**Metadata Records**

**Irrigation Innovation Consortium-Supported Project Datasets**

**Please use a separate sheet for each dataset. Answers are automatically saved.**
**Questions? Contact Diane DeJong: diane.de_jong@colostate.edu.**

**Thank you!**

| Question | Your answer |
|---|---|
| **Project name** | Potential for intensification of maize production with SDI |
| **Project background** | A field study was conducted in northwest Kansas to evaluated the potential for intensification of field corn production with subsurface drip irrigation (SDI). Experimental factors were three irrigation levels (115, 100, or 85% of ET-rain replacement), two high-yielding corn hybrids (Pioneer 1151 or Pioneer 1197) and three elevated plant densities (42,000, 38,000, or 34,000 plants/acre). In 2019, corn yields (averaging 249 bu/acre) were not affected by irrigation level and significantly greater crop water productivity (CWP) was obtained by the lower 85% ET-rain irrigation treatment. There were numerical differences between hybrids with Pioneer 1197 averaging nearly 2% more grain yield. Increasing plant density from 34,000 to 42,000 plants/acres increased grain yield by 2% (5 bushels/acre). Seasonal profile soil water was relatively stable across irrigation treatments and plant densities further indicating that the 85% ET-Rain irrigation treatment was sufficient for this corn production intensification study. |
| **Dataset name** | Corn Yields, Yield Components, Water Use, and CWP |
| **Primary author**<br>Include first & last name, institution affiliation, and email address. | Freddie R. Lamm, Kansas State University (deceased) |
| **Primary contact**<br>The primary contact may be the same or different from the primary author.<br>Include first & last name, institution affiliation, and email address. | Susan Metzger, Kansas State University, smetzger@ksu.edu |
| **Dataset description**<br>Please provide a brief, clear summary description of the dataset contents. Indicate as applicable: purpose and scope; time period; areas of investigation; and any other special characteristics. | Corn yield and water use parameters in an SDI study with intensive management at the KSUNWREC, Colby, Kansas in 2017. Yield components include: grain yield (bu/ac), plant density (p/ac), ears/plant, kernels/ear, and kernel mass (mg). Water use parameters include crop water use (in), crop water productivity (lb/ac-in) |
| **Spatial coverage**<br>Please be specific as possible about the geographic coverage of your data, and record the information according to defined standards, such as FGDC or the Getty Thesaurus of Geographic Names. You can enter lat/long data, county names, state names, etc. | KSU Northwest Research-Extension Center in Colby, Kansas |
| **Temporal coverage**<br>Describe the temporal coverage of your dataset:<br>Start: Time of day, Date, Month, Year<br>Finish: Time of day, Date, Month Year | 2017 |

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| **Re-use limitations**<br>Describe known problems or caveats that would limit reuse of the data (e.g., uncertainty, sampling problems, blanks, quality control samples) and/or that future potential users of your dataset should know about. Or indicate "None." | None |
| **Citations**<br>Please include full citations and DOIs for articles published based on or related to this dataset. Or indicate "None." | https://www.ksre.k-state.edu/sdi/reports/2018/Lamm18IntenseSDI.pdf |
| **Keywords**<br>Please add a few appropriate National Agricultural Library keywords:<br>https://agclass.nal.usda.gov/vocabularies/nalt | drip irrigation; microirrigation; Kansas; maize; corn |
| **Tags**<br>Please add a few of your own user-defined tags that would be useful to others who might use your dataset in the future. | subsurface drip irrigation |
| **Acronyms & abbreviations**<br>Please define any acronyms, site abbreviations, or other project specific designations used in your dataset. Or indicate "none." | SDI - subsurface drip irrigation; |
| **Other dataset storage location**<br>Has this dataset already been uploaded elsewhere?  Yes or No<br><br>Reasons may include a requirement as part of publishing a paper or storing data on GitHub or other locations to make accessible to others.<br><br>If yes, please provide the link or other information to explain where the dataset is located and where or how it can be accessed. | None |