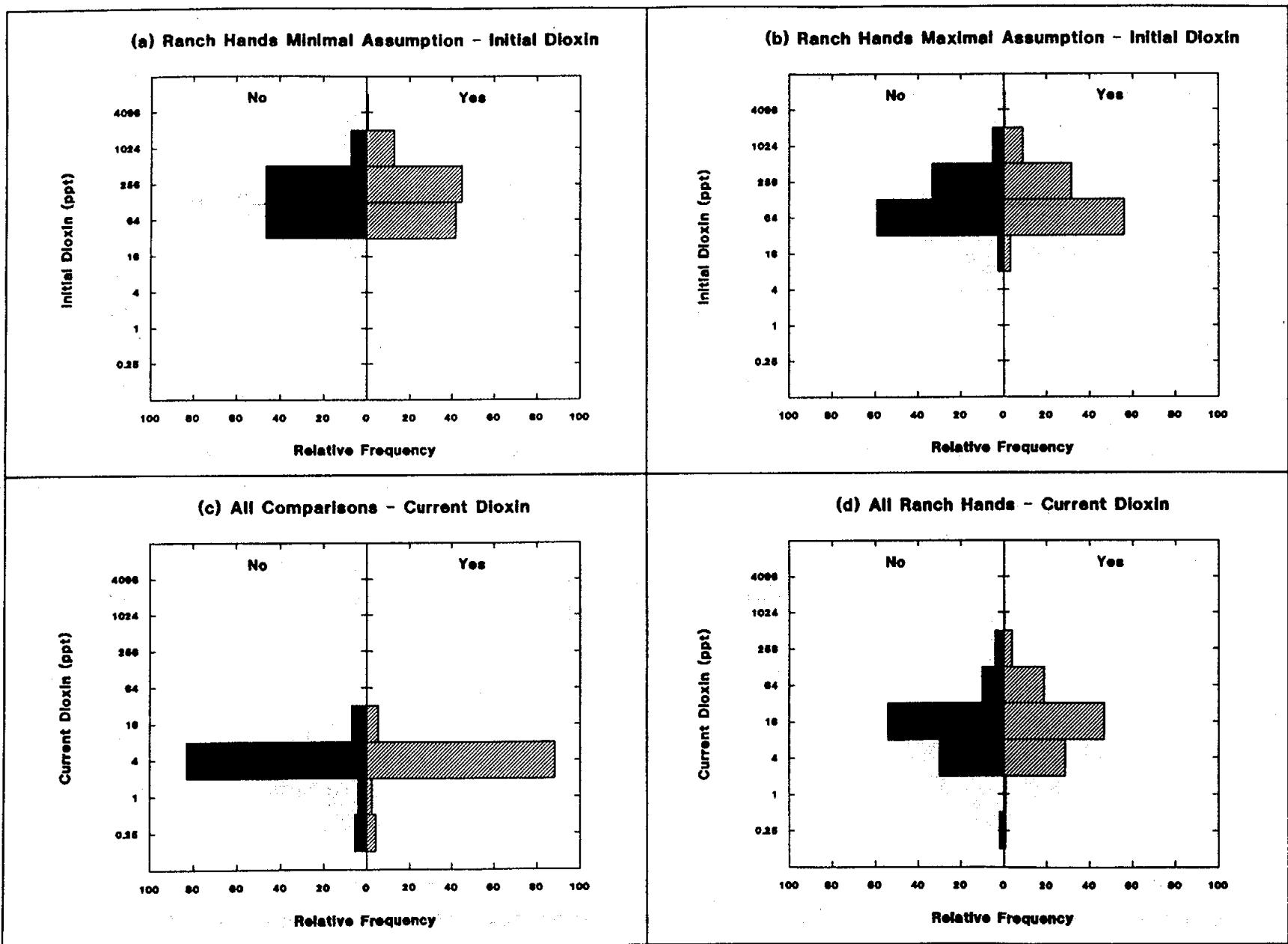
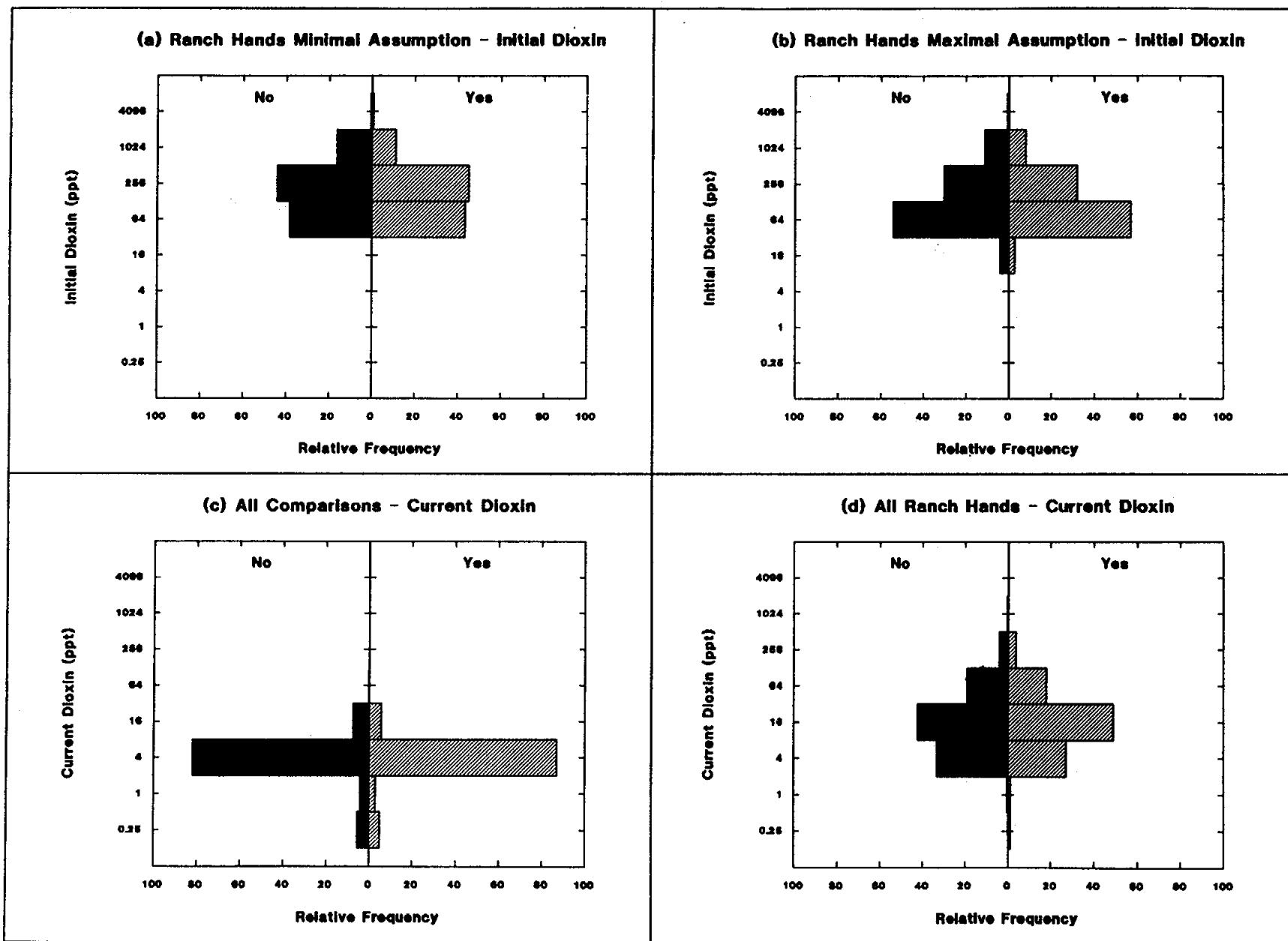


FIGURE D-28. Herbicide Exposure versus Dioxin

**FIGURE D-29. Insecticide Exposure versus Dioxin**

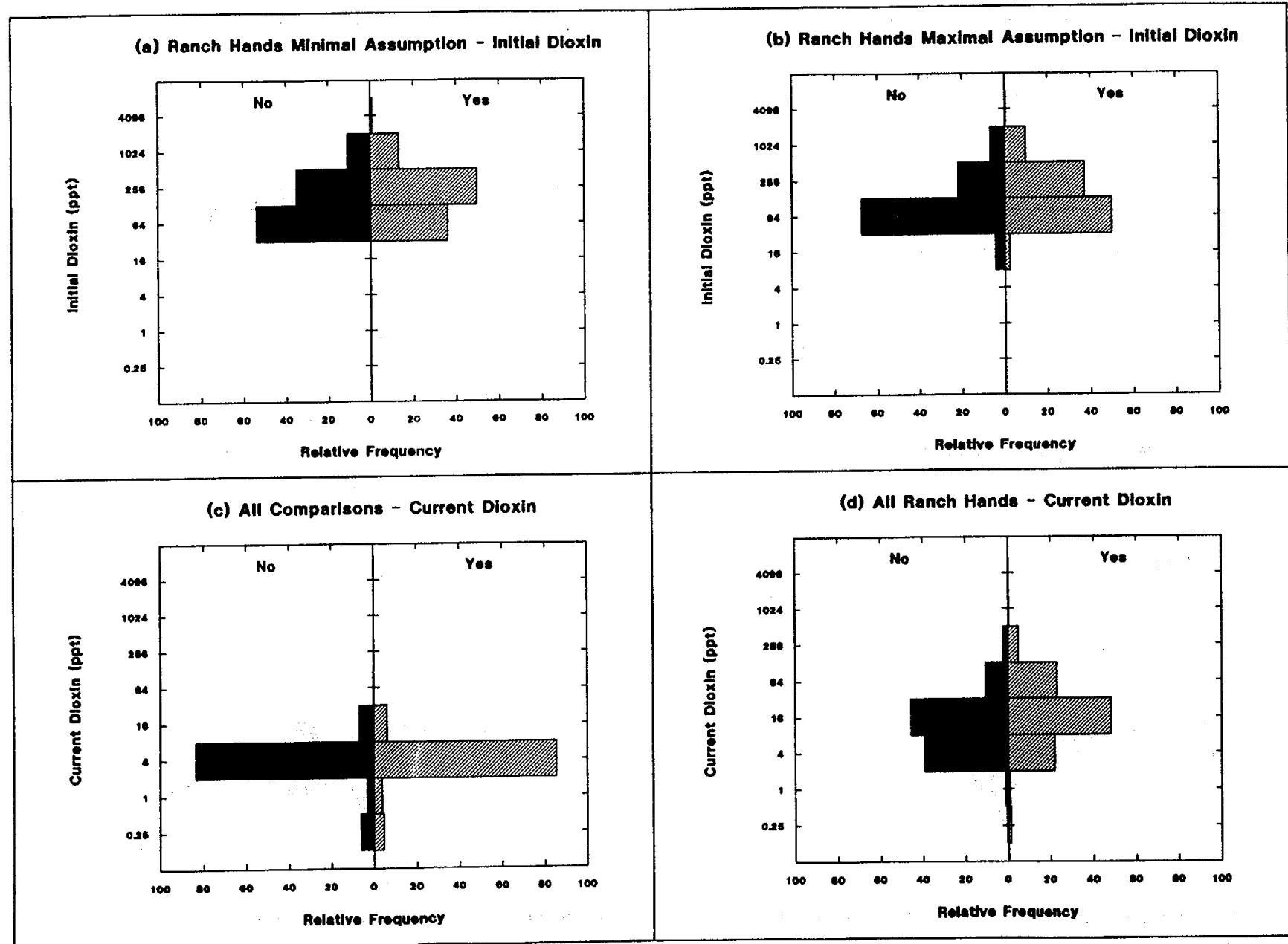
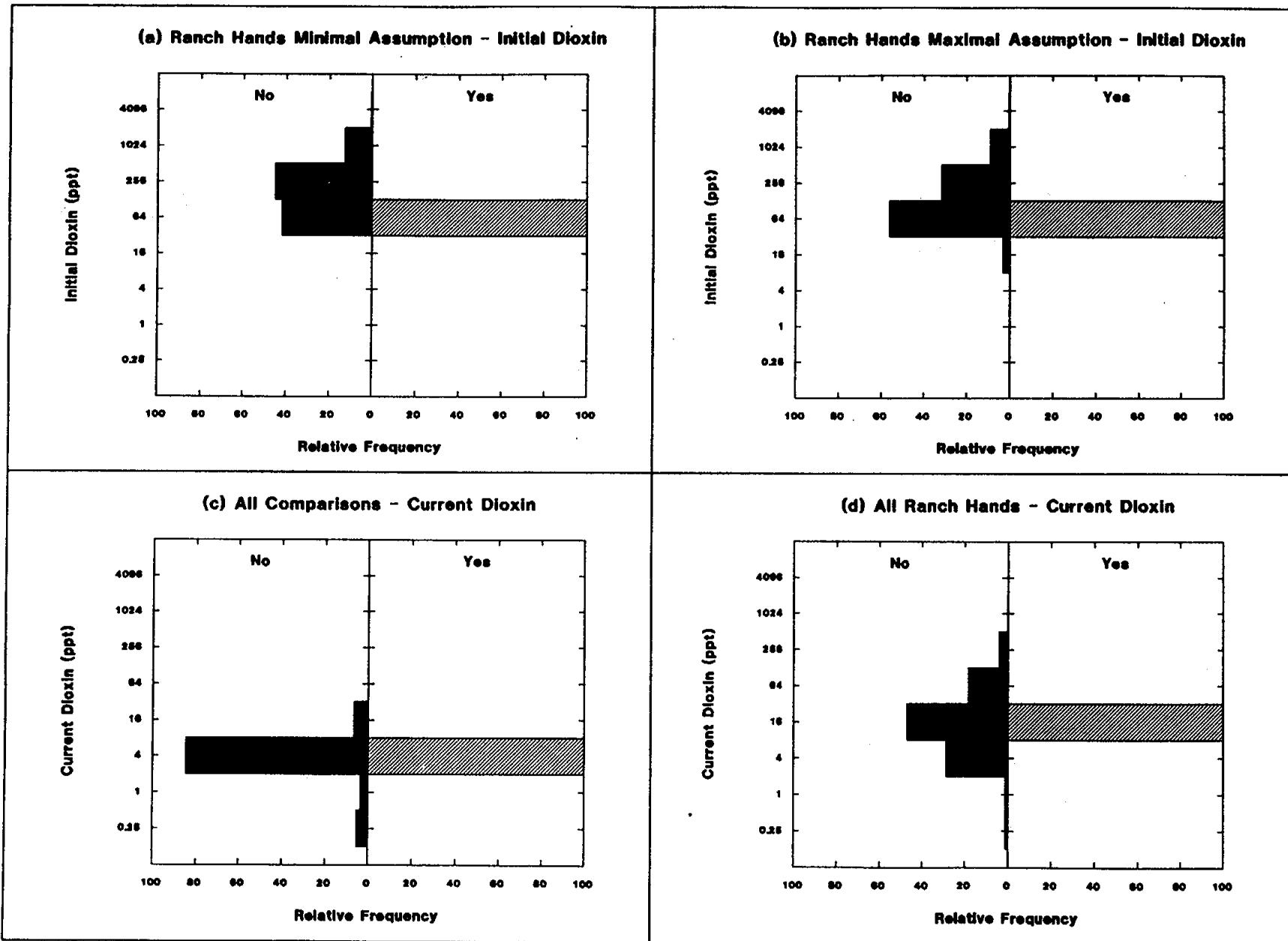


FIGURE D-30. Degreasing Chemical Exposure versus Dioxin

**FIGURE D-31. Anthracene Exposure versus Dioxin**

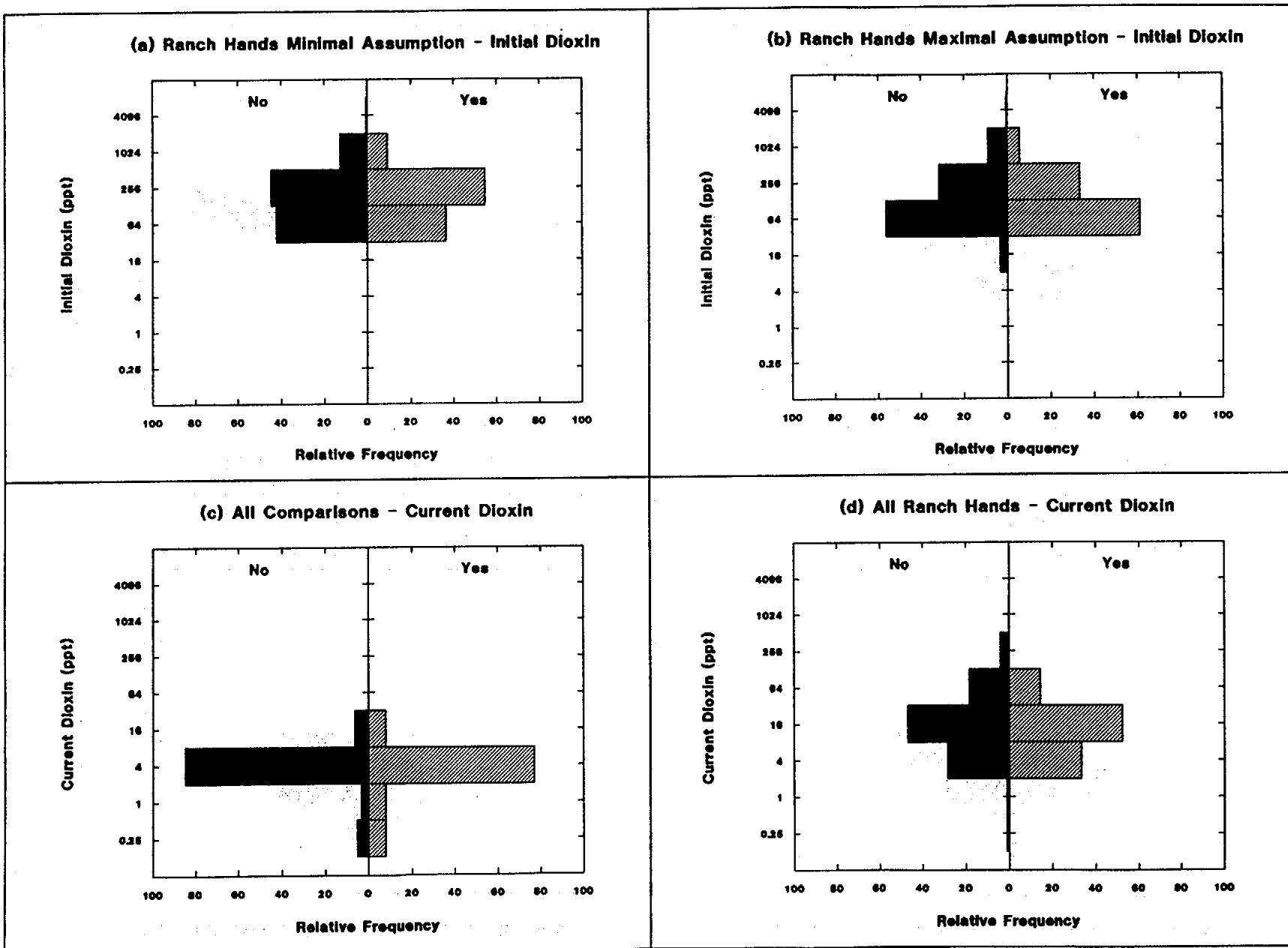


FIGURE D-32. Arsenic Exposure versus Dioxin

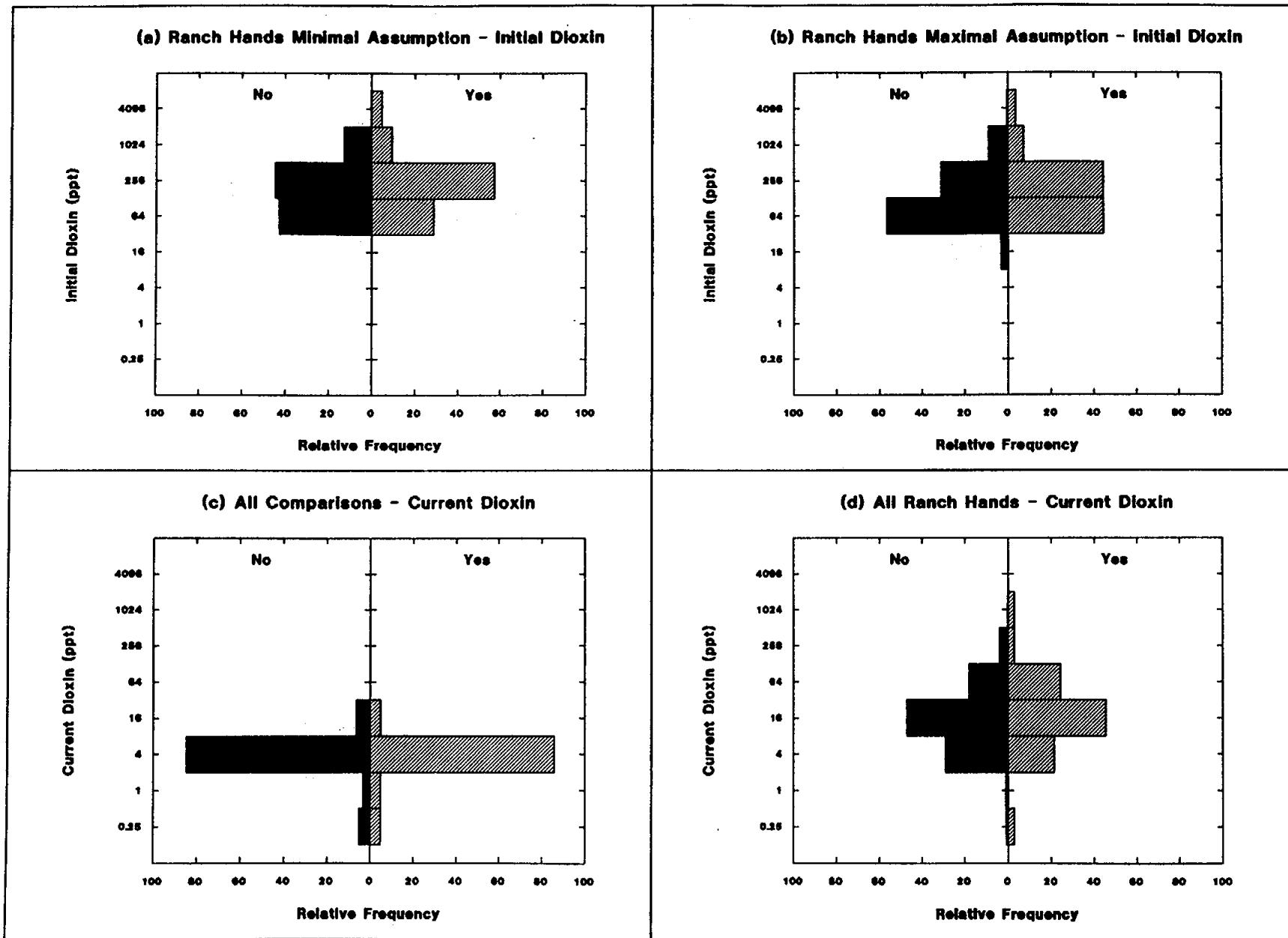
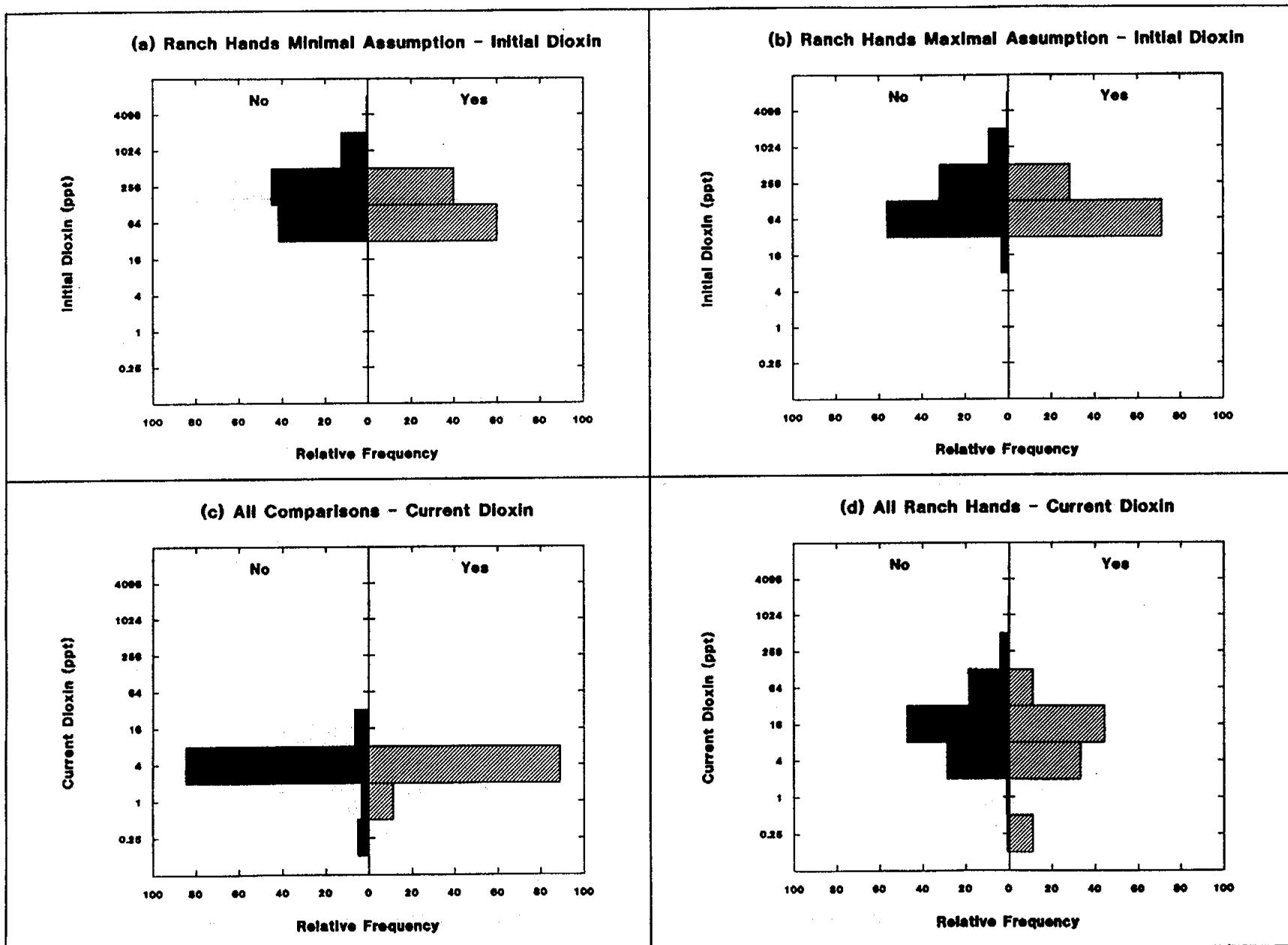


FIGURE D-33. Benzene Exposure versus Dioxin

**FIGURE D-34. Benzidine Exposure versus Dioxin**

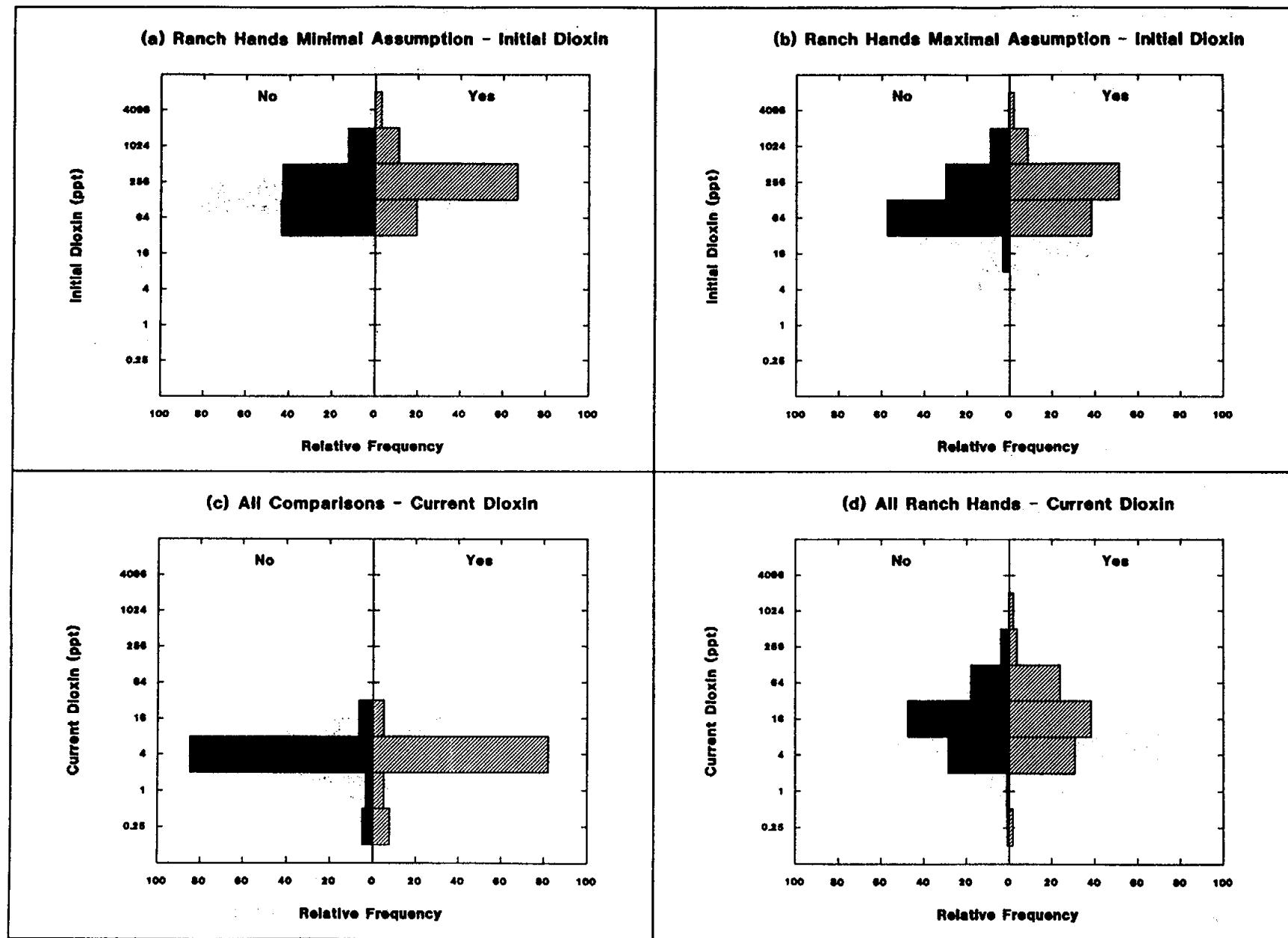
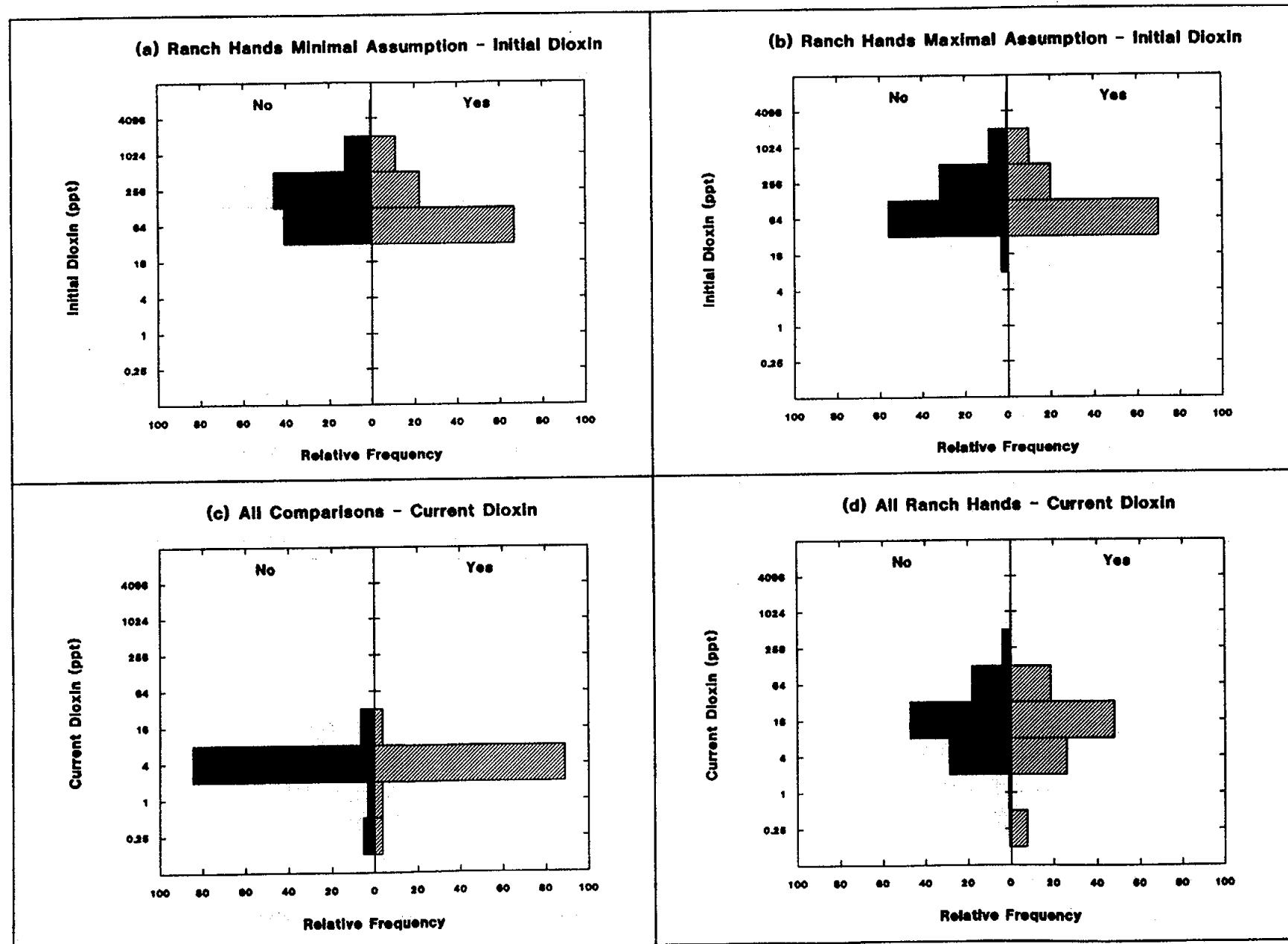


FIGURE D-35. Chromate Exposure versus Dioxin

**FIGURE D-36. Coal Tar Exposure versus Dioxin**

D-40

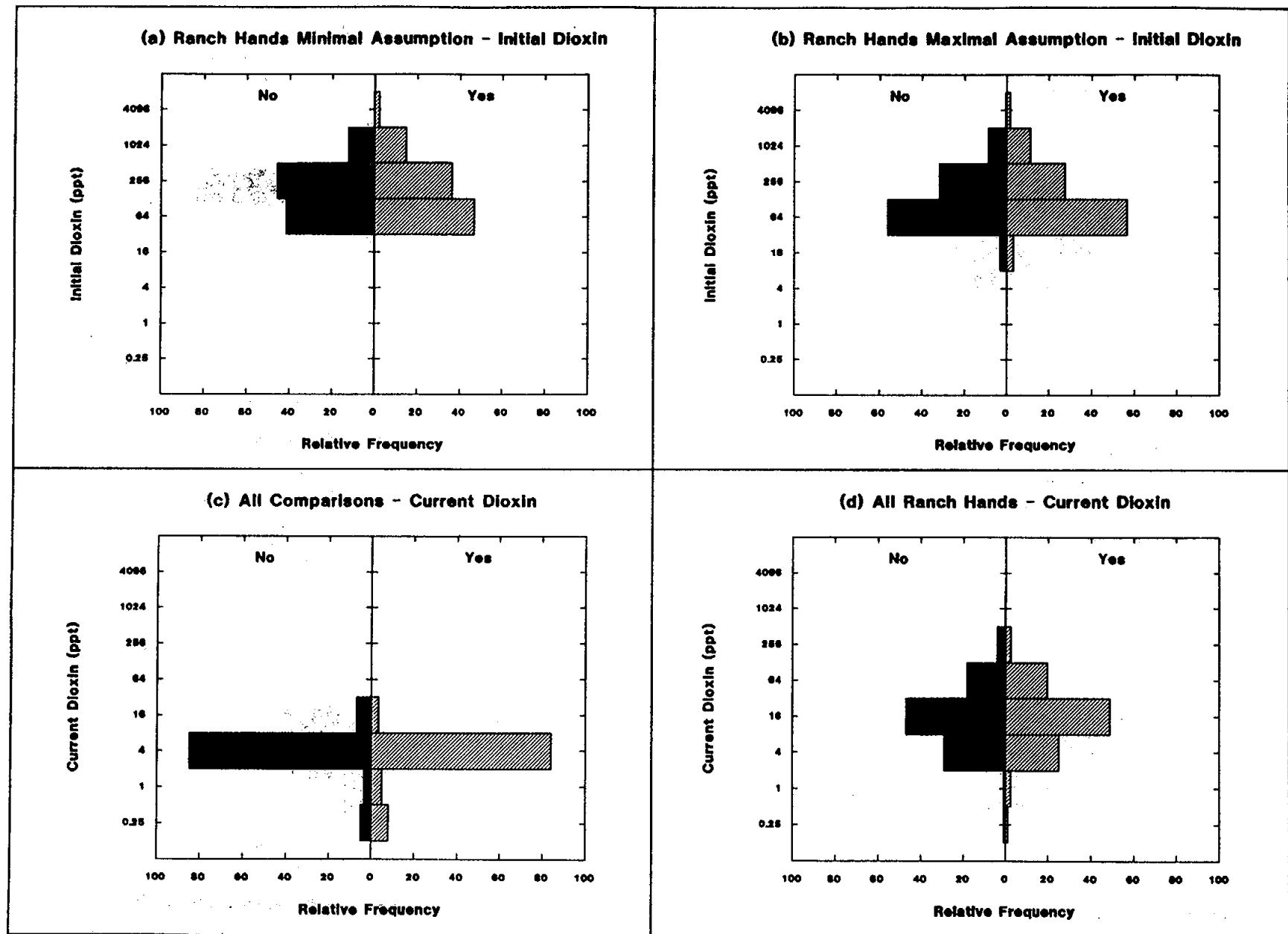
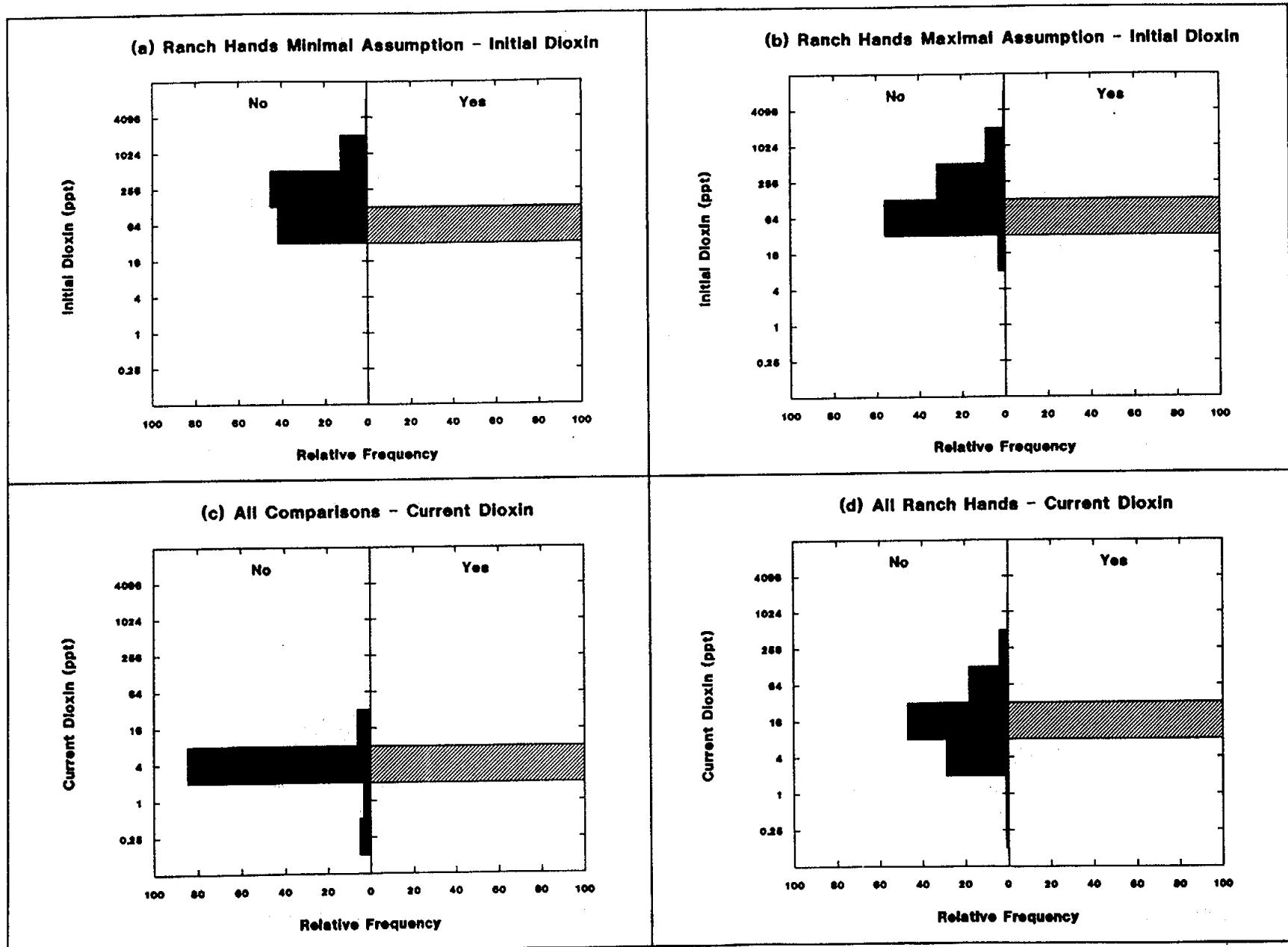
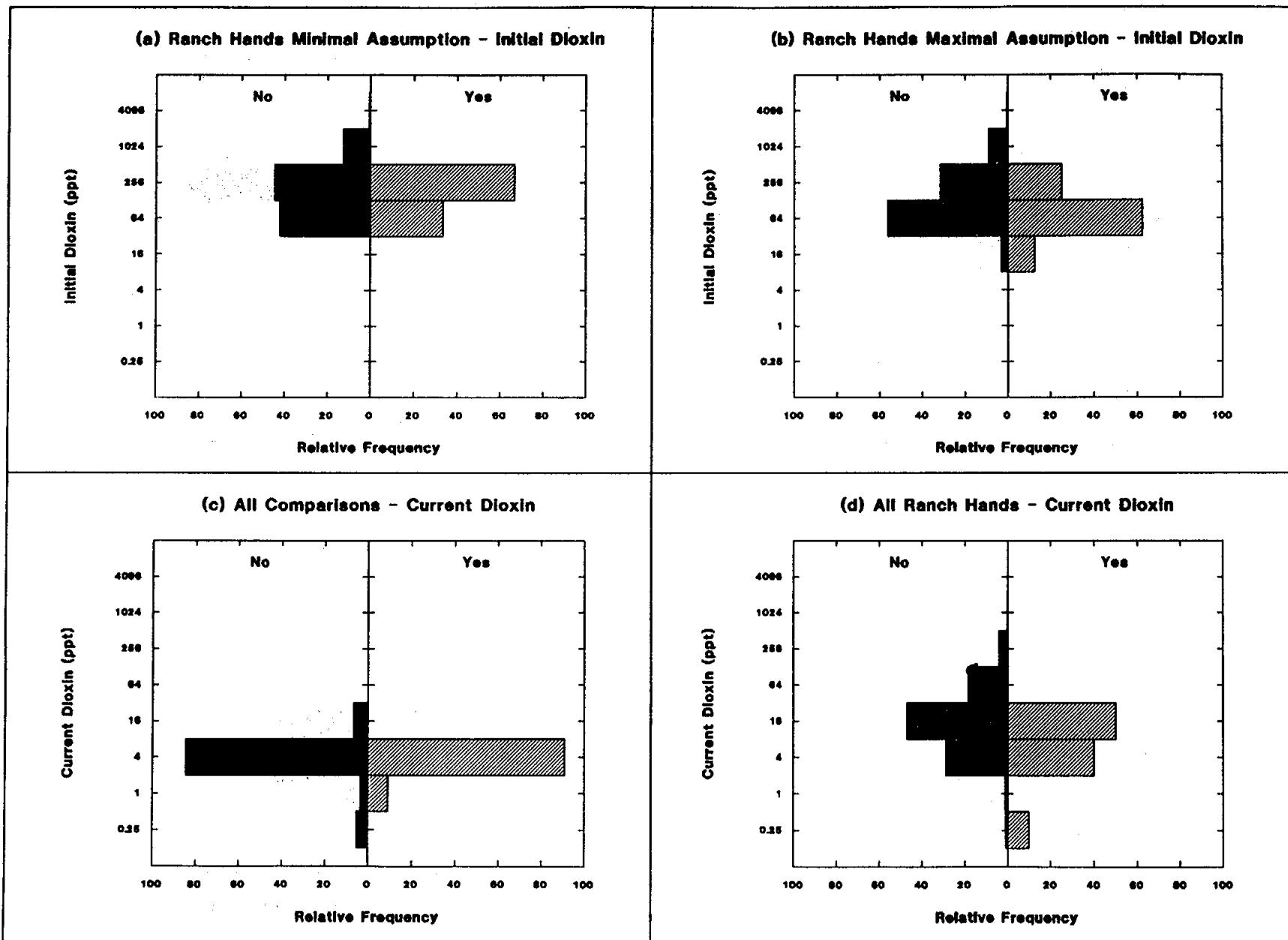
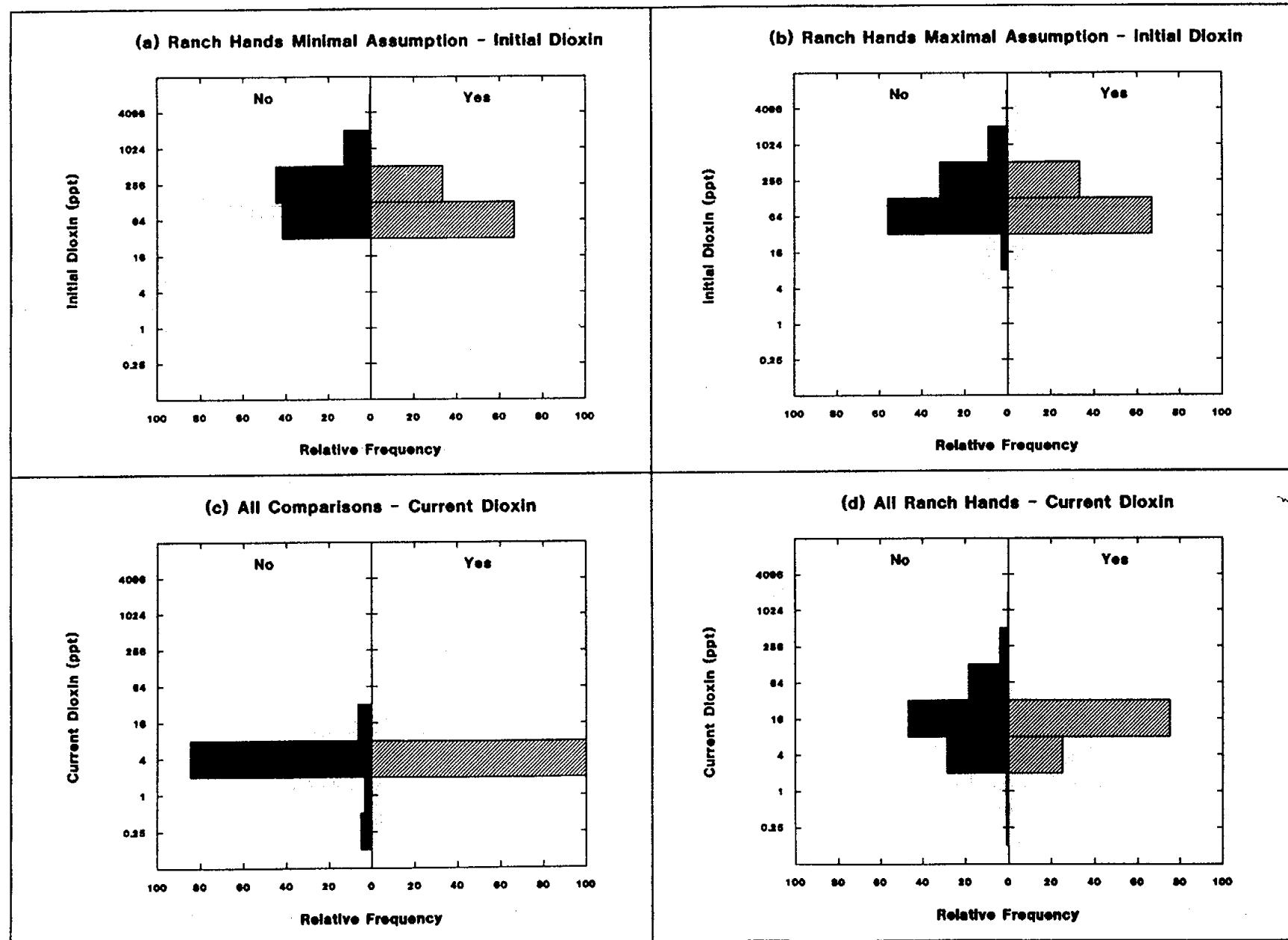


FIGURE D-37. Creosote Exposure versus Dioxin

**FIGURE D-38. Aminodiphenyl Exposure versus Dioxin**

**FIGURE D-39. Chloromethyl Ether Exposure versus Dioxin**

**FIGURE D-40. Mustard Gas Exposure versus Dioxin**

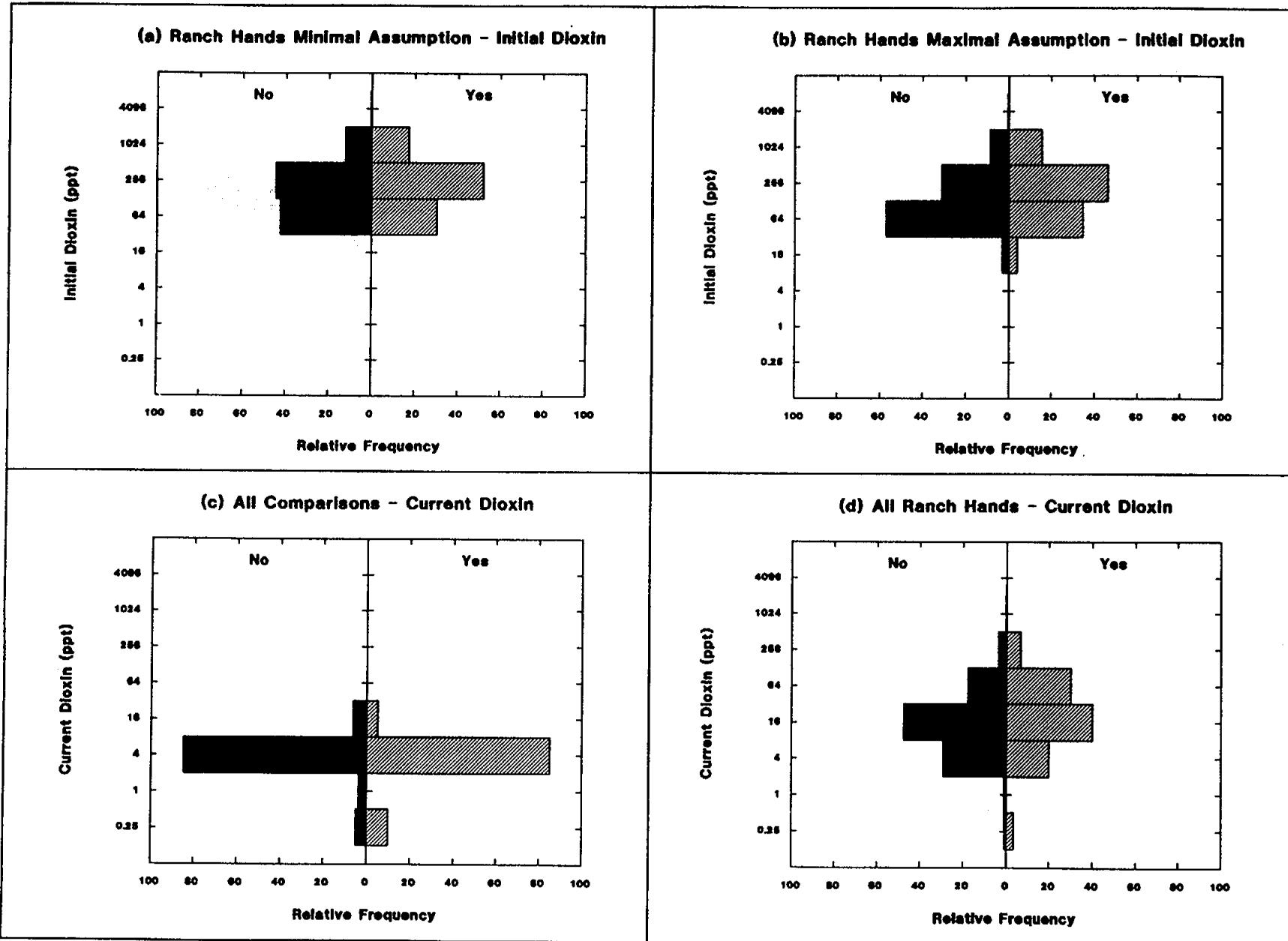


FIGURE D-41. Naphthylamine Exposure versus Dioxin

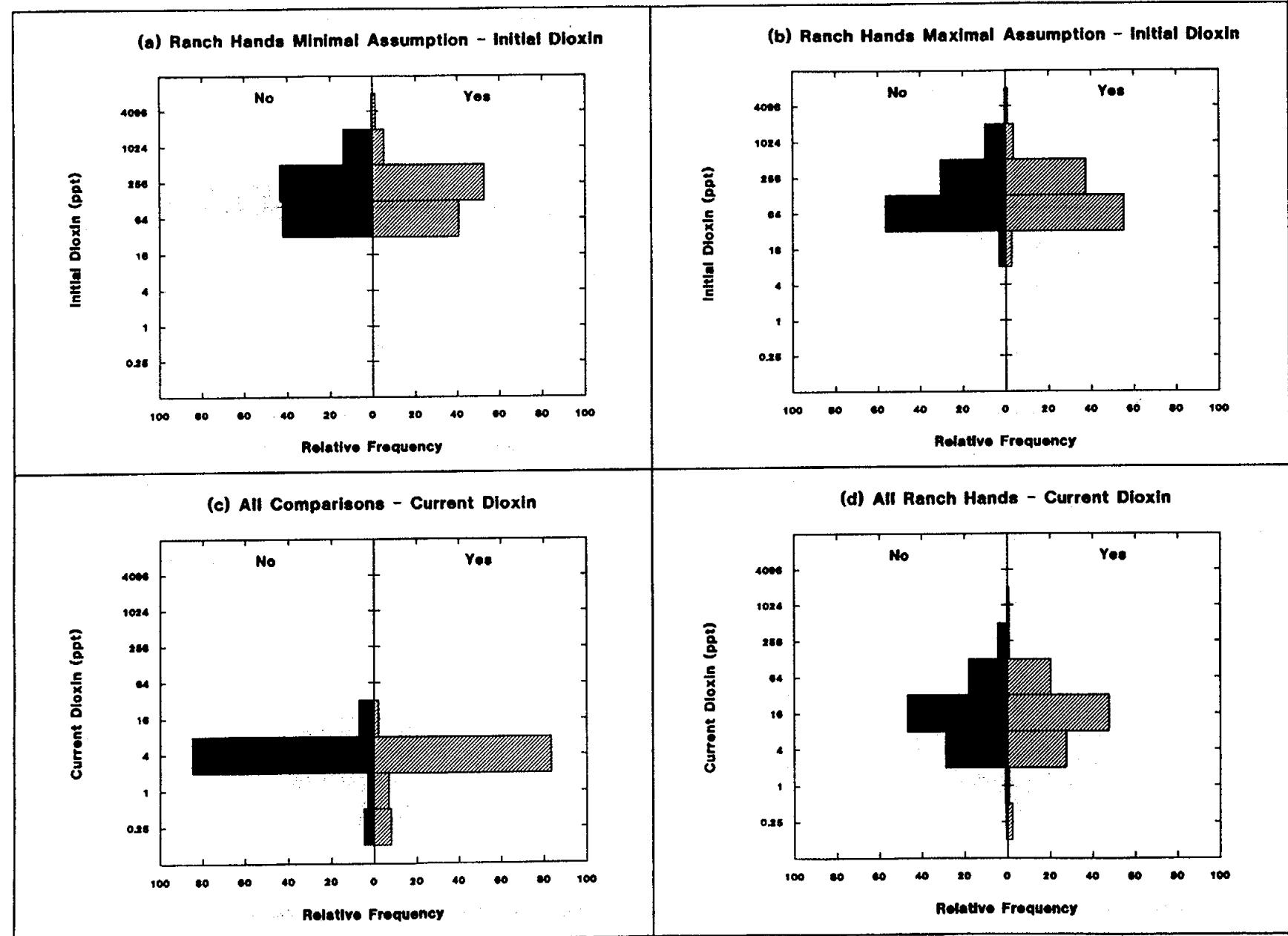
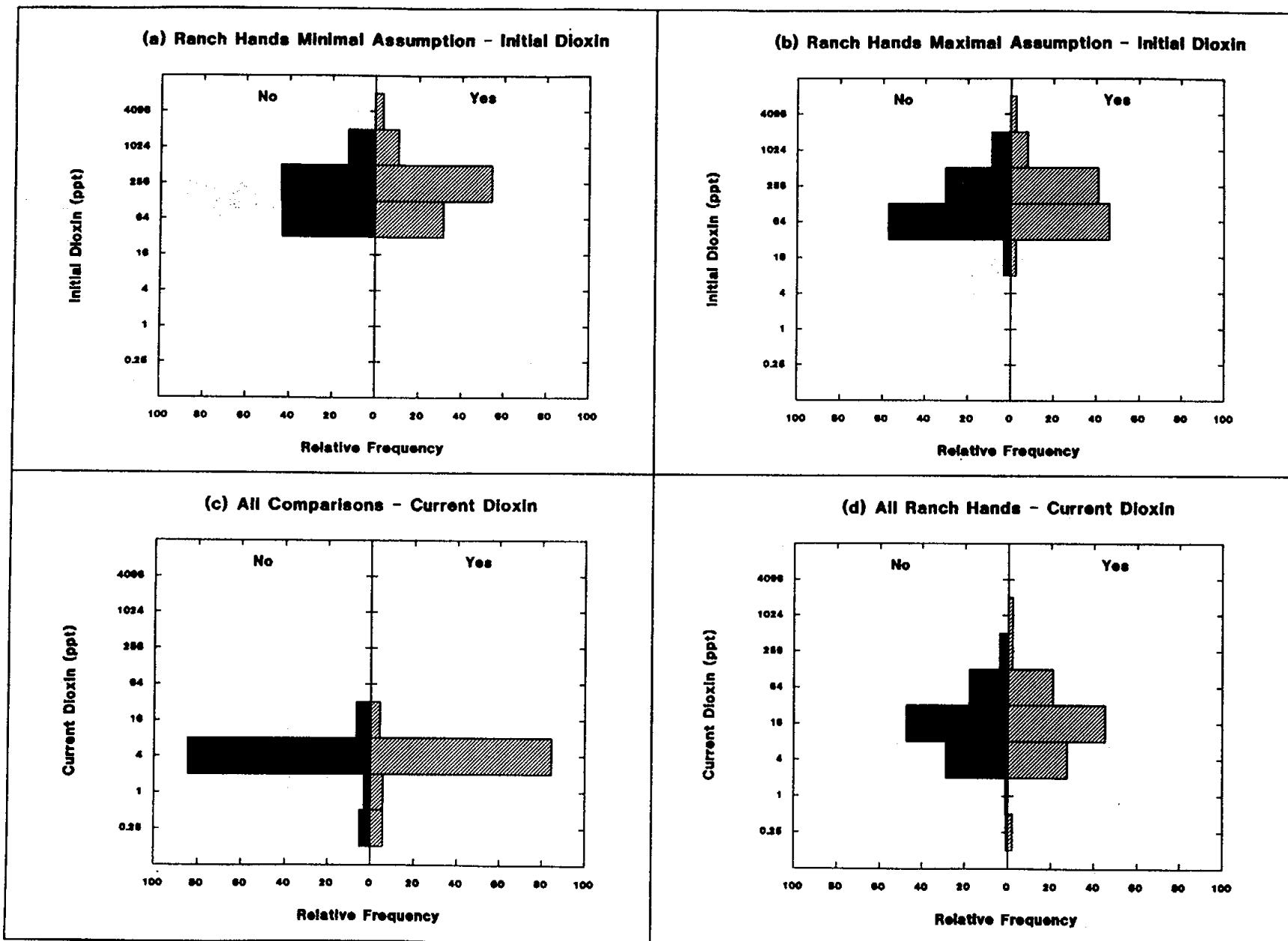


FIGURE D-42. Cutting Oils Exposure versus Dioxin

**FIGURE D-43. Trichloroethylene Exposure versus Dioxin**

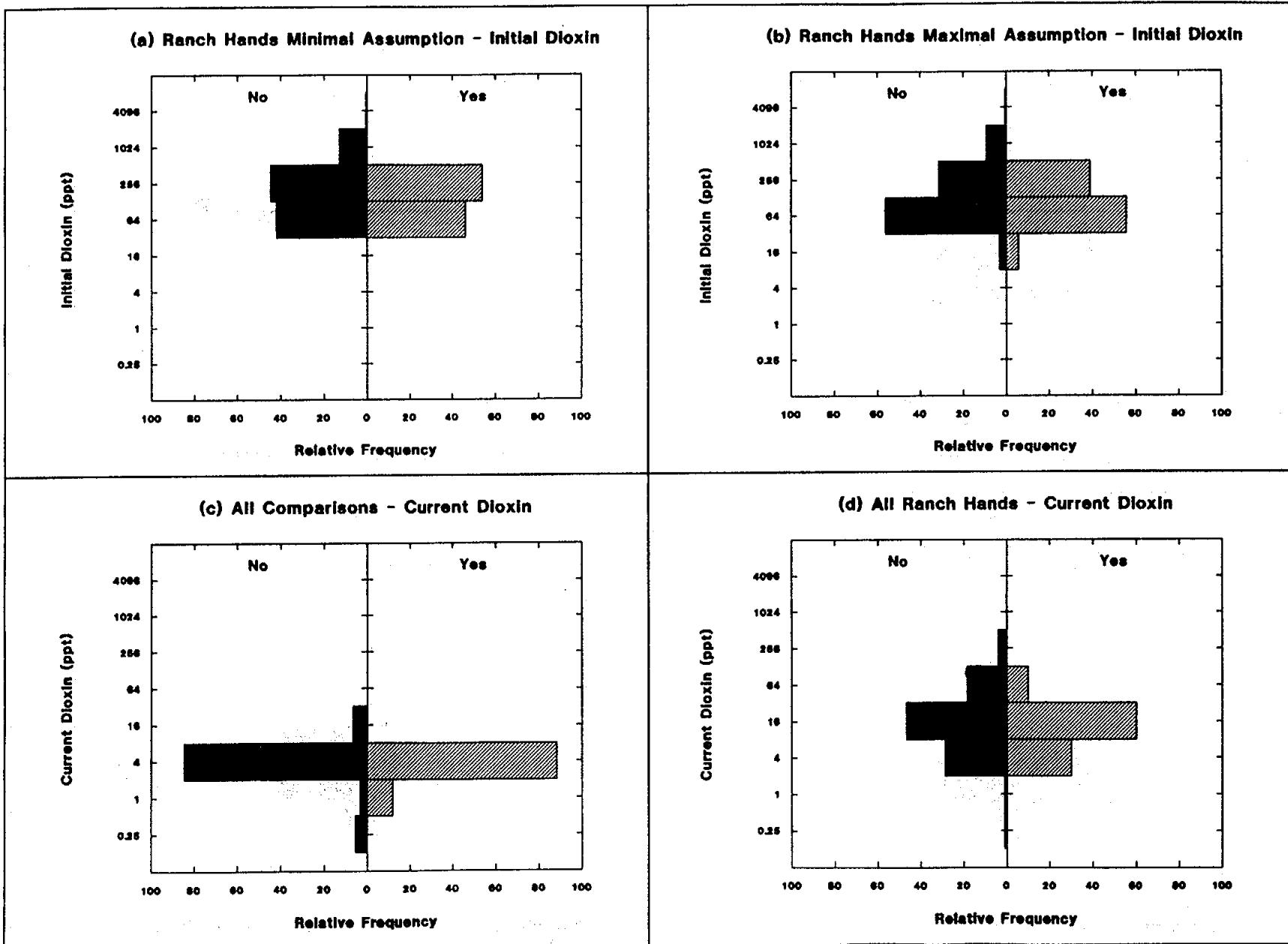
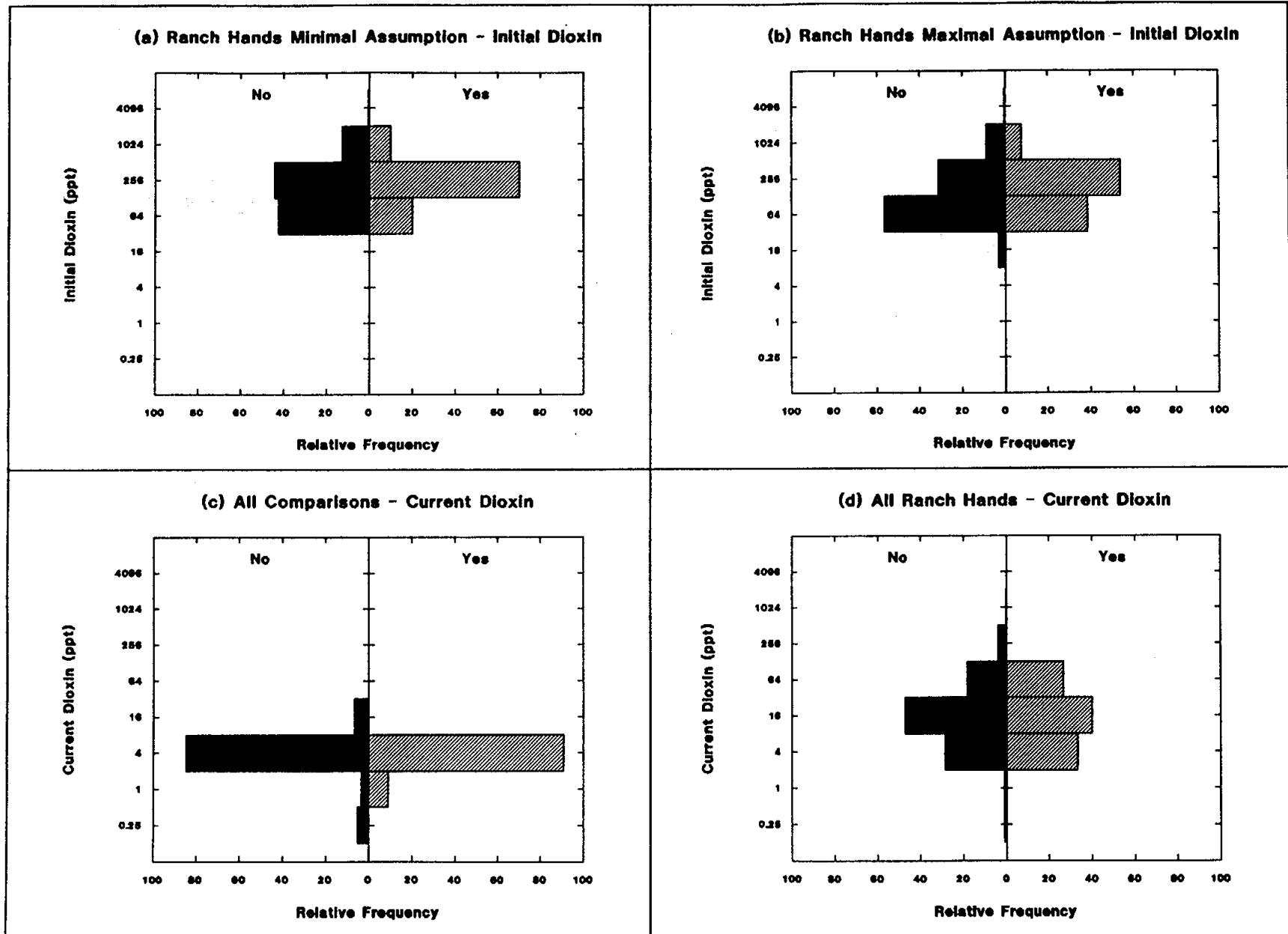


FIGURE D-44. Ultraviolet Light (Not Sun) Exposure versus Dioxin

**FIGURE D-45.** Vinyl Chloride Exposure versus Dioxin

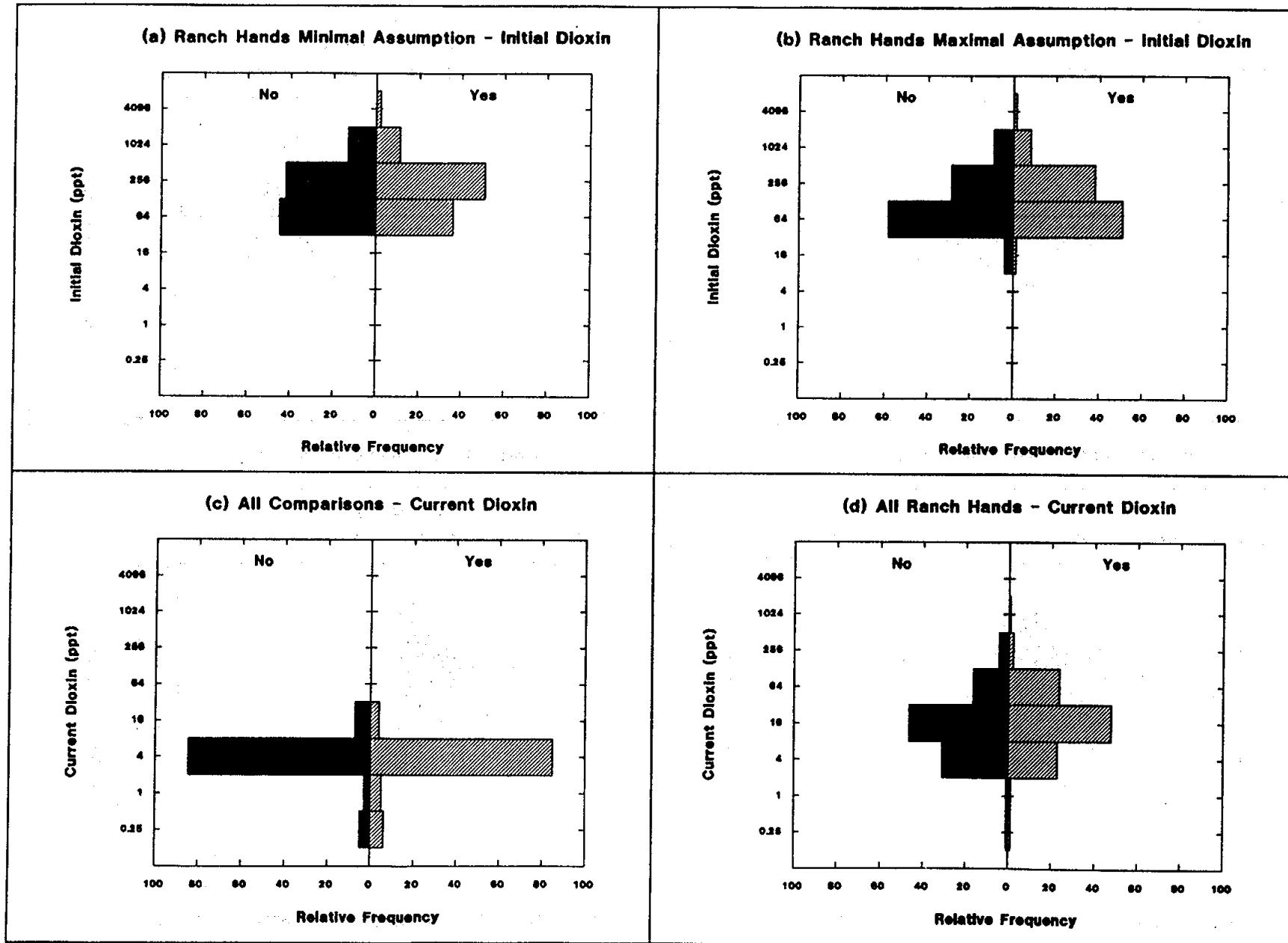


FIGURE D-46. Composite Carcinogen Exposure versus Dioxin

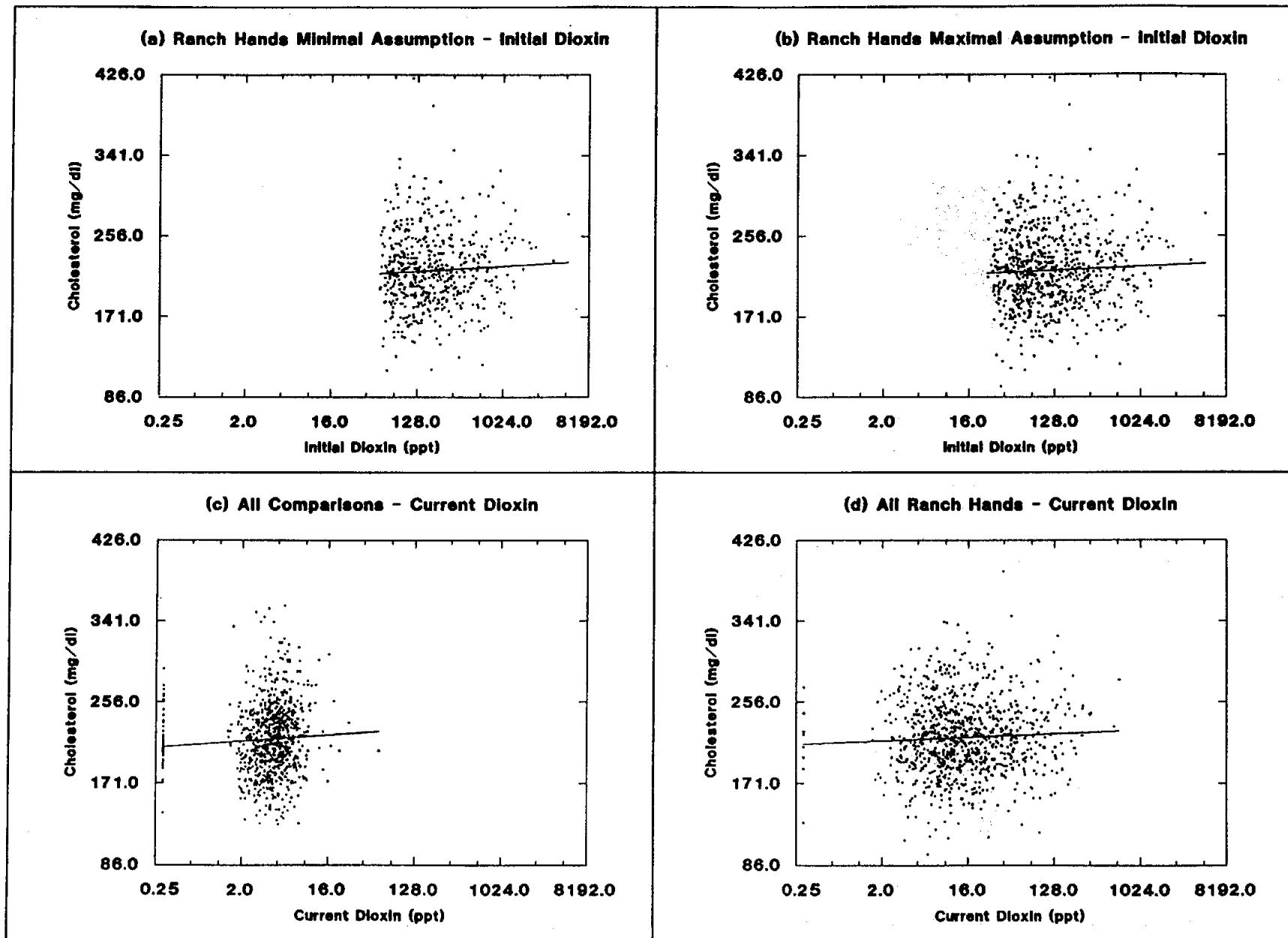


FIGURE D-47. Cholesterol (Continuous) versus Dioxin

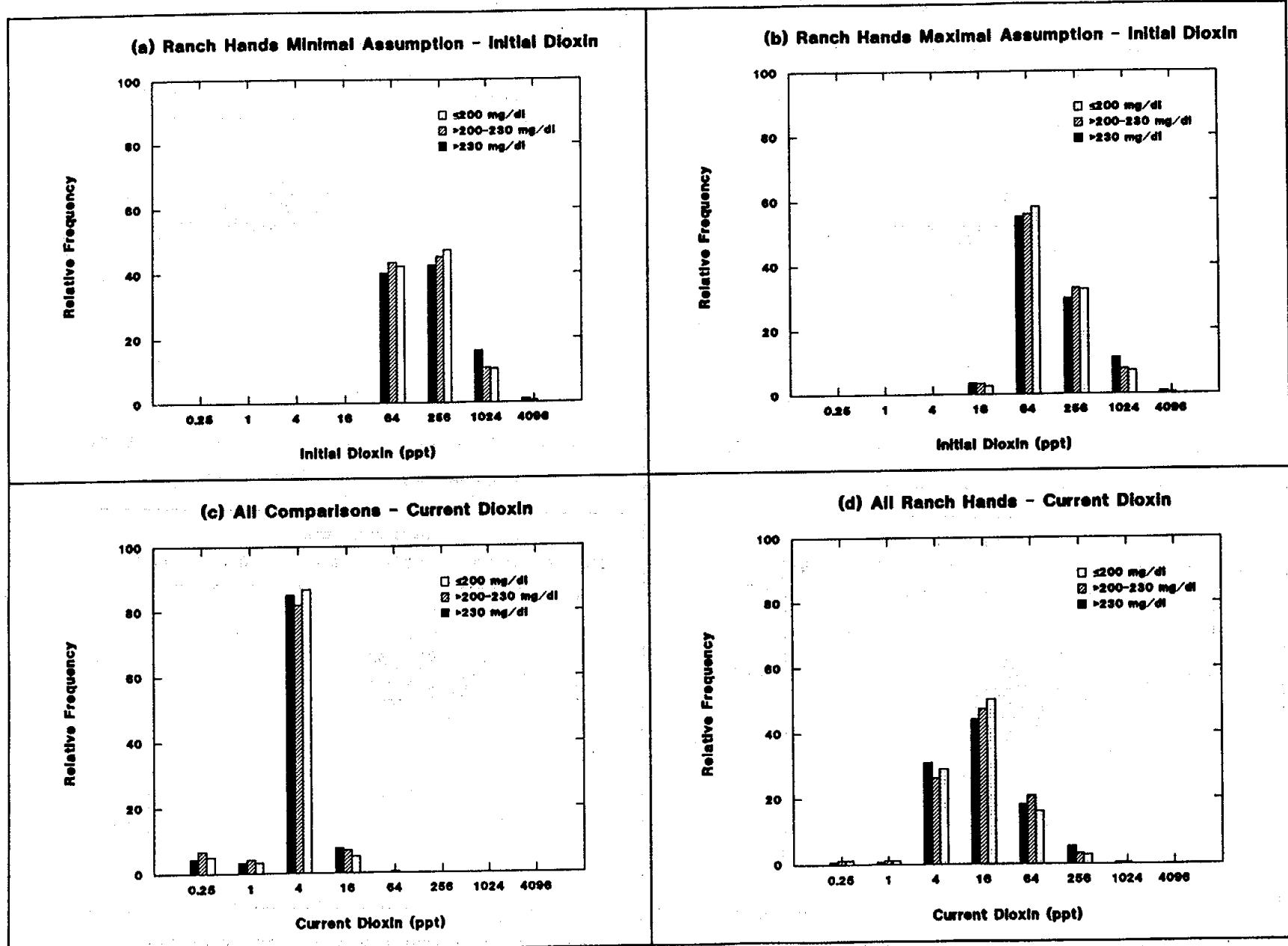


FIGURE D-48. Cholesterol (Discrete) versus Dioxin

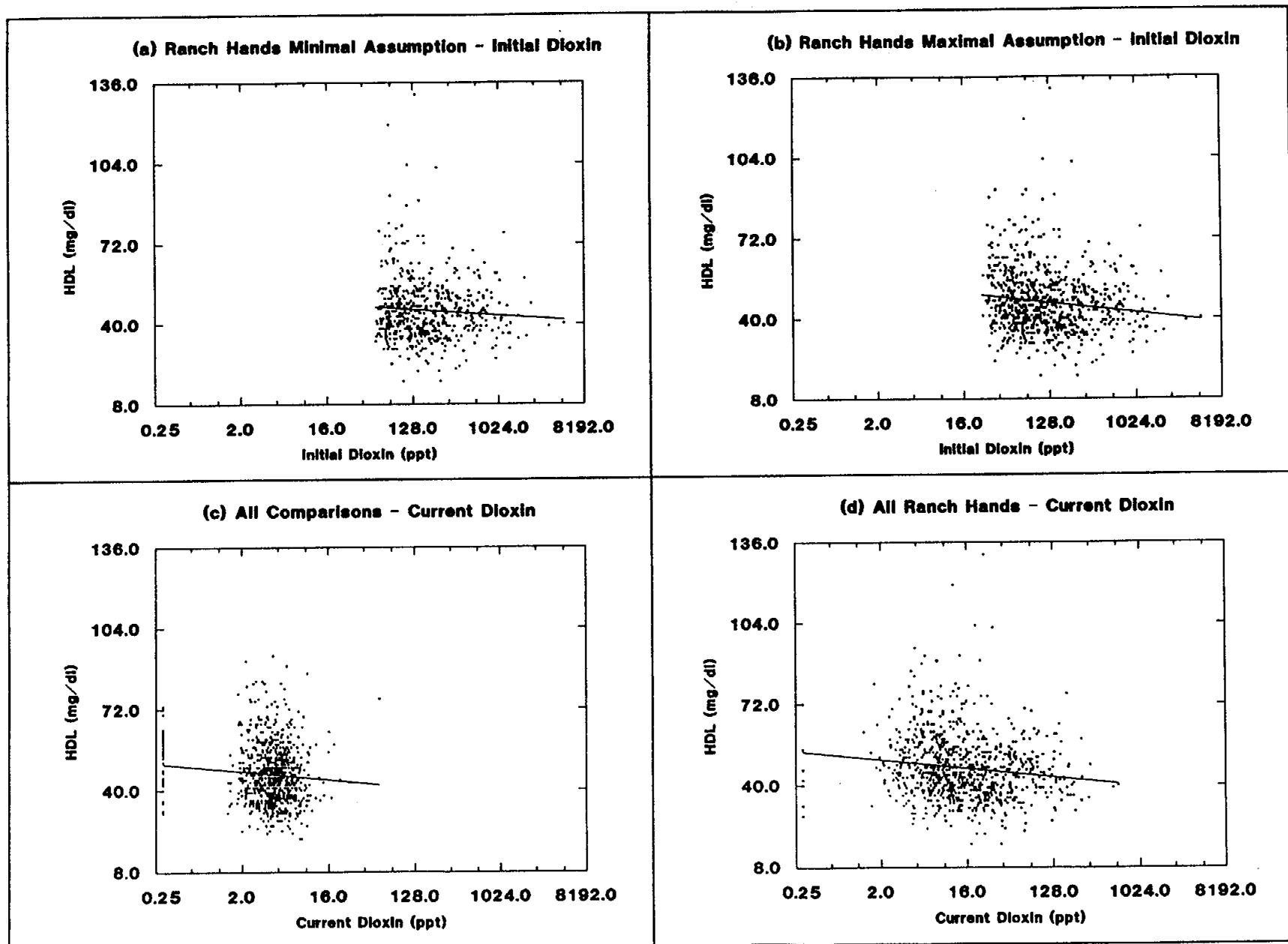


FIGURE D-49. HDL (Continuous) versus Dioxin

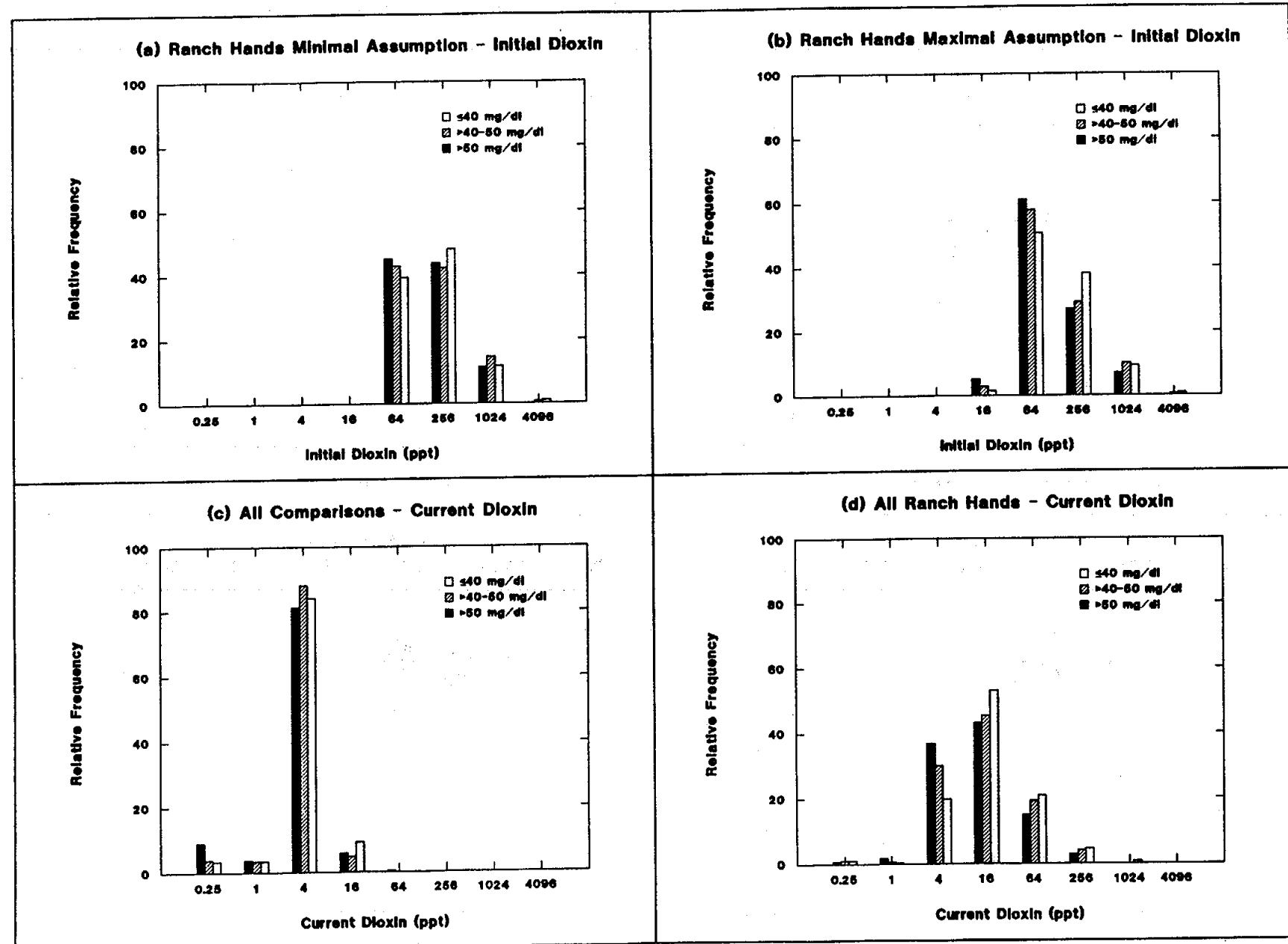


FIGURE D-50. HDL (Discrete) versus Dioxin

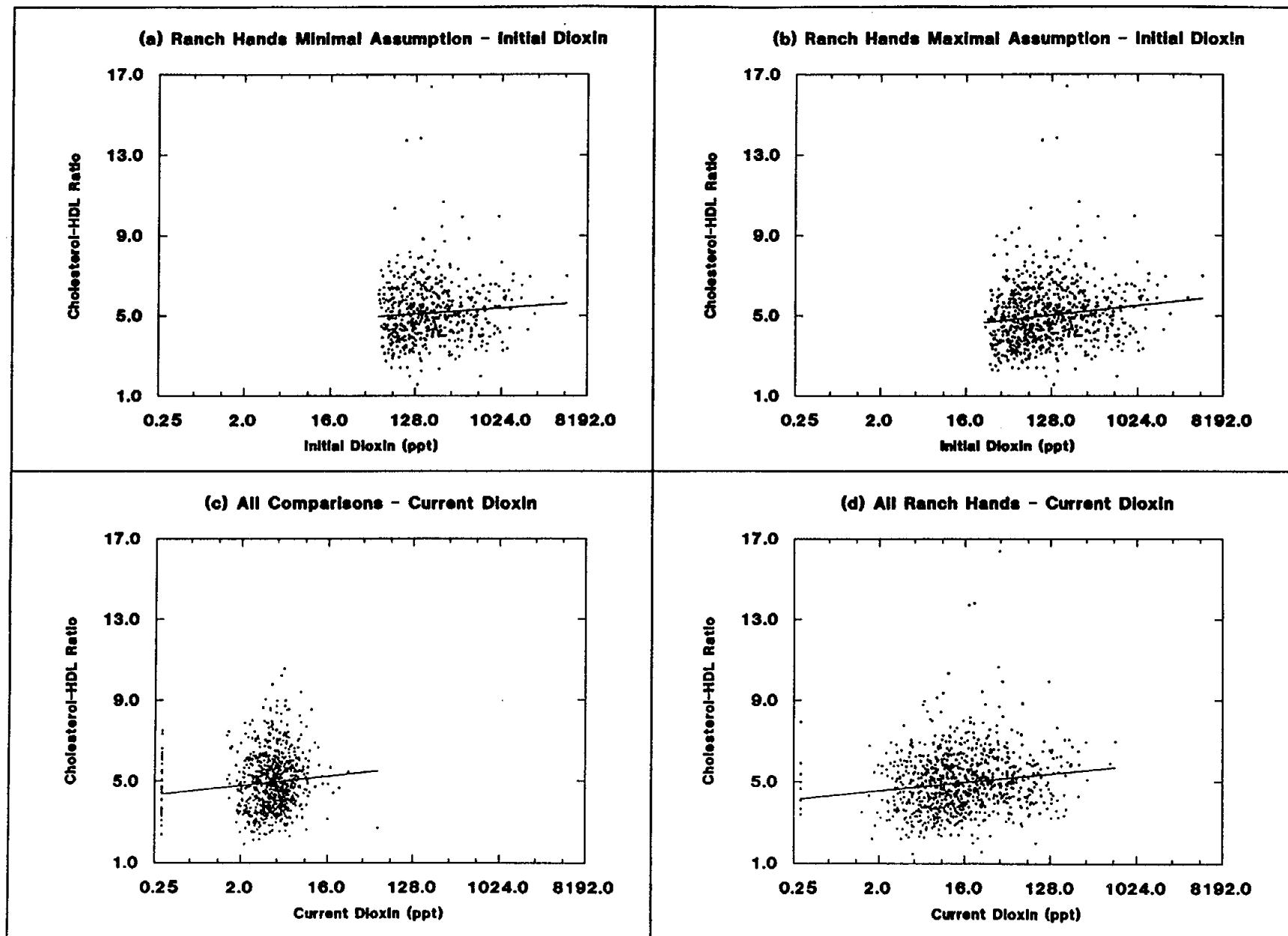


FIGURE D-51. Cholesterol-HDL Ratio (Continuous) versus Dioxin

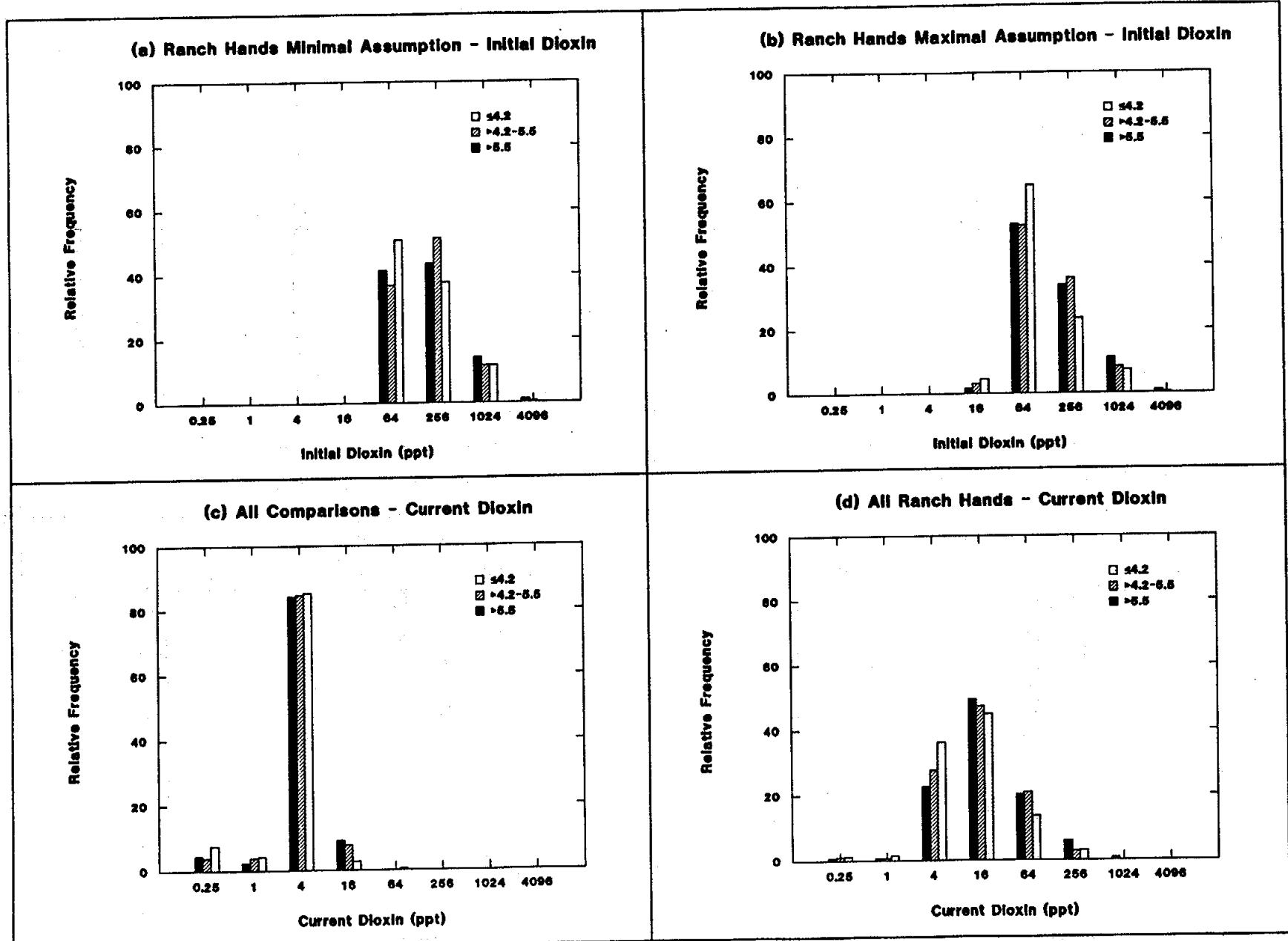


FIGURE D-52. Cholesterol-HDL Ratio (Discrete) versus Dioxin

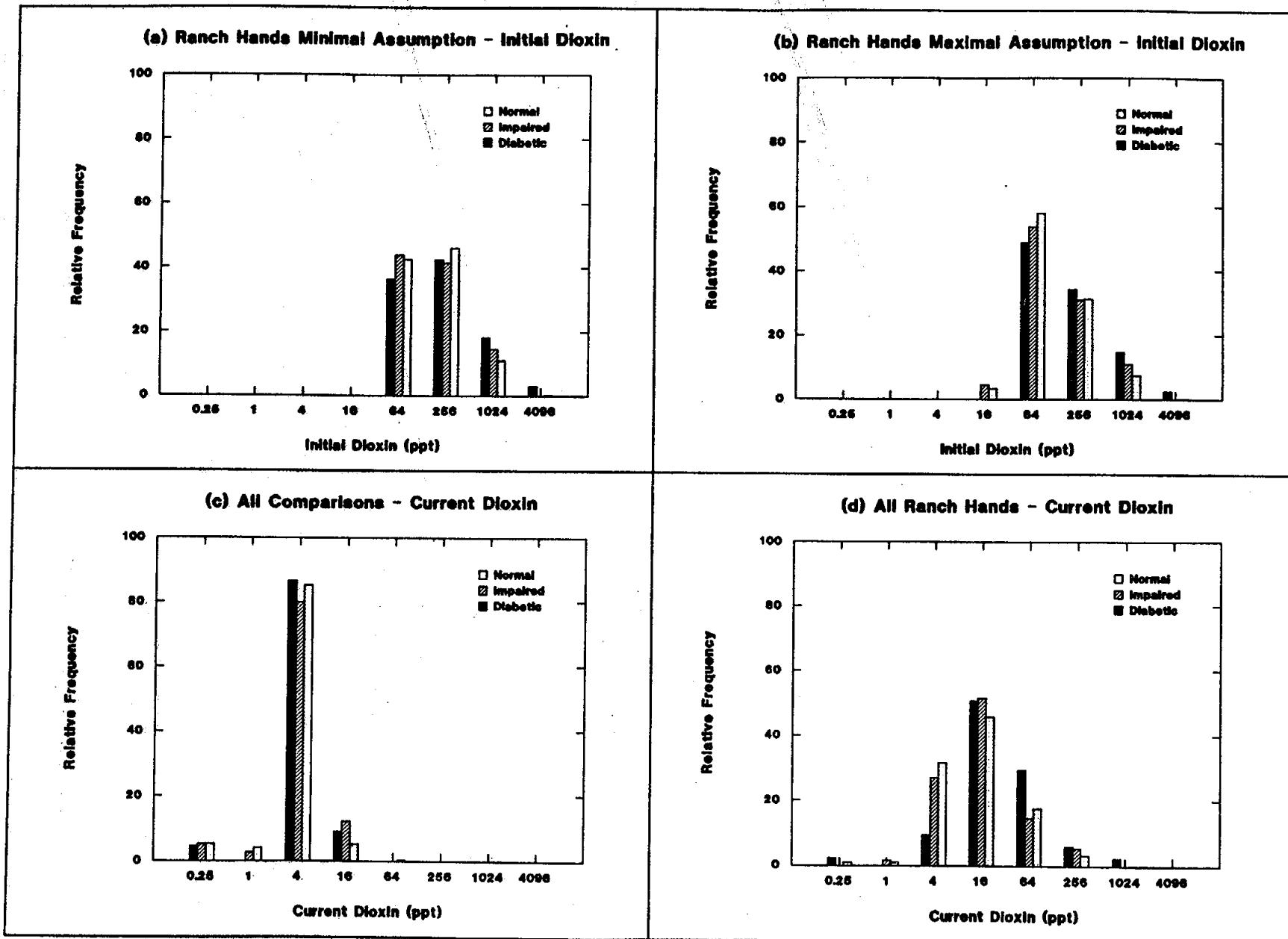


FIGURE D-53. Diabetic Class versus Dioxin

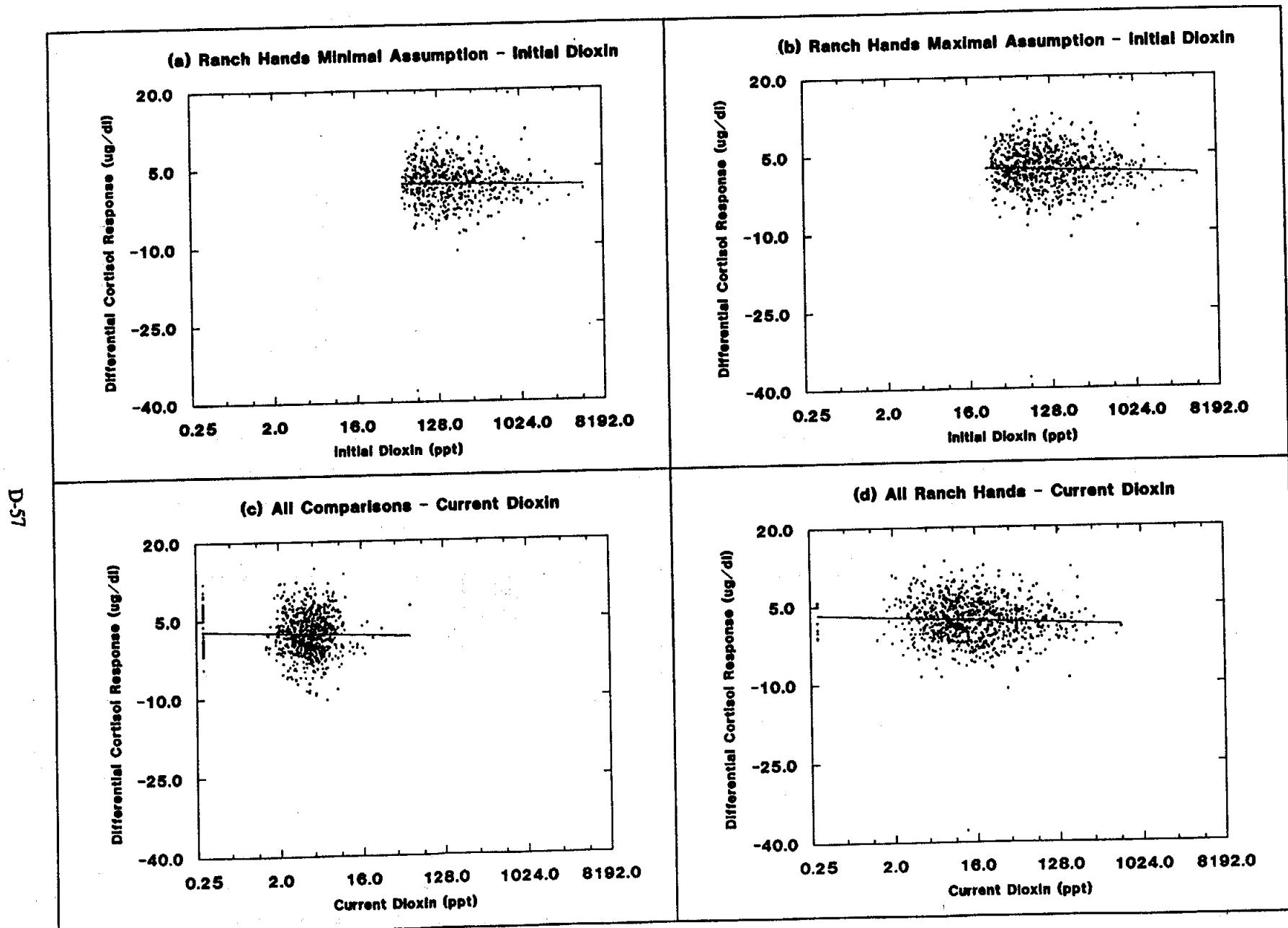


FIGURE D-54. Differential Cortisol Response (Continuous) versus Dioxin

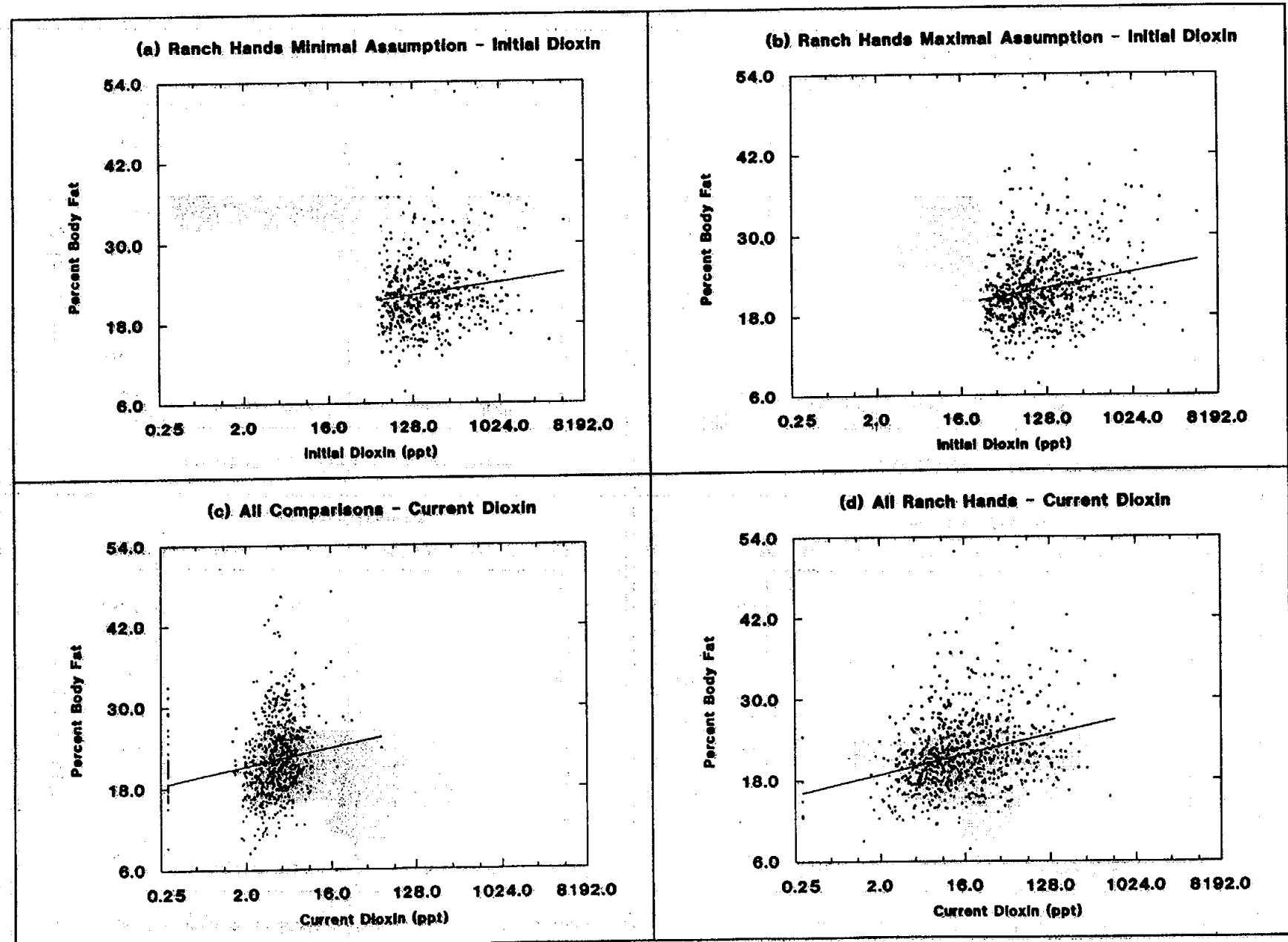


FIGURE D-56. Percent Body Fat (Continuous) versus Dioxin

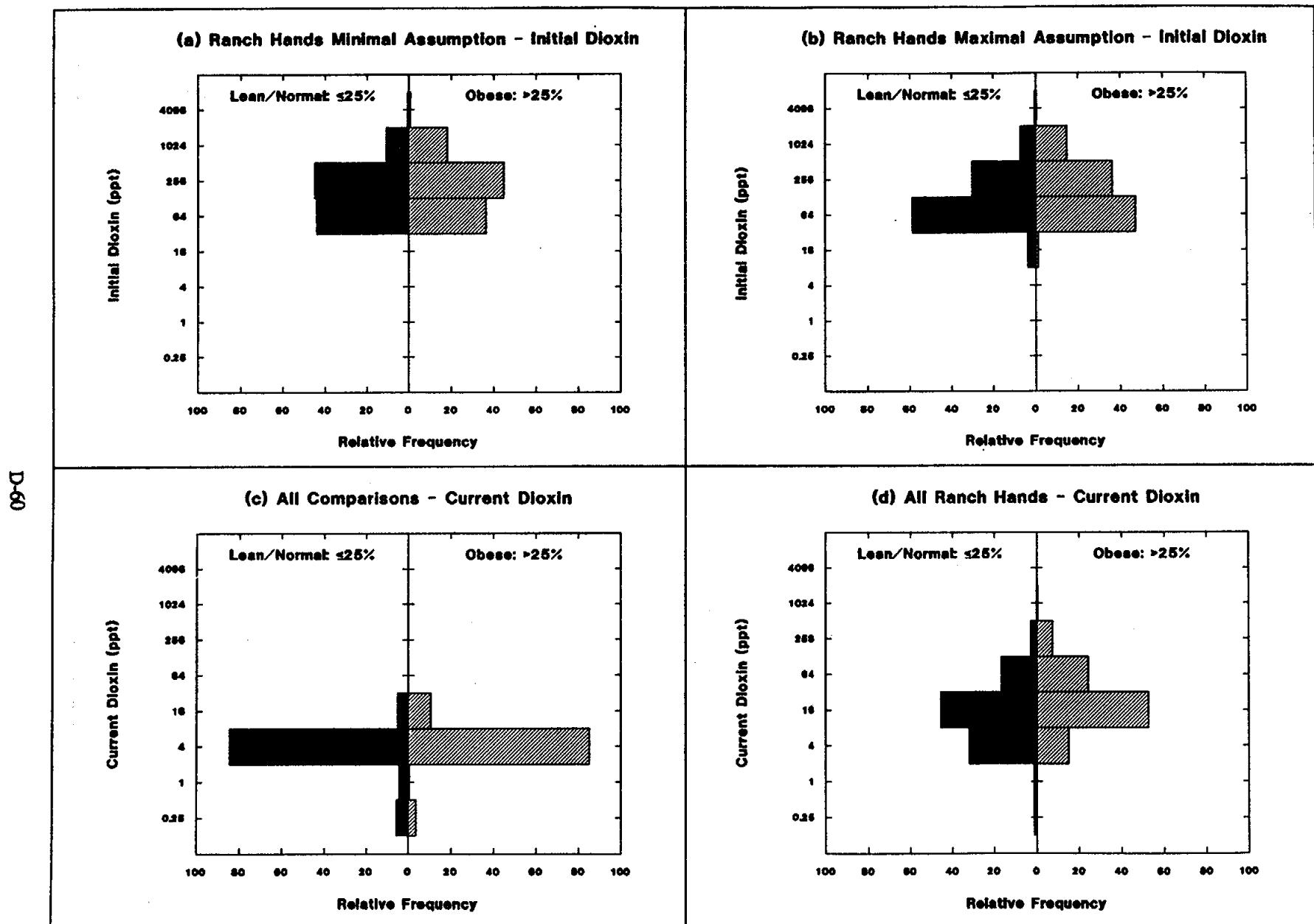


FIGURE D-57. Percent Body Fat (Discrete) versus Dioxin

D-61

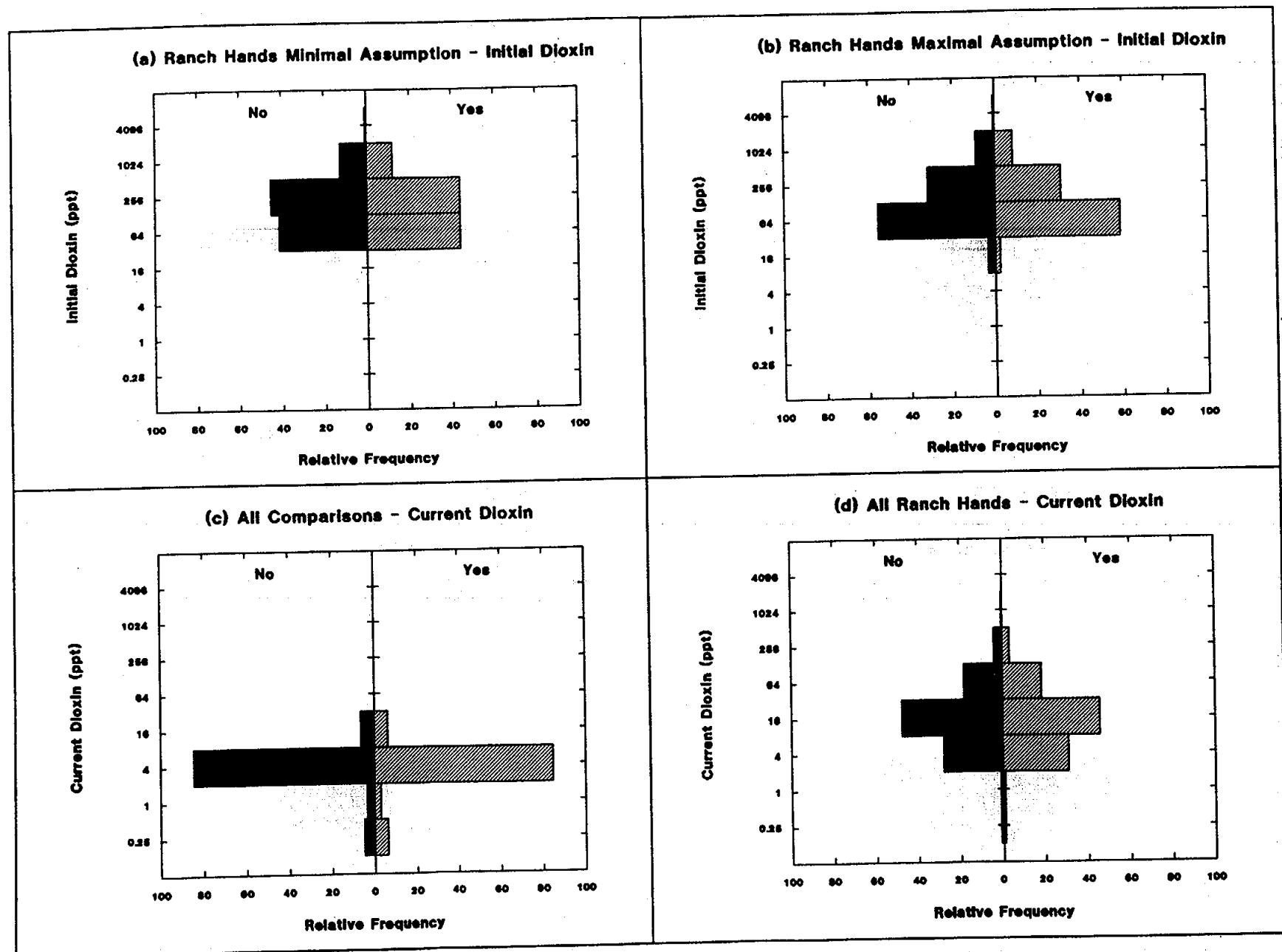


FIGURE D-58. Family History of Heart Disease versus Dioxin

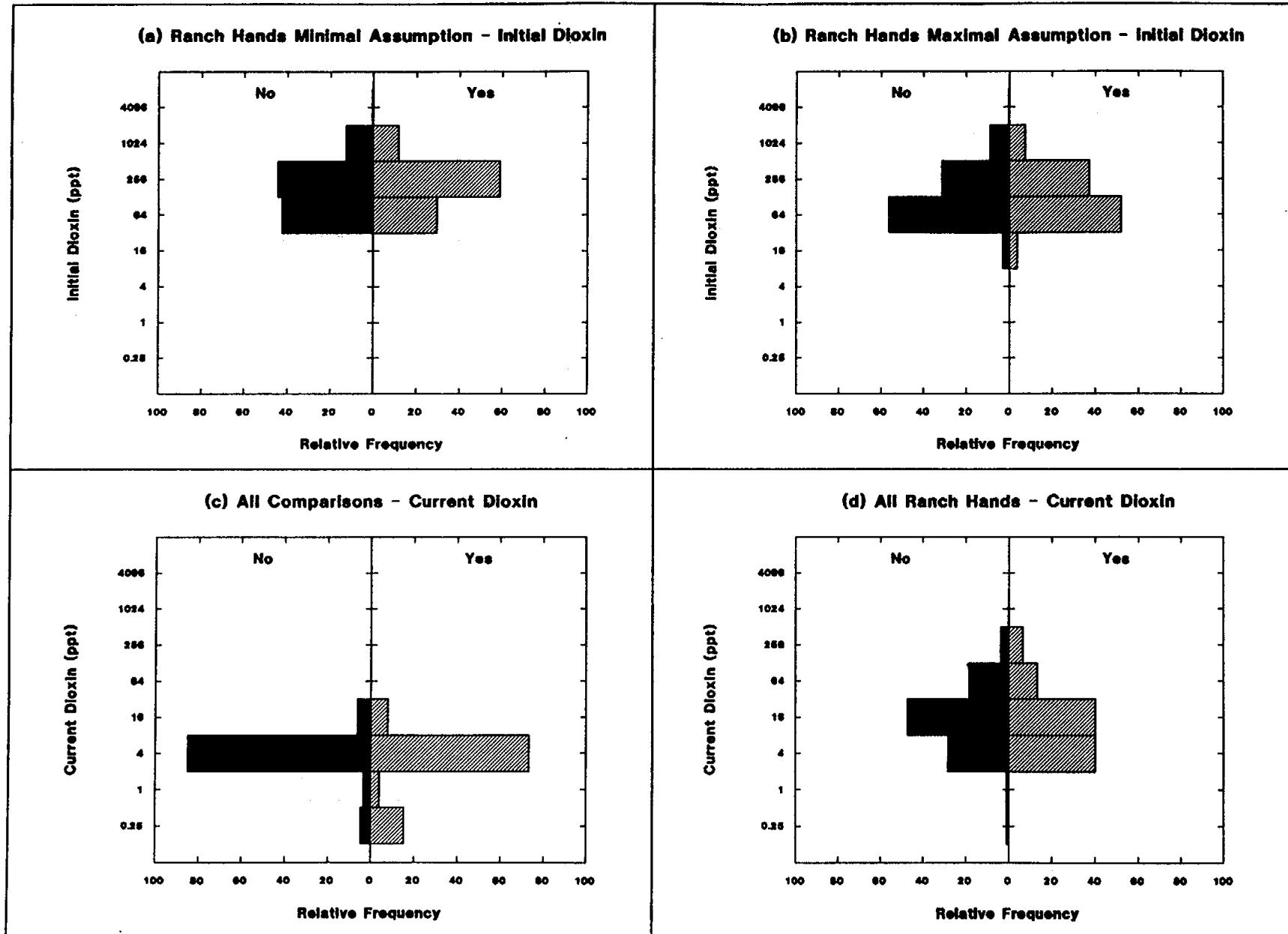


FIGURE D-59. Family History of Heart Disease Before Age 50 versus Dioxin

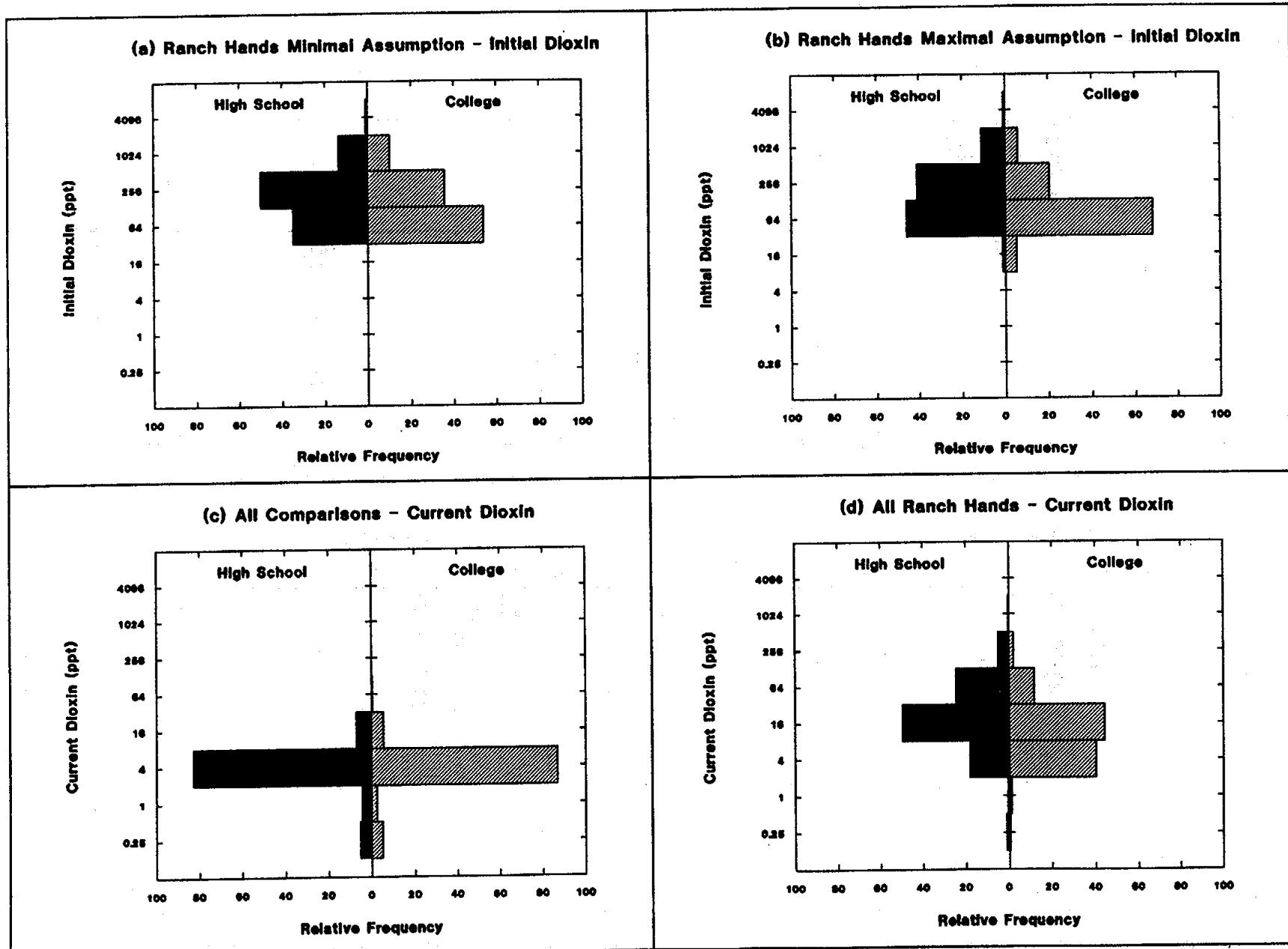
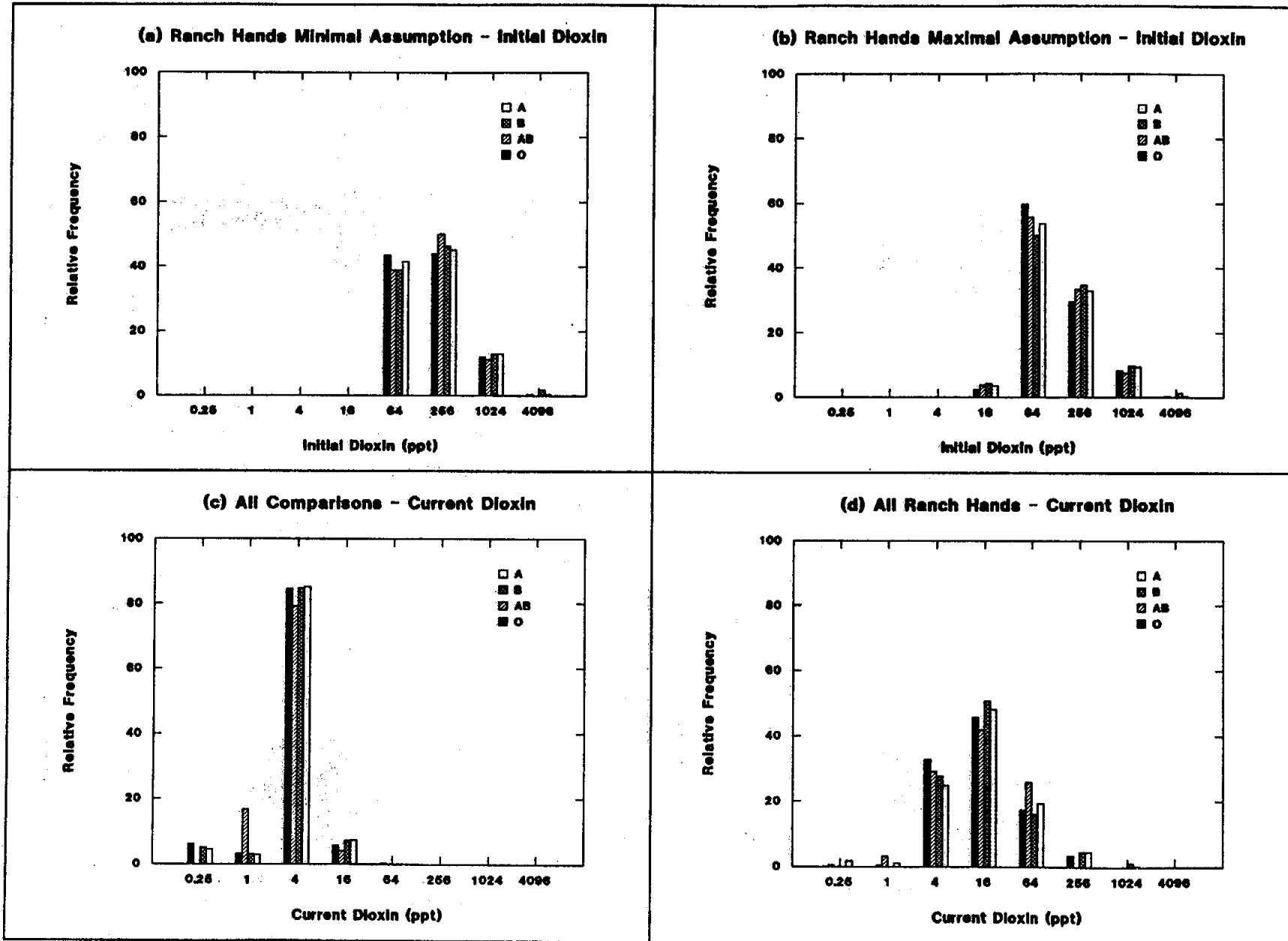


FIGURE D-60. Education versus Dioxin

**FIGURE D-61. Blood Type versus Dioxin**

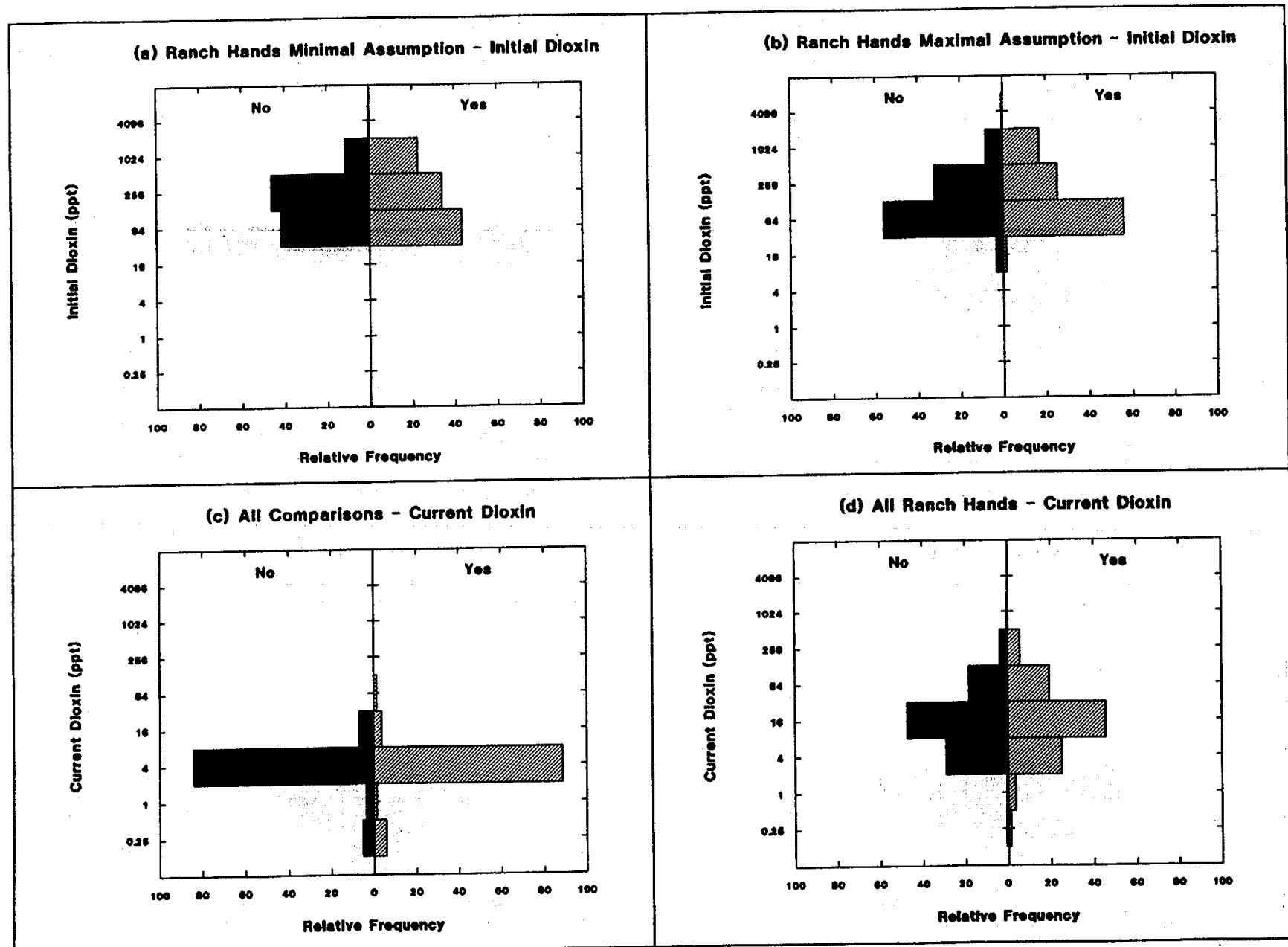
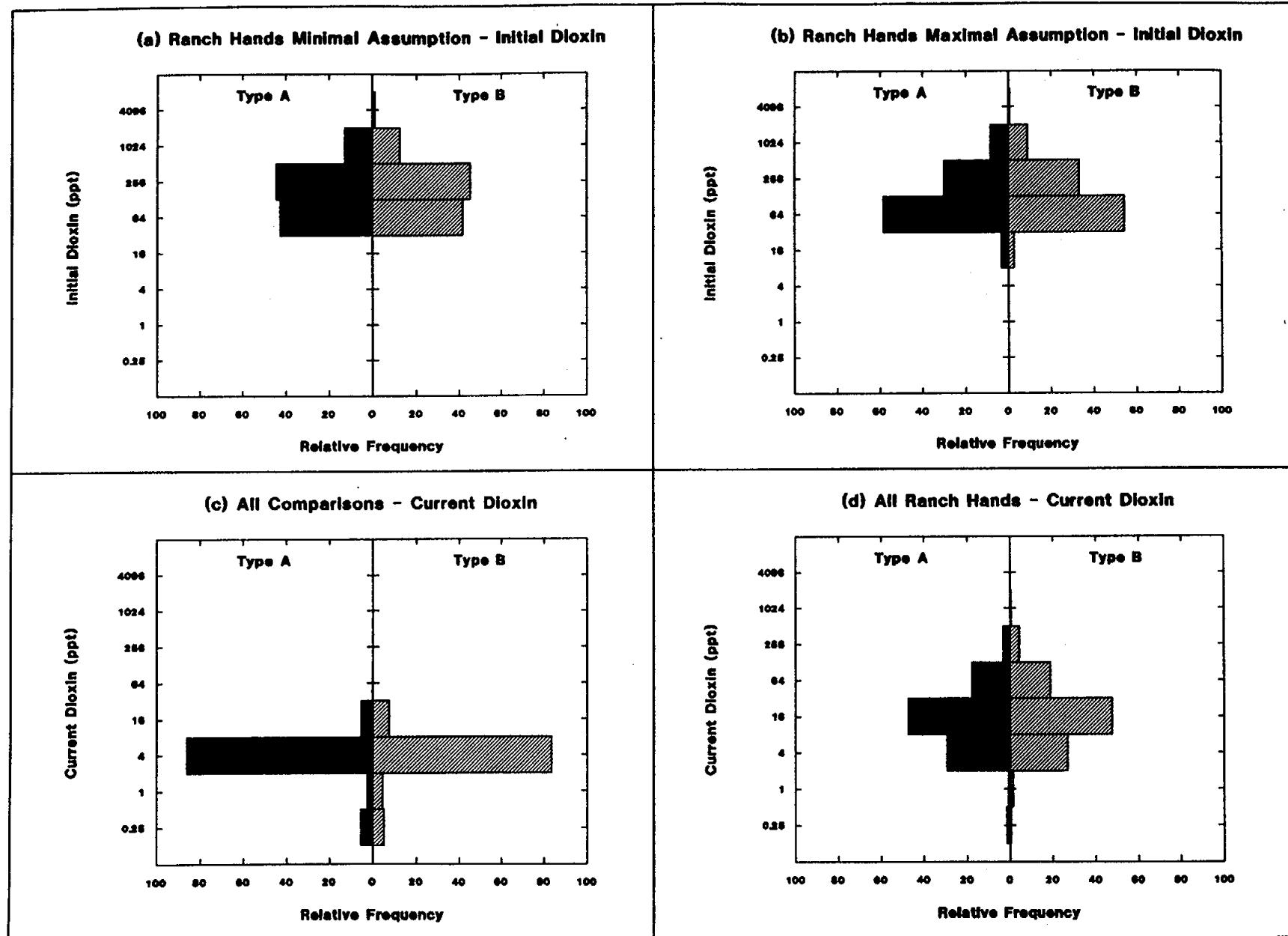


FIGURE D-62. Presence of Pre-SEA Acne versus Dioxin

**FIGURE D-63. Personality Type versus Dioxin**