

***Agriculture, Food, and the Environment***  
**农业、食物与环境**

**Fall 2022**

**8:00 - 9:40 AM at Cornell, Ithaca/20:00 - 21:40 PM at CAU, Beijing**  
**Wednesdays, Aug 24-Nov 2, 2022**

**7:30 - 9:10 AM at Cornell, Ithaca/20:30 - 22:10 PM at CAU, Beijing**  
**Wednesdays, Nov 9, 16, 30, 2022**

**Co-coordinators: Terry W. Tucker, [twt2@cornell.edu](mailto:twt2@cornell.edu)**

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**Instructed in English, CAU and Cornell will be connected  
via Zoom**

## Course Structure

Date	Contents	Requirements	Methods	Instructor(s)
24 Aug	Introduction of the course; Review and celebration for the 2021 edition 课程介绍与 2021 年度课程总结	Self-introduction and grouping	Discussions	Terry Tucker, Juan Liu
31 Aug	The Global Food System: major trends, priority issues and the potential for high impact innovation 全球农业 食物体系变迁	Raise questions based on reading	In-class lecture and discussion	Mario Herrero
7 Sept	Cropping Systems Management with Attention to Climate Change Adaptation and Mitigation 农业食物系统 如何适应与缓解气候变化	Raise questions based on reading	In-class lecture and discussion	Andrew McDonald
14 Sept	Land regime and land politics in China 中国的土地制度与 土地政治	Raise questions based on reading	In-class lecture and discussion	Chunyu Wang
21 Sept	Internal migration and the left-behind populations: changing dynamics 农政变迁 中的劳动力流动与留守人口	Raise questions based on reading	In-class lecture and discussion	Chunyu Wang
28 Sept	Comparative agricultural knowledge and innovation systems 农业知识与创新系 统	Raise questions based on reading	In-class lecture and discussion	Terry Tucker
5 Oct	<b>Knowledge sharing:</b> Crops, horticulture and the integrated crop-livestock systems; New directions and trends in the Agri-food Systems in China 知识分享：作物、园艺与种 养结合；中美农业食物体系 中的新方向与新趋势	Group formation and discussions	Group work and presentation	Terry Tucker, Juan Liu
12 Oct	Excavating agrarian transformation under ‘secure’ crop booms: insights from the China-Myanmar borderland 边境作物变迁的政治	Raise questions based on reading	In-class lecture and discussion	Xiaobo Hua
19 Oct	From Poverty Alleviation to Rural Vitalization: a case of small farmer household-based village development 以小农 户为基础的“巢状市场”构 建与实践	Raise questions based on reading	In-class lecture and discussion	Jingzhong Ye
26 Oct	Food waste and efforts to create more circular food systems 食物残余与循环食 物体系	Raise questions based on reading	In-class lecture and discussion	Lori Leonard

2 Nov	Landscape sustainability, pastoral food production and livelihoods 景观可持续性、牧区食物生产与牧民生计	Raise questions based on reading	In-class lecture and discussion	Chuan Liao
9 Nov	Ecological Distribution Conflicts and sustainability transformations 生态分配冲突与可持续转型	Raise questions based on reading	In-class lecture and discussion	Juan Liu
16 Nov	Circular economy and low carbon lifestyle 循环经济与低碳生活方式	Raise questions based on reading	In-class lecture and discussion	Rebecca Nelson
30 Nov	<b>Creation work:</b> envisioning innovations for climate-smart agriculture and transformative agri-food systems 可持续的未来：农业食物体系变革与创想	Group presentation	Group creational work and presentation	Terry Tucker, Juan Liu, 3 Guest Reviewers

## Suggested Readings

Borras, S. M., Liu, J., Hu, Z., Li, H., Wang, C., Xu, Y., Franco, J. C., & Ye, J. (2018). Land control and crop booms inside China: implications for how we think about the global land rush. *Globalizations*, 15(1), 134–151. <https://doi.org/10.1080/14747731.2017.1408287>

Cui, Z., Zhang, H., Chen, X., Zhang, C., Ma, W., Huang, C., Zhang, W., Mi, G., Miao, Y., Li, X., Gao, Q., Yang, J., Wang, Z., Ye, Y., Guo, S., Lu, J., Huang, J., Lv, S., Sun, Y., ... Dou, Z. (2018). Pursuing sustainable productivity with millions of smallholder farmers. *Nature*, 555(7696), 363–366. <https://doi.org/10.1038/nature25785>

Harder, R., Wielemaker, R., Larsen, T. A., Zeeman, G., & Öberg, G. (2019). Recycling nutrients contained in human excreta to agriculture: Pathways, processes, and products. *Critical Reviews in Environmental Science and Technology*, 49(8), 695–743. <https://doi.org/10.1080/10643389.2018.1558889>

Herrero, M., Thornton, P. K., Notenbaert, A. M., Wood, S., Msangi, S., Freeman, H. A., Bossio, D., Dixon, J., Peters, M., Van De Steeg, J., Lynam, J., Rao, P., MacMillan, S., Gerard, B., McDermott, J., Seré, C., & Rosegrant, M. (2010). Smart investments in sustainable food production: Revisiting mixed crop-livestock systems. *Science*, 327(5967), 822–825. <https://doi.org/10.1126/science.1183725>

Herrero, M., Thornton, P. K., Notenbaert, A., Msangi, S., Wood, S., Kruska, R., Dixon, J., Bossio, D., Steeg, J., Freeman, H. A., & others. (2010). *Drivers of change in crop-livestock systems and their potential impacts on agro-ecosystems services and human well-being to 2030*.

Hua, X., Kono, Y., & Zhang, L. (2021). Excavating agrarian transformation under ‘secure’ crop booms: insights from the China-Myanmar borderland. *The Journal of Peasant Studies*, 1–30. <https://doi.org/10.1080/03066150.2021.1926993>

Leach, M., Rockström, J., Raskin, P., Scoones, I., Stirling, A. C., Smith, A., Thompson, J., Millstone, E., Ely, A., Arond, E., Folke, C., & Olsson, P. (2012). Transforming innovation for sustainability. *Ecology and Society*, 17(2). <https://doi.org/10.5751/ES-04933-170211>

- Liao, C., Agrawal, A., Clark, P. E., Levin, S. A., & Rubenstein, D. I. (2020). Landscape sustainability science in the drylands: mobility, rangelands and livelihoods. *Landscape Ecology*, 35(11), 2433-2447. <https://doi.org/10.1007/s10980-020-01068-8>
- Maatman, A., Wongtschowski, M., Heemskerk, W., Sellamna, N., Davis, K., Nahdy, S., Ochola, W., & Kisauzi, D. (2011). Dynamic Networks of Interactive Learning and Agricultural Research for Development. *Three Critical Roles for Agricultural Advisory Services Conference Working Paper*, 11.
- Rivera, A., Bravo, C., & Buob, G. (2017). Climate Change and Land Ice. In *International Encyclopedia of Geography: People, the Earth, Environment and Technology*. <https://doi.org/10.1002/9781118786352.wbieg0538>
- Scheidel, A., Del Bene, D., Liu, J., Navas, G., Mingorría, S., Demaria, F., Avila, S., Roy, B., Ertör, I., Temper, L., & Martínez-Alier, J. (2020). Environmental conflicts and defenders: A global overview. *Global Environmental Change*, 63(May). <https://doi.org/10.1016/j.gloenvcha.2020.102104>
- Schiavoni, C. M. (2017). The contested terrain of food sovereignty construction: toward a historical, relational and interactive approach. *Journal of Peasant Studies*, 44(1), 1–32. <https://doi.org/10.1080/03066150.2016.1234455>
- Wollenberg, E., Vermeulen, S. J., Girvetz, E., Loboguerrero, A. M., & Ramirez-Villegas, J. (2016). Reducing risks to food security from climate change. *Global Food Security*, 11, 34–43. <https://doi.org/10.1016/j.gfs.2016.06.002>
- Ye, J. (2015). Land Transfer and the Pursuit of Agricultural Modernization in China. *Journal of Agrarian Change*, 15(3), 314–337. <https://doi.org/10.1111/joac.12117>
- Ye, J., He, C., Liu, J., Wang, W., & Chen, S. (2017). Left-behind elderly: shouldering a disproportionate share of production and reproduction in supporting China's industrial development. *Journal of Peasant Studies*, 44(5). <https://doi.org/10.1080/03066150.2016.1186651>
- Ye, J., Wang, C., Wu, H., He, C., & Liu, J. (2013). Internal migration and left-behind populations in China. *Journal of Peasant Studies*, 40(6). <https://doi.org/10.1080/03066150.2013.861421>