

# Observation of common field soil texture methods by video analysis

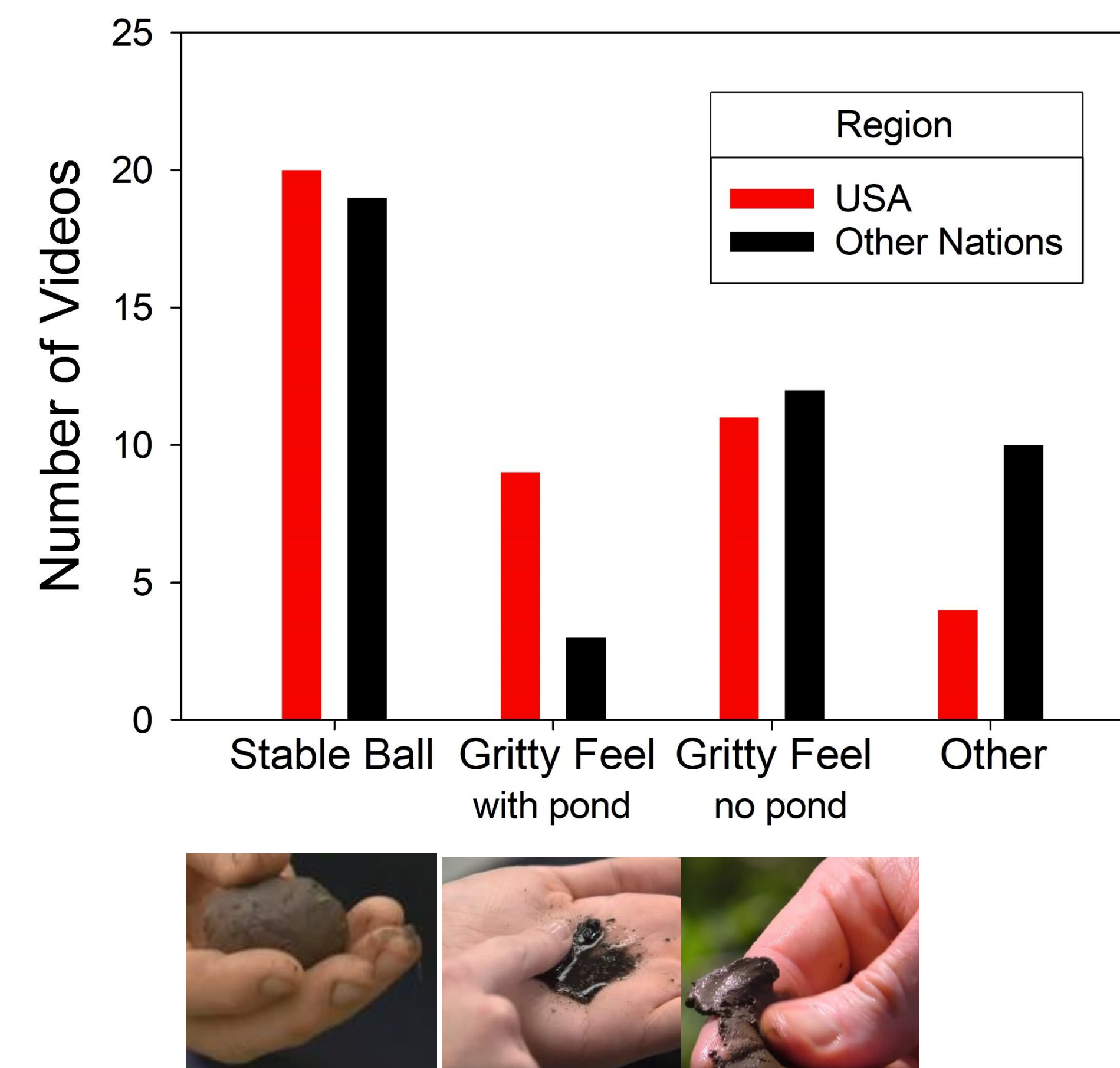
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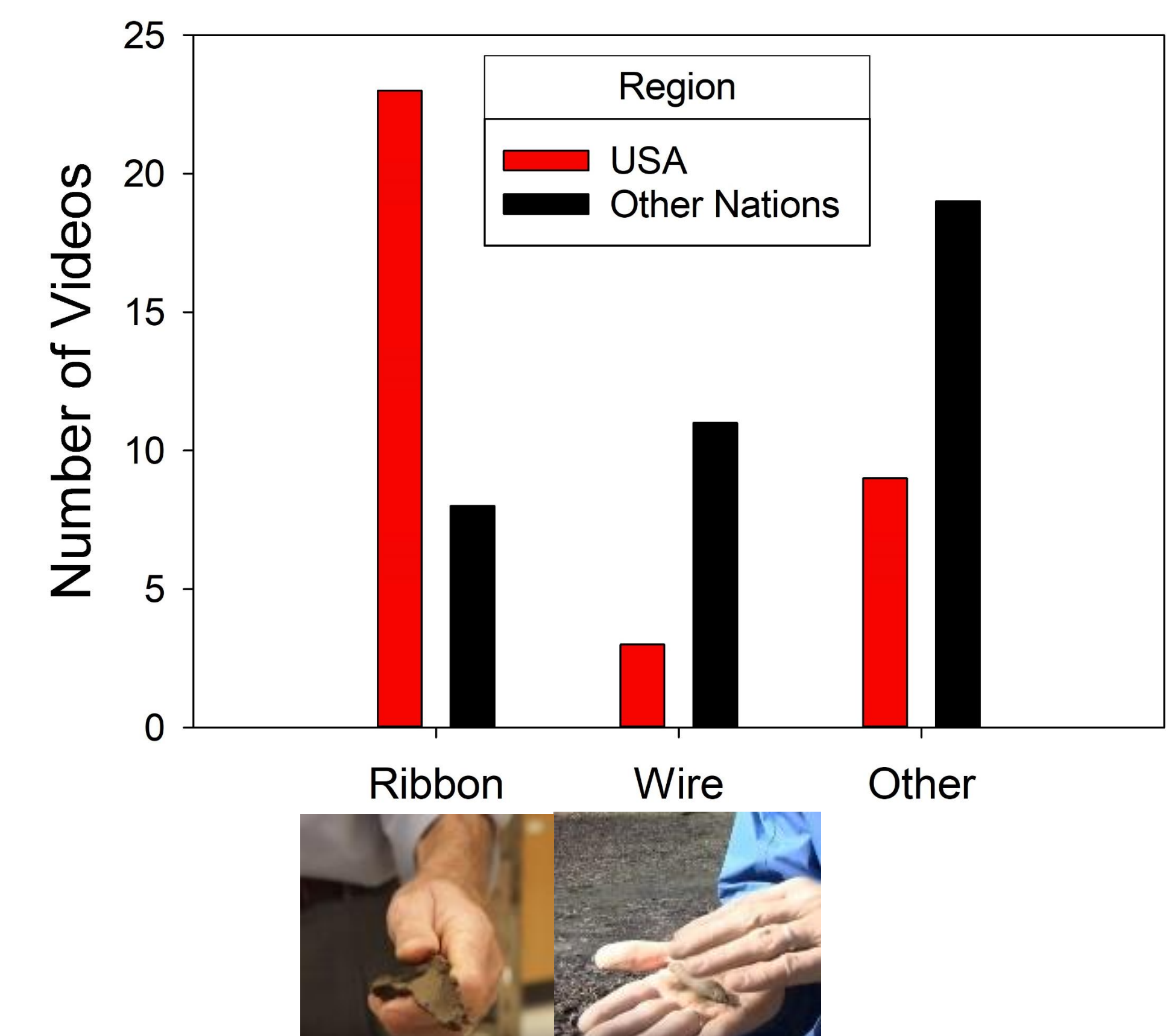
## Background

- Texture is a critical morphologic property of soils that impacts soil classification and interpretations for land use
- Many different methods for field evaluation of texture exist
- The USDA flow chart for soil texturing includes three techniques: the stable ball test, ribboning, and feeling for grit in a ponded state

## Sand Analysis Techniques



## Clay Analysis Techniques



## Question

**How widely used is the USDA flowchart method compared to other techniques in the U.S. and other nations?**

Other methods included:

- Visual estimate of sands washed out in palm
- Gnashing soil between teeth for gritty feel
- Rubbing sample next to ear for gritty sound
- Variations of the above methods

Other methods included:

- Visual estimate of shine on smooth surface
- Press thumb into surface to create imprint
- Ability to work sample in hands
- Variations of the above methods

## Methods

- Searched “[soil] texture by feel” in English and Spanish on YouTube
- Recorded techniques used and nation of origin for 50 search results

## Conclusions

- In the U.S., soil scientists mainly follow the USDA flow chart, though most do not pond the sample before feeling for grit.
- In other nations, ribboning is much less common and even fewer scientists pond the sample before feeling for grit.
- Though field texture data is widely collected by soil scientists around the world, the techniques used vary and little is known about their relative accuracy