

The present invention provides a spray delivery system and methods of use thereof, suitable for delivering a fan-shaped vaccine spray to birds or chicks. The birds or chicks are held within an open-topped container, that comprises a cover, an elongated guide rail mounted thereon, and a spray head which, in one embodiment, may move reversibly on the guide rail. The spray head comprises a spray nozzle assembly having a spray port and optionally a fan-shaped nozzle for delivering a fan-shaped fluid spray. The cover has an elongated slot that permits the spray nozzle assembly to extend below the plane of the cover, while allowing the spray nozzle assembly freely traverse the length of an open-topped container placed beneath the cover. By reversibly moving the spray head along the guide rail, the spray delivery system can deliver a substantially uniform fluid spray to an open-topped container with minimal overspray and reduced fluid wastage.