



A new community collaborative rain, hail and snow network in the United States

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CoCoRaHS (the Community Collaborative Rain, Hail and Snow Network) is a growing organization of volunteers of all ages and backgrounds in the United States who share a common interest in weather. Using low cost plastic rain gauge, rulers for measuring snow depth, and squares of Styrofoam wrapped with aluminum foil ("hail pads") to measure hail, volunteers carefully measure and report the daily precipitation on the internet that lands in their yards, gardens, fields or pastures. CoCoRaHS is active and growing in 17 states with over 3500 volunteers. The CoCoRaHS website data is accessed by U. S. National Weather Service to get ground truth for the Doppler radar system. The data is used by state drought monitoring groups to estimate the impact of rainfall on crop production and rangeland forage production. Snow data is used to augment data measured by the SNOTEL automated system and snow courses used to predict stream flow runoff for forecasting the available irrigation water for irrigated crop production. Spatial variability of rainfall is extremely large with a coefficient of variation in the winter months for frontal storms of 0.43 and for summer thunder storms of 0.51 necessitating a large network of rain gages that can only be read by volunteers.