

ADJUVANT PERSPECTIVES - UNIVERSITY. Rich Zollinger, Extension Weed Specialist, Department of Plant Sciences, North Dakota State University, Fargo, ND 58105-5051.

The U.S. EPA does not regulate adjuvants as pesticides and approximately 1000 chemicals are exempt from EPA regulation. Hence, thousands of name brand adjuvants exist today. Lack of regulation, profitability in adjuvant production and marketing, nonproprietary status of adjuvants, and complexity of the interaction between plant, herbicide, environment, water quality, and adjuvant has caused a pervasive attitude of confusion for adjuvant selection among growers. Growers use three main criteria in adjuvant selection: cost, effectiveness, and crop safety. With the exception of cost, unbiased information on effectiveness and crop safety are rarely available for most commercial adjuvants. Choosing the best adjuvant for each specific condition may be difficult. Other factors contributing to grower confusion on adjuvant selection are unfamiliarity and non-standardizing of adjuvant active ingredients, number and function of adjuvant classes, specified rate, vague and contradictory recommendations on pesticide and adjuvant labels, unsubstantiated and unguaranteed manufacturer claims, testimonials, unfamiliar adjuvant terminology in product descriptions, use of obscure adjuvants with herbicides in scientific research and publications, lack of unbiased research, and lack of adjuvant specific education in extension programs and publications. Another condition which minimizes the importance of adjuvant selection is liability for herbicide nonperformance. Rarely do adjuvant manufacturers become involved in grower complaints of pesticide nonperformance. Advancement has been made to reduce grower confusion with adjuvant selection. Chemical companies have published approved adjuvant lists and have issued guidelines to manufacturers that set minimum requirements to qualify adjuvants for use with herbicides. Pesticide companies are increasing the study of adjuvants in discovery screens of pesticides. Registered herbicides are beginning to be marketed with an effective adjuvant either in the herbicide formulation or packaged in a different container and sold with the formulated herbicide. University adjuvant research is limited but shows variability in herbicide enhancement from adjuvants and has influenced herbicide label wording and recommendations.