

DEFINITIONS

Impressions: number of times content is displayed/viewed.


Engagements: number of actions your content received from users (likes, comments, shares, saves, etc.). For X, this metric is provided, however, for LinkedIn, this metric had to be hand calculated.

Engagement rate: the "standard" engagement rate is the number of engagements divided by impressions.


Clicks or "total clicks": includes link clicks, post reactions, comments, shares, clicks to expand images to full screen, clicks to homepage, etc. (LinkedIn only)

Click-through rate: The total number of clicks divided by impressions (LinkedIn only).

Detail expands: number of times a post was clicked to show full details of the post (X only).




(Twitter)



44 X posts have led to

- ◆ 4,142 impressions
- ◆ 264 engagements
- ◆ 6 engagements per post (average)
- ◆ ~6% engagement rate
- ◆ 38 detail expands
- ◆ 87 likes
- ◆ 22 reposts





42 LinkedIn posts have led to

- ◆ 11,969 impressions
- ◆ 458 Likes
- ◆ 20 comments
- ◆ 51 reposts
- ◆ 1,076 clicks
- ◆ 7% click-through rate
- ◆ 13% engagement rate
- ◆ 994 video views

SOCIAL MEDIA PLATFORM SUMMARY BY METRIC

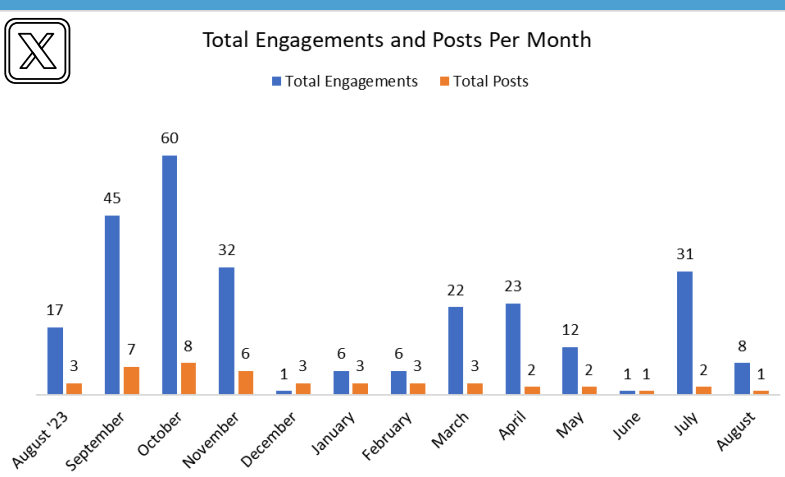
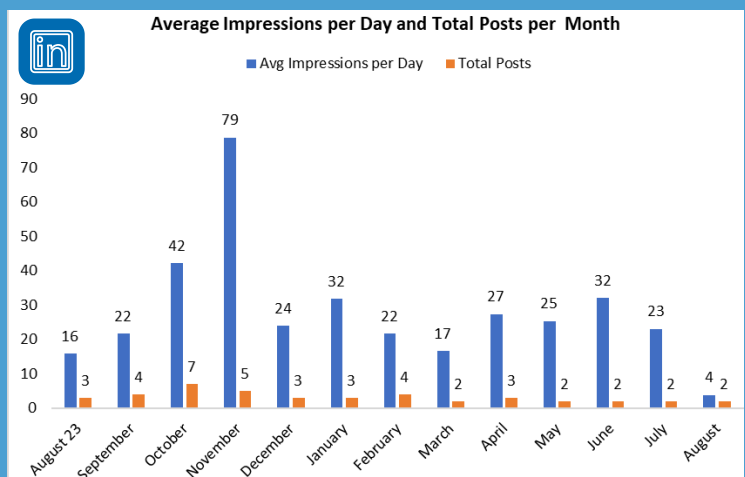
*Average Metric Unit per Post

Platform	Impressions	Engagements	Engagement rate*	Likes	Top Content Theme	Top Media Type	Top Hashtags
 X (Twitter)	94	6	6.4% (+540%)*	2	Education/out-reach; Shout outs to team members	Images of team members at events; Links to articles	#nutrition #plant-breeding
 LinkedIn	285	19	13.0% (+550%)*	11	Education/out-reach; Shout outs to team members	Images of team members at events; links to non-journal articles and partners	#research #plant-breeding

ACROSS ALL PLATFORMS, **TUESDAYS** AND **THURSDAYS** TEND TO BE THE IDEAL DAYS TO POST. TO OPTIMIZE INTERACTIONS, **MONDAYS** SHOULD GENERALLY BE AVOIDED FOR X AND **FRIDAYS** SHOULD BE GENERALLY AVOIDED FOR LINKEDIN.

*LinkedIn "standard engagement" rate is 2% and X(Twitter)'s "standard" engagement rate is 0.5-1.0% according to Adobe Express (2022). The percentages listed within brackets represent the percent difference between S2S's engagement rate and the respective standard provided by Adobe Express. The conservative 1% standard was used to compare X's engagement rate.

OVERVIEW



Average impressions per day along with the total posts per month were graphed (LinkedIn example to the Left) to see if there was any relationship between the posts and impressions. Similarly, total engagements and total posts per month (X example, to the right) were graphed. No clear relationship between the impressions and engagements and posts by month were observed. There does seem to be a trend in impressions and engagements across both platforms to peak in the Fall and Spring, which is understandable as these are highly active times for Universities.

WHO IS ENGAGING ON LINKEDIN?

LinkedIn users who engage with S2S posts are most likely to be **researchers**.

Users are most commonly from **plant breeding, agriculture, agronomy, or food production/industry**.

Most engagement comes from users who are **not** part of the S2S team or affiliated with an S2S institution, indicating that the LinkedIn platform is **reaching external parties**.

Most Common User Disciplines

Plant breeding
Agriculture
Agronomy
Food production/industry
Education

Most Common User Roles

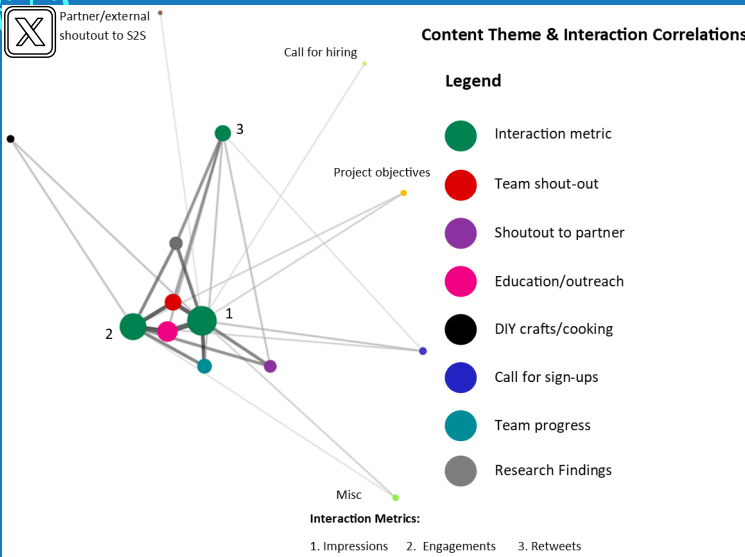
Researcher
Entrepreneur
Agriculture outreach/consulting
Agronomist
Graduate student

FORCE-DIRECTED GRAPHS

Social media posts for each platform (X and LinkedIn) were read and coded for naturally occurring themes. These themes were collected with respect to the content of the post's message itself, the type of media that was used in the post (i.e., image, URL link, video) if at all, and the hashtags used. To see if there was a relationship between these components and post interactions (i.e., if utilizing images in posts garnered more attention than a URL link), OEIE used Atlas.ti23 to run correlations (relative frequencies only; not a significance test) between themes and interaction metrics respective to the platform being analyzed, then visualized the results in Atlas's force-directed graphs. Force-directed graphs utilize algorithms that impose similar physics as van der Waal's forces onto the network, based on the correlations between the codes (nodes). Please refer to Appendix A for more details regarding the methodology and Appendix B for a summary of results.

- The **size of the node** is a function of **integration** - the larger the node, the more relationships that node has with other nodes.
- The **length of the 'edges'**, or lines between nodes, is a function of **how strong the correlation is** (a shorter length indicates those two nodes occur more frequently together than with others).
- The **thickness of the edges** is a function of **density** - the more frequently those nodes occur simultaneously, the thicker the edge.

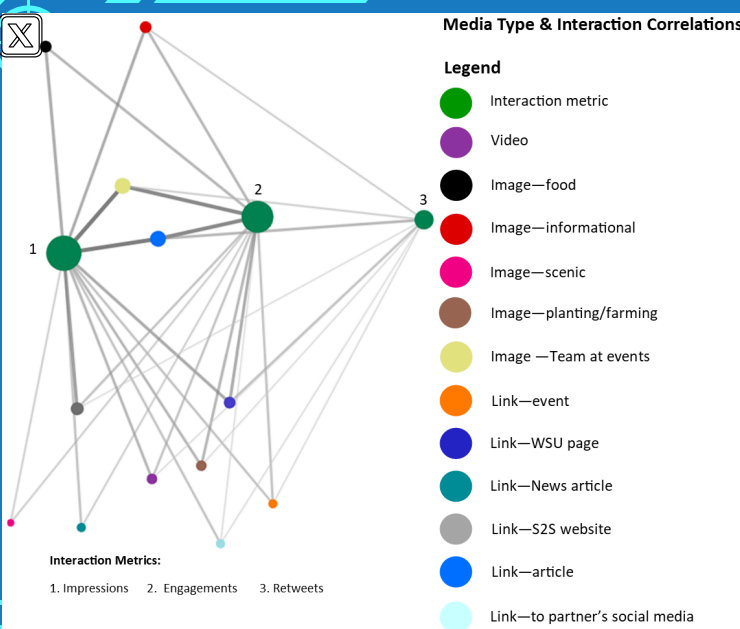
CONTENT THEMES



Seven themes naturally emerged from the thematic coding of the post message content (see image to the left and Appendix B for more details). Themes and their co-occurrence correlations with interaction metrics were graphed for each platform. In the case here with X, interaction metrics included impressions, engagements, and retweets.

In the X example to the left, **interaction metrics** most strongly correlated with **team or team member shout outs** and **education/outreach** posts. This is visibly indicated by the larger size of these nodes and the short, thick edges between the respective thematic nodes and interaction metrics (particularly impressions and engagements).

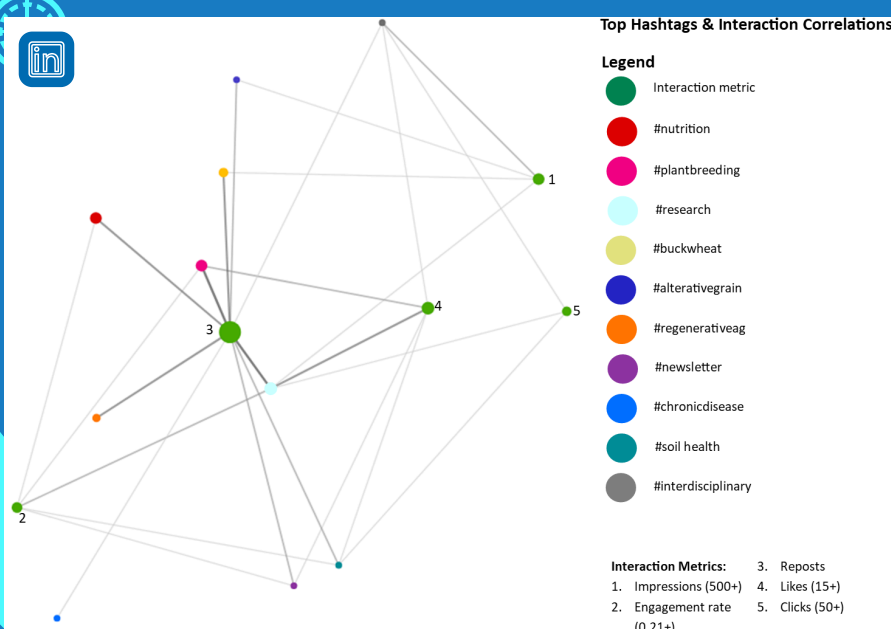
MEDIA TYPE THEMES



The media used in posts were coded for naturally occurring themes (i.e., videos, images, links). Many themes were found (i.e., 12 themes emerged in X's media within posts as demonstrated to the left). Themes were graphed against the respective interaction metrics for each platform. In the case here with X, interaction metrics included impressions, engagements, and retweets.

In the example to the left, **interaction metrics** most strongly correlated with **images of team members at events** and **links to articles** (i.e., journal article). This is visibly indicated predominately by the shorter, thicker edges between the respective thematic nodes and interaction metrics (particularly impressions and engagements).

HASHTAGS



Hashtags used in posts were coded for naturally occurring themes and their co-occurrence correlations were graphed with the respective interaction metrics for each platform. Only the highest correlated hashtags were included in graphs due to the volume of hashtags employed. In the case here with LinkedIn, interaction metrics included impressions (500+), engagement rate (0.21+), reposts, likes (15+), and clicks (50+).

In the example to the left, **interaction metrics** most strongly correlated with the hashtags **#research** and **#plantbreeding**. This is visibly indicated predominately by the shorter, thicker edges between the respective thematic nodes and interaction metrics (particularly reposts and likes).