



S529 SSSA Inclusivity Assessment Committee Ethnicity Report

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SYNOPSIS

This document is Phase 2 of a report on women and ethnicity within the Soil Science Society of America (SSSA) from the SSSA Inclusivity Assessment Committee (IAC), previously the SSSA Representation and Recognition Task Force, to the SSSA Board of Directors. To address the issue of lack of diversity within SSSA, the Committee focused on binary gender as the first step in that process (discussed in the Phase 1 report submitted to the SSSA Board of Directors in April 2019), with ethnicity and other aspects of diversity and inclusion considered in Phase 2. This report contains findings as of October 2022, of the current status of SSSA with regards to ethnicity equity, as well as recommendations and action items for discussion at the SSSA Board level and for subsequent implementation.

Data for this analysis were generated by SSSA staff member Beth Jacques using members' optional self-reported data. Most figures and tables are presented with percentages instead of raw numbers to protect members' privacy. Society members have the option to self-report which US Census Bureau's ethnicity category they choose to identify with:

- American Indian/Alaska Native
- Asian
- Black/African American
- Caucasian/White
- Hispanic/Latino
- Native Hawaiian/Other Pacific Islander
- Other

As seen in Table 1, self-reported ethnicity is known for less than 67% of the total SSSA members (range between 54.3 to 66.3% over the past 10 years). Self-reporting is greatest among more senior levels of membership (i.e., 68% to 98%) and substantially drops for students (i.e., 3% to 22%) (Table 2). Therefore, the ethnicity of the student membership is not quantitatively known, even though students account for approximately a third of all members of SSSA. This presents significant difficulties in accurately assessing the society's ethnic diversity and formulating recommendations. However, the findings from the available data are not necessarily unexpected and important trends can still be inferred. For instance, since more senior levels of membership have the highest self-reporting of ethnicity, the ethnicity of those in governance positions are generally well known.

From the available data, the demographics of SSSA members has changed in recent years. While gender diversity and the representation of binary women have shown steady increases across the society (Phase 1 report www.soils.org/gender), this does not appear to be the case for the representation of black, indigenous, and people of color (BIPOC), among professional and emeriti members, which has remained constant at about 550 to 600 members. The term BIPOC used in the report is specific to the United States and does not include society members from African countries. The most senior rank of membership (emeriti) is the least ethnically diverse with 93% self-identifying as Caucasian, and less than 6% is BIPOC. Among the active members, around 60% self-identify as Caucasian/White, and less than 13% as BIPOC. Due to the low self-reporting by students, in-depth analysis of trends over time is not possible. However, based on the binary gender report in Phase 1, the student members appear to be the society's most diverse cohort. Interestingly, the decline in membership in 2020 (by approximately 400 members) is accompanied by a concomitant increase in known BIPOC members, representing nearly one quarter of the members with self-reported ethnicity.

Table 1: Soil Science Society of America (SSSA) members in percent by ethnicity from 2010-2020

Year	American		Black/African American	Caucasian/ White	Hispanic/ Latino	Native		Other	Unknown	Total
	Indian/Alaska Native	Asian				Hawaiian/Other Pacific Islander				
2010	0.0%	5.0%	1.3%	57.9%	0.0%	0.0%	2.2%	33.6%	6,323	
2011	0.1%	4.9%	1.2%	55.1%	0.2%	0.4%	1.8%	36.3%	6,412	
2012	0.2%	4.6%	1.2%	50.1%	0.5%	0.4%	1.4%	41.8%	6,781	
2013	0.1%	4.6%	1.2%	48.6%	0.7%	0.3%	1.5%	42.9%	6,806	
2014	0.1%	4.7%	1.3%	46.2%	0.9%	0.3%	1.4%	45.1%	6,876	
2015	0.1%	4.6%	1.4%	45.1%	0.9%	0.3%	1.6%	45.9%	6,755	
2016	0.2%	5.0%	1.4%	46.3%	1.2%	0.3%	1.5%	44.1%	5,987	
2017	0.2%	5.5%	1.2%	45.2%	1.3%	0.3%	1.4%	44.9%	5,847	
2018	0.2%	5.3%	1.3%	43.4%	1.4%	0.3%	1.3%	46.9%	5,907	
2019	0.1%	5.3%	1.3%	41.8%	1.4%	0.2%	1.2%	48.7%	5,911	
2020	0.2%	6.3%	1.8%	41.5%	2.8%	0.3%	1.5%	45.7%	5,504	

We evaluated the ethnic and racial diversity of the SSSA membership relative to the ethnic composition of people with degrees in soil science. The relative proportion of Asians, the second largest ethnic group among SSSA members (5%), is commensurate with the composition of the advanced degree holders (Table 3). The representation of other BIPOC groups is low and below expectation based on the historic BIPOC distribution of advanced degree holders as reported by the National Science Foundation (NSF, 2020). The numbers of BIPOC among active and student members attending SSSA meetings, participating in SSSA governance, and populating permanent/standing committees and editorial positions, are commensurate with the BIPOC distribution within the membership. This is a trend in which SSSA needs to take significant actions to stimulate growth and foster retention of new BIPOC members.

This report is divided into sections analyzing data related to Society-level Demographics, Graduate Student Retention, Governance, Annual Meetings and Awards, Summary of Findings and Recommendations to the Board. There are several areas of particular concern which we highlight. First, the ethnic background is known for about half of the SSSA members, and little is known about the ethnicity of the student members, who make up as much as 30% of the SSSA membership. There is a high attrition rate among these student members and few transition into active membership. Therefore, the SSSA should make a concerted effort to retain these young members and actively engage them in all aspects of SSSA activities as they are at the basis of future demographic trends in the SSSA as well as the continuation of a healthy Society. The ethnic composition of key players in Society governance as well as nomination and selection process of awards need to be considered when trying to achieve greater ethnic parity.

As charged in the Committee’s functions, this report, and associated data (in non-identifiable format to protect individual privacy) will be posted on the SSSA Diversity webpage and forwarded to the Early Career Members Committee, Graduate Student Committee, Women in Science Committee, Diversity Committee, Annual Meetings Planning Committee, and others as needed or requested.

Table 2: Soil Science Society of America (SSSA) members ethnicity by member category

Year	Category	American Indian/Alaska Native	Asian	Black/African American	Caucasian/ White	Hispanic/ Latino	Native Hawaiian/Other Pacific Islander	Other	Unknown
2015	Professional	0.2%	6.1%	1.8%	61.8%	1.0%	0.4%	2.0%	26.8%
	Emeritus	0.0%	3.2%	0.8%	93.7%	0.0%	0.4%	0.4%	1.6%
	Graduate	0.1%	2.9%	1.0%	8.5%	1.2%	0.0%	1.2%	85.1%
	Undergraduate	0.0%	0.2%	0.2%	4.1%	0.5%	0.0%	0.2%	95.0%
	Total	0.1%	4.6%	1.4%	45.1%	0.9%	0.3%	1.6%	45.9%
2016	Professional	0.2%	6.2%	1.7%	61.5%	1.2%	0.4%	2.0%	26.8%
	Emeritus	0.0%	3.3%	1.5%	92.0%	0.0%	0.7%	0.7%	1.8%
	Graduate	0.1%	3.9%	0.9%	8.4%	1.8%	0.0%	0.8%	84.0%
	Undergraduate	0.2%	0.0%	0.2%	3.1%	0.2%	0.0%	0.2%	96.1%
	Total	0.2%	5.0%	1.4%	46.3%	1.2%	0.3%	1.5%	44.1%
2017	Professional	0.2%	6.4%	1.6%	59.5%	1.3%	0.4%	1.7%	28.9%
	Emeritus	0.0%	3.9%	1.1%	92.5%	0.0%	0.4%	0.7%	1.4%
	Graduate	0.2%	5.0%	0.7%	8.0%	1.9%	0.0%	1.1%	83.1%
	Undergraduate	0.2%	0.0%	0.2%	3.9%	0.5%	0.0%	0.0%	95.2%
	Total	0.2%	5.5%	1.2%	45.2%	1.3%	0.3%	1.4%	44.9%
2018	Professional	0.2%	6.5%	1.7%	58.0%	1.4%	0.4%	1.7%	30.1%
	Emeritus	0.0%	3.8%	0.7%	92.3%	0.0%	0.7%	0.7%	1.7%
	Graduate	0.2%	4.3%	0.9%	7.8%	1.8%	0.0%	0.8%	84.3%
	Undergraduate	0.2%	0.0%	0.0%	3.2%	0.7%	0.0%	0.2%	95.7%
	Total	0.2%	5.3%	1.3%	43.4%	1.4%	0.3%	1.3%	46.9%
2019	Professional	0.1%	6.8%	1.7%	56.2%	1.5%	0.3%	1.7%	31.7%
	Emeritus	0.0%	3.4%	0.7%	92.3%	0.0%	0.7%	1.0%	2.0%
	Graduate	0.1%	3.9%	0.9%	7.9%	1.7%	0.0%	0.6%	85.0%
	Undergraduate	0.0%	0.0%	0.0%	2.3%	0.5%	0.0%	0.2%	97.0%
	Total	0.1%	5.3%	1.3%	41.8%	1.4%	0.2%	1.2%	48.7%
2020	Professional	0.1%	7.2%	2.0%	55.3%	1.8%	0.3%	1.8%	31.5%
	Emeritus	0.0%	3.2%	0.7%	93.0%	0.0%	0.7%	1.1%	1.4%
	Graduate	0.3%	6.1%	1.7%	8.1%	4.7%	0.2%	1.4%	77.6%
	Undergraduate	0.2%	1.5%	1.3%	3.9%	6.9%	0.0%	0.4%	85.9%
	Total	0.2%	6.3%	1.8%	41.5%	2.8%	0.3%	1.5%	45.7%

SOCIETY- LEVEL DEMOGRAPHICS

Evaluating the ethnic and racial diversity of the SSSA membership relative to the ethnic composition of people with degrees in soil science is somewhat challenging, as soil science is studied in many different academic units including environmental studies, ecology, natural resources, engineering, and geosciences (Brevik et al., 2018; Vaughan et al., 2019). In the NSF database, soil science is classified under life sciences, subgroup agricultural sciences and natural resources, and statistics are combined with disparate life science disciplines. Conversely, earth sciences encompass geology disciplines mainly, although some focal areas, such as geochemistry, may technically spill over into soil science. Furthermore, for some ethnic groups the NSF degree data is spotty due to low individual representation and privacy issues. Finally, while the SSSA membership also includes foreign nationals, either active in various countries around the world, or temporarily residing in the US, NSF only reports ethnicity or race for permanent residents or US citizens. Comparisons, therefore, must be made with some caution. Here, in this analysis data from both life sciences and earth sciences are used to put our membership demographics in perspective.

The racial and ethnic composition of SSSA membership partially mirrors patterns reported by NSF of degrees in the life sciences over the last 15 years (NSF, 2020) with Caucasians/White, the dominant ethnic group in SSSA, earning 75 - 85% of the BS degrees, 75 - 83% MS degrees, and 77% - 83% (2018) of the doctoral degrees (Table 3). This is similar to earth sciences where Caucasians earned 75% of BS (2018), 77% of MS degrees (2018), and 85% (2005) to 83% (2018) of doctoral degrees. Asians are the second largest ethnic group among SSSA members with graduate degrees, driving the ethnic diversity of advanced degree holders, accounting for almost 10% of members with a PhD and 4% of members with a MS (Table 3). The latter approaches the relative proportion of Asians with MS degrees in life sciences (2.8 - 4.5%) and slightly exceeds the numbers for earth sciences (1.7 - 3.4%). The relative proportions of Asian members with doctoral degrees exceeds their relative representation among PhD holders in life sciences (3.9 - 6.6%) and earth sciences (1.8 - 5.7%) reported by NSF between 2005 and 2018.

The proportion of SSSA members with BS or MS degrees (Table 3) who are Black/African American is slightly below the national average (BS: 2.8 – 3.3% in life sciences and 1.8% - 2.7% in earth science; MS: 2.6 – 4.2 % in life sciences and 1.2% - 3% for earth sciences) (NSF, 2020). The proportion of Black members holding doctoral degrees is in line with available data for PhD degrees in earth sciences (2% in 2012, 1.7% in 2015, 2.2% in 2017), but below the data for life sciences (2.8% in 2005, 5.2% in 2012, 3.7% in 2015, 4.1% in 2017). The relative proportion of Hispanic/Latino members is well below their relative representation among degree holders in both the life and earth sciences where the relative proportion of Hispanics or Latinos has steadily risen between 2005 and 2018. Specific trends are: For BS degrees in the Life Sciences a rise from 4.2% in 2005 to 9.6% in 2018, and from 3.9% in 2005 to 10.7% in 2018 in the Earth Sciences; for MS degrees in the Life Sciences a rise from 4.3% in 2008 to 7.6% in 2018, similar to the Earth Sciences from 3.9% in 2005 to 8.6% in 2018. Finally, the % PhDs in the Life Sciences who are Hispanic has risen from 3.7% in 2005 to 7.2% in 2013 and 6.3% in 2018, and for Earth Sciences from 3.3% in 2005 to 6.9% in 2015 and 6% in 2018. Native Americans and Pacific Islanders remain underrepresented in the field, comprising only a small fraction of earth sciences degree holders.

Table 3: Soil Science Society of America (SSSA) Members by Ethnicity and Highest Degree Obtained, % of row

Year	Highest Degree Obtained	American Indian/Alaska Native	Asian	Black/African American	Caucasian /White	Hispanic / Latino	Native Hawaiian/Other Pacific Islander	Other	Unknown
2019	Associates	0.0%	0.0%	0.0%	75.0%	0.0%	0.0%	0.0%	25.0%
	Bachelor's	0.0%	2.2%	1.3%	77.2%	2.5%	0.3%	1.6%	14.9%
	Master's	0.3%	4.0%	1.3%	61.2%	1.3%	0.1%	1.6%	30.1%
	PhD	0.1%	9.9%	2.3%	68.4%	1.7%	0.5%	1.9%	15.2%
	Other	0.0%	0.0%	33.3%	66.7%	0.0%	0.0%	0.0%	0.0%
	Unknown	0.0%	2.2%	0.4%	9.1%	1.0%	0.0%	0.5%	86.7%
	Total	0.1%	5.3%	1.3%	41.8%	1.4%	0.2%	1.2%	48.7%
2020	Associates	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%	0.0%
	Bachelor's	0.0%	1.8%	1.1%	80.0%	2.9%	0.4%	1.8%	12.1%
	Master's	0.3%	4.5%	1.4%	62.9%	2.4%	0.2%	2.1%	26.3%
	PhD	0.1%	9.8%	2.4%	69.4%	1.8%	0.5%	1.9%	14.1%
	Other	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%	0.0%
	Unknown	0.2%	4.5%	1.5%	9.3%	3.7%	0.1%	1.1%	79.7%
	Total	0.2%	6.3%	1.8%	41.5%	2.8%	0.3%	1.5%	45.7%

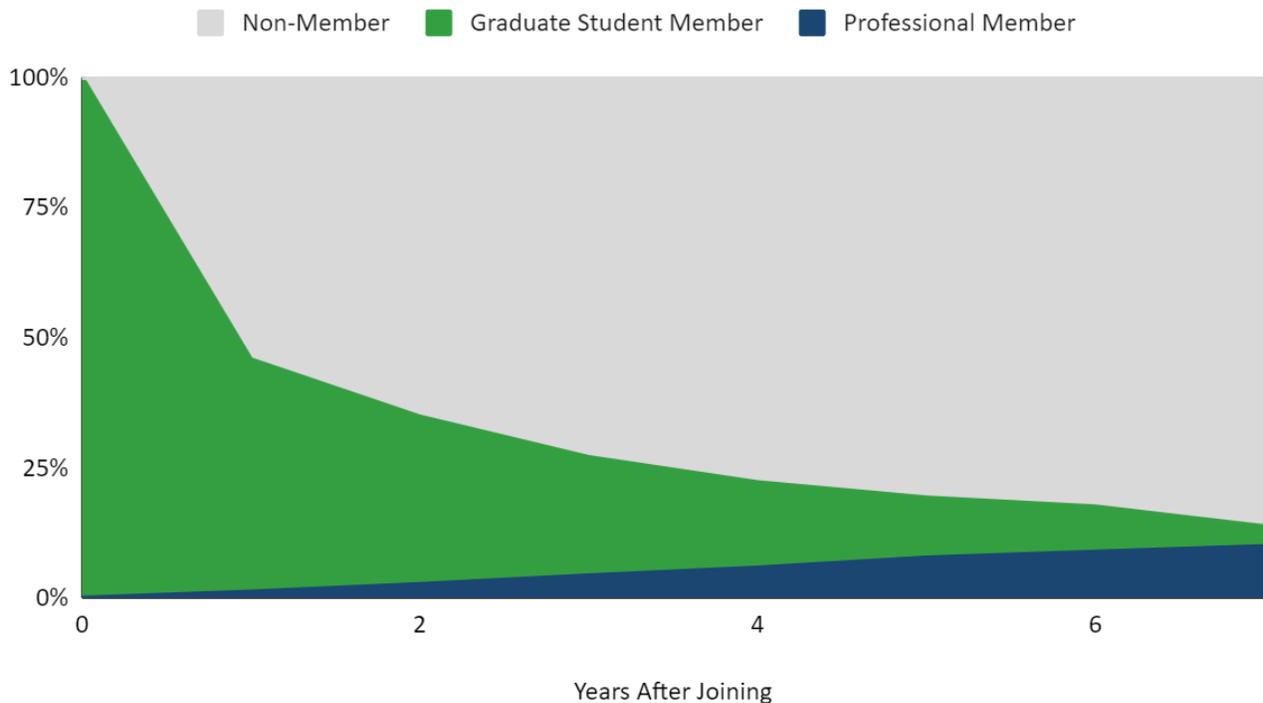
GRADUATE STUDENT RETENTION

The data shows that 10% of graduate students retain SSSA membership as professional members after 7 years of joining (Table 4, Figure 1). The data is consistent in showing an attrition rate of around 50% in year 2 for new SSSA graduate students. It will be important to evaluate the exact reasons behind this trend to develop recommendations to reduce the attrition rate and increase the rate of graduate students transitioning into professional membership. Although the exact ethnic makeup of SSSA graduate students is not known, we suspect that this is the most diverse group within our society.

Table 4: Soil Science Society of America (SSSA) Graduate Student Retention by Year

Original Join Year	New SSSA Graduate Students	SSSA Member in 2015	SSSA Member in 2016	SSSA Member in 2017	SSSA Member in 2018	SSSA Member in 2019	SSSA Member in 2020	SSSA Member in 2021
2014	708	343	234	196	171	139	119	97
2015	659		277	225	185	153	119	120
2016	542			260	197	135	117	108
2017	543				246	184	130	107
2018	537					261	202	163
2019	583						256	197
2020	515							227

Figure 1: SSSA Graduate Student Retention by Member Type and Years After Joining, Average %



SOCIETY GOVERNANCE

The data presented in this section are for the various governance committees within SSSA with some governance data presented for the Tri-Societies (American Society of Agronomy, Crop Science Society of America, and Soil Science Society of America). The ethnic diversity in society governance largely reflects the composition of the active senior members of SSSA. Caucasian/White members dominate the leadership and governance positions, commensurate with their preponderance in the most senior membership ranks. Asian is the next dominant ethnicity, albeit substantially lower than Caucasian/White. All other BIPOC categories have considerably lower representation than the Asian, reflective of their low proportion among active members.

Overall, slight shifts in ethnicity have occurred over the last 10 years, although Caucasians/White continue to occupy the majority of governance positions. The overall governance in the Tri-Societies shows Black/African American representation has not changed much in the last 10 years ranging from 1.5-2.7%. Similar but lower representation percentages are shown for Hispanic/Latino (0.4-1.8%), American Indian/Alaska Native (0.1-0.8%) and Native Hawaiian/Other Pacific islander (0.4-0.6%). The Asian representation, however, has increased from 5.6% in 2010 to 9.3% in 2020 (Table 5).

Table 5: SSSA General, Awards, Fellows, Board, Division, and Editorial Committee Members and Chairs, %

Year	American Indian/ Alaska Native	Asian	Black/ African American	Caucasian/ White	Hispanic/ Latino	Native Hawaiian/ Other Pacific Islander	Other	Unknown	Total
2010	0.3%	5.6%	2.3%	80.7%	0.4%	0.6%	1.1%	9.0%	699
2011	0.4%	5.4%	2.5%	79.1%	0.6%	0.6%	1.6%	9.9%	709
2012	0.8%	6.1%	2.8%	75.3%	1.0%	0.5%	1.4%	12.1%	786
2013	0.8%	6.4%	2.9%	73.1%	1.0%	0.5%	1.9%	13.5%	798
2014	0.8%	5.9%	1.8%	73.7%	1.4%	0.4%	1.9%	14.1%	779
2015	0.4%	6.3%	1.5%	70.3%	1.1%	0.4%	2.2%	17.8%	808
2016	0.1%	7.4%	1.5%	68.6%	1.6%	0.4%	2.4%	18.0%	799
2017	0.1%	8.0%	1.8%	65.6%	1.8%	0.2%	1.9%	20.6%	848
2018	0.1%	8.8%	2.3%	61.9%	2.1%	0.1%	2.4%	22.2%	838
2019		8.8%	2.4%	59.5%	1.6%	0.4%	2.4%	24.9%	788
2020		9.3%	2.7%	56.4%	1.5%	0.4%	2.2%	27.6%	789

The Board of Directors (BOD) for SSSA is predominantly Caucasian/White (92.9- 100%) from 2010-2020 (Table 6). The BOD is an elected body from the various divisions with senior members often elected to the Board. The BOD has one seat for graduate students and one seat for early career members where they serve for a two-year term and recently approved a DEI Member-At-Large (in response to this committee’s recommendation). All of these are excellent steps to increase the diversity of the BOD. We recommend additional steps: increase the seats for graduate students and early career members to two each to ensure synergy and support for these two groups. We also encourage the BOD to appoint 1-2 members for a 3-year term in addition to the elected members. These appointed members’ pools can be from international members (outside the US), industry reps, and practitioners.

Table 6: Soil Science Society of America (SSSA) Board of Director Members by Ethnicity, % (excluding President)

Year	Asian	Caucasian/ White	Unknown
2010		100.0%	
2011		100.0%	
2012		100.0%	
2013		100.0%	
2014		93.3%	6.7%
2015		92.9%	7.1%
2016		92.9%	7.1%
2017		92.9%	7.1%
2018		100.0%	
2019		100.0%	
2020	7.1%	92.9%	

Since SSSA’s inception in 1936, 98% of Presidents were Caucasian/White, 1% were Asian, and 1% were Native Hawaiian/Other Pacific Islander (Table 7).

Table 7: Soil Science Society of America (SSSA) Presidents by Ethnicity 1937-2022

Ethnicity	Percentage
Asian	1%
Caucasian/White	98%
Native Hawaiian/Other Pacific Islander	1%

SSSA DIVISIONS

Ethnic diversity of Division committees are shown in Tables 8 and 9. The officers of each SSSA Division are elected SSSA members as follows: the Chair of the Division, the Chair-Elect of the Division, the most recent Past Chairs of the Division. Chairs of committees and members are predominantly Caucasian/ White, with Asian members representing the next highest group serving as division chairs or division committee members (Table 8 and 9).

Table 8: Soil Science Society of America (SSSA) Division Committee Chairs by Ethnicity

Year	American Indian/ Alaska Native	Asian	Black/ African American	Caucasian/ White	Hispanic/ Latino	Native Hawaiian/Other Pacific Islander	Other	Unknown	Total
2010		9.1%		90.9%					11
2011		8.3%		83.3%				8.3%	12
2012				83.3%				16.7%	12
2013	7.1%			92.9%					14
2014	7.1%	7.1%	7.1%	71.4%				7.1%	14
2015				92.9%	7.1%				14
2016				85.7%				14.3%	14
2017		14.3%		71.4%				14.3%	14
2018		7.1%		92.9%					14
2019				61.5%			23.1%	15.4%	13
2020			7.1%	64.3%				28.6%	14

Table 9: Soil Science Society of America (SSSA) Division Committee Members by Ethnicity (excluding Chairs)

Year	American Indian/ Alaska Native	Asian	Black/ African American	Caucasian/ White	Hispanic / Latino	Native Hawaiian/Other Pacific Islander	Other	Unknown	Total
2010		3.0%		90.9%				6.1%	33
2011		2.9%		91.4%				5.7%	35
2012	2.8%	2.8%		91.7%				2.8%	36
2013	3.6%	3.6%	3.6%	78.6%				10.7%	28
2014	3.2%			93.5%	3.2%				31
2015	3.0%	3.0%	3.0%	81.8%				9.1%	33
2016		5.7%		85.7%	2.9%			5.7%	35
2017		2.8%		91.7%				5.6%	36
2018		5.4%		75.7%			8.1%	10.8%	37
2019		2.6%	2.6%	82.1%				12.8%	39
2020		5.4%		73.0%			8.1%	13.5%	37

GENERAL COMMITTEES

In contrast to Division chairs, SSSA Committee chairs and members are appointed by leadership of the society. Although chairs of committees are again predominantly Caucasian/White, there is more diversity in these committees, for example representation of committee chairs by Black/African American was at 9.5% in 2020 and Asian representation was at 10.2% in 2018 (Table 10). Being intentional in these appointments by leadership to be inclusive is encouraged, but collecting data on race and ethnicity will be crucial. More diversity is exhibited in committee members (Table 11). This again illustrates that more diversity is shown at the lower level of governance of the Society. However, the numbers are encouraging and show more representation by American Indian/ Alaska Native, Hispanic/ Latino groups, and even Native Hawaiian/ Other Pacific Islander.

Table 10: SSSA Committee Chairs by Ethnicity

Year	American Indian/ Alaska Native	Asian	Black/ African American	Caucasian/ White	Hispanic/ Latino	Native Hawaiian/ Other Pacific Islander	Other	Unknown	Total
2010		4.7%	4.7%	83.7%				7.0%	43
2011	1.9%	3.8%	1.9%	82.7%			1.9%	7.7%	52
2012	1.6%	3.2%	1.6%	87.1%			3.2%	3.2%	62
2013		1.9%	3.7%	83.3%	1.9%			9.3%	54
2014				90.9%	1.8%		1.8%	5.5%	55
2015	2.0%	4.1%	4.1%	83.7%				6.1%	49
2016		3.7%	5.6%	79.6%	1.9%		1.9%	7.4%	54
2017		4.0%	6.0%	74.0%	4.0%			12.0%	50
2018		10.2%	4.1%	69.4%	4.1%			12.2%	49
2019		6.5%	2.2%	71.7%	4.3%			15.2%	46
2020		2.4%	9.5%	69.0%			2.4%	16.7%	42

Table 11: SSSA Committee Members by Ethnicity (excluding Chairs)

Year	American Indian/ Alaska Native	Asian	Black/ African American	Caucasian/ White	Hispanic/ Latino	Native Hawaiian/ Other Pacific Islander	Other	Unknown	Total
2010	0.8%	3.6%	3.6%	80.2%	0.8%	0.4%	1.6%	9.1%	253
2011	0.8%	3.1%	4.2%	78.6%	1.1%	0.4%	2.7%	9.2%	262
2012	1.0%	4.8%	4.5%	72.9%	1.9%	0.3%	2.3%	12.3%	310
2013	0.9%	4.1%	4.4%	70.7%	1.3%	0.3%	2.5%	15.8%	317
2014	1.0%	4.9%	2.9%	71.1%	1.6%	0.3%	2.3%	15.9%	308
2015	0.3%	4.6%	2.0%	68.4%	1.3%	0.3%	3.0%	20.1%	304
2016	0.3%	6.6%	2.1%	68.4%	2.1%	0.3%	3.1%	17.0%	288
2017	0.3%	7.5%	2.5%	65.3%	2.5%	0.3%	2.2%	19.4%	320
2018	0.3%	7.9%	3.5%	62.9%	3.5%	0.3%	1.9%	19.7%	315
2019		7.9%	3.9%	59.1%	2.2%	1.1%	2.2%	23.7%	279
2020		9.6%	4.1%	55.5%	2.1%	1.0%	1.4%	26.4%	292

EDITORIAL COMMITTEES

Ethnic representation has changed from 2010-2020 in the Editorial systems. Representation of Asian members has increased in various roles for example for Editorial committee chairs from 0% in 2010 to 9.1% in 2017 and to 16.7% in 2020 (Table 12). Similarly, Asian members' representation increased from 7.7 (2010) to 12.5% (2020) over the past 10 years (Table 13) (overall Asian membership representation is 4.6 to 6.3%). In contrast, the representation of Black/African American has decreased from 1.6 to 0% over the past 10 years for the Editorial committee (Table 13) (overall Black/African American membership is 1.2 to 1.8%).

Ethnic diversity tends to be inversely represented by the level of rank within the society's governance and editorial systems. Representation tends to more closely represent the overall membership at the lower levels of the society's governance and editorial systems. While still less than 15%, Asian representation within the editorial systems is approximately 2-3 times as high as that found in the overall membership representation. All ethnic groups have had consistent or temporary representation at the Associate Editor level since 2010. Caucasian/White and Asian have been represented at the Technical Editor level since 2010. Only Caucasian/White have representation at the Editor and Editor-in-Chief levels.

Table 12: Soil Science Society of America (SSSA) Editorial Committee Chairs by Ethnicity

Year	American Indian/Alaska Native	Asian	Black/ African American	Caucasian/ White	Hispanic /Latino	Native Hawaiian/Other Pacific Islander	Other	Unknown	Total
2010				91.7%				8.3%	12
2011				90.9%				9.1%	11
2012				90.9%				9.1%	11
2013				100.0%					11
2014				100.0%					12
2015				92.9%				7.1%	14
2016				91.7%				8.3%	12
2017		9.1%		72.7%				18.2%	11
2018		9.1%		72.7%				18.2%	11
2019		9.1%		72.7%				18.2%	11
2020		16.7%		66.7%				16.7%	12

Table 13: Soil Science Society of America (SSSA) Editorial Committee Members by Ethnicity (excluding Chairs)

Year	American Indian/Alaska Native	Asian	Black/African American	Caucasian/White	Hispanic/Latino	Native Hawaiian/Other Pacific Islander	Other	Unknown	Total
2010		7.7%	1.6%	78.0%		0.4%	0.4%	11.8%	246
2011		7.2%	1.7%	76.3%		0.4%	0.4%	14.0%	236
2012	0.4%	7.1%	1.7%	71.3%	0.4%	0.4%	0.4%	18.3%	240
2013	0.4%	9.3%	1.6%	67.9%	0.4%	0.8%	2.0%	17.5%	246
2014	0.4%	9.2%	1.6%	65.5%	0.8%	0.8%	1.6%	20.1%	249
2015		8.5%	0.7%	64.9%	0.7%	0.4%	2.8%	22.0%	282
2016		8.7%	0.4%	61.6%	0.7%	0.4%	2.9%	25.4%	276
2017		10.2%	0.7%	55.8%	1.0%	0.3%	3.1%	28.9%	294
2018		10.7%	0.7%	50.9%	0.7%		3.2%	33.8%	281
2019		11.9%	0.7%	49.4%	1.1%		3.0%	33.8%	269
2020		12.5%		45.9%	1.2%		3.1%	37.4%	257

SOCIETY RECOGNITION

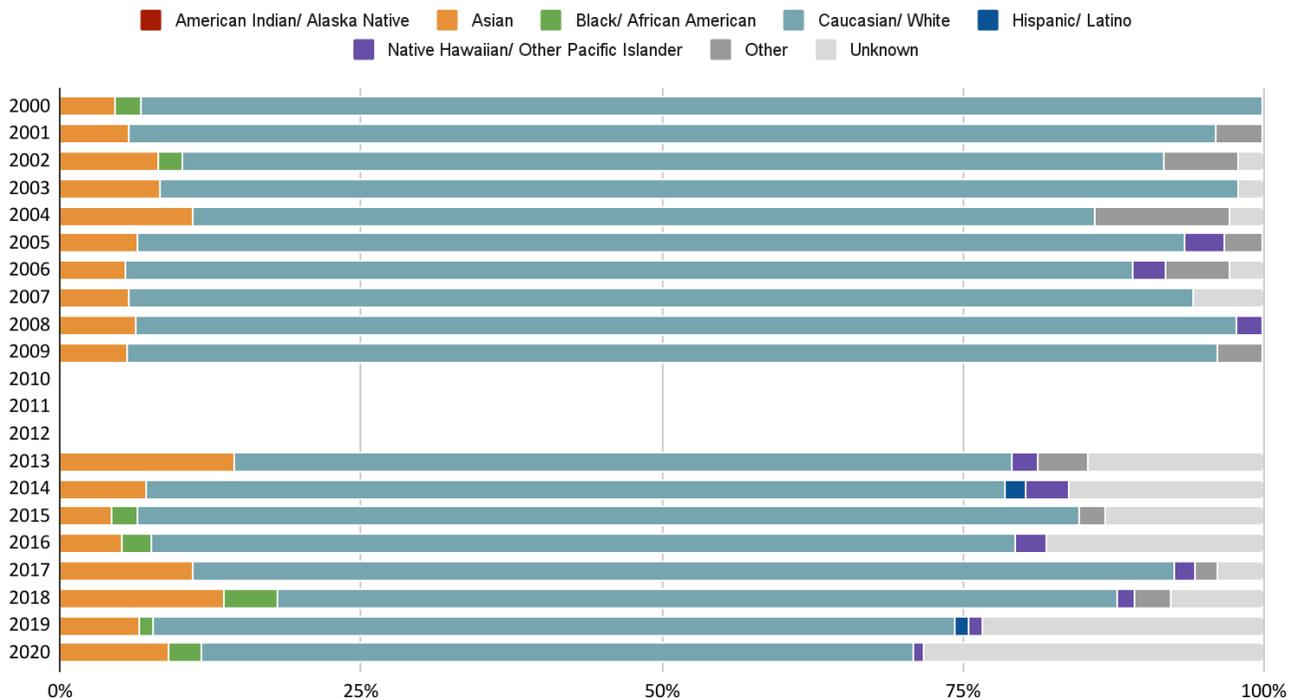
When analyzing the ethnic composition of fellows, award winners and scholarship recipients, it is prudent to place these outcomes within the context of the ethnic diversity of the membership as the source from which nominees and recipients are drawn. This is particularly relevant for recognition of life-time achievements or long-term contributions to soil science which are typically bestowed to members with a certain level of seniority, and therefore more likely to represent the ethnic composition of that membership tier. In addition, we also evaluated the ethnicity of nominators and selection committees as potential factors influencing the recognition process.

AWARDS & FELLOWS

Caucasian/White members represent 75-93% of awards nominators and 82-92% of fellows nominators prior to 2010 (Figure 2). There has been a slight decline to 59-81% of awards nominators and 67-83% fellows nominators between 2013 and 2020, bringing the % nominators who self-identify as Caucasian/White more in line with their relative proportion among professional and emeriti members.

By contrast, Black or African American and Hispanic or Latino members are noticeably absent for many years as nominators, even though they represent 1-2% of our professional members.

Figure 2: SSSA and ACS Award Nominators by Ethnicity



Selection Committees, similarly, have been characterized by low ethnic diversity between 2010 and 2020, although Awards committees (Table 14) tend to be ethnically more diverse than the Fellow’s selection committees (Table 15), which have been predominantly Caucasian/White.

The leadership of Awards and Fellows committees has been predominantly Caucasian/White members: 100% SSSA fellows selection committee and 56-100% of SSSA & ACS awards committees were chaired by Caucasian/White members. In addition, Caucasian/White members have occupied two-thirds or more of the SSSA fellows committee slots and the SSSA and ACS awards committee slots. Fellows Committee members belong to the following ethnicities: 58-100% Caucasian/White, 8-23% Asian and 8-17% Black or African American. Hispanic or Latino and Native American members have been absent from the fellow's committee over the last 10 years and in only 1 year did Native Hawaiian/Pacific Islander serve. Between 2014-2017 the SSSA Fellows selection committees were exclusively Caucasian/White.

After Caucasians/Whites (63%-78% of all Award committee slots), Asians are the next prevalent group among chairs and awards committee members (5-14% chairs; 6.5-13% of all awards committee members). Less than 3% of awards committee members self-identified as Black or African American (0-2.9%), Hispanic or Latino (1.2-3.3%), or Native Hawaiian or Pacific Islander (0-2.8%). There have been no Native Americans serving as either chairs or committee members on any awards committees over the last 10 years.

Table 14: SSSA Award Committee Members by Ethnicity, (excluding Chairs)

Year	American Indian/ Alaska Native	Asian	Black/ African American	Caucasian/ White	Hispanic/ Latino	Native Hawaiian/Other Pacific Islander	Other	Unknown	Total
2010		6.8%	1.7%	74.6%	1.7%	1.7%	5.1%	8.5%	59
2011		13.6%	1.7%	67.8%	1.7%	3.4%	3.4%	8.5%	59
2012		12.5%	1.4%	75.0%	1.4%	1.4%	1.4%	6.9%	72
2013		12.0%	1.2%	79.5%	1.2%		1.2%	4.8%	83
2014		7.5%		77.6%	3.0%		3.0%	9.0%	67
2015		14.5%	1.4%	62.3%	2.9%	1.4%	1.4%	15.9%	69
2016		14.5%	2.6%	64.5%	1.3%	1.3%		15.8%	76
2017		7.8%	2.6%	68.8%	2.6%			18.2%	77
2018		7.1%	3.6%	66.7%	2.4%		2.4%	17.9%	84
2019		8.1%	2.3%	61.6%	1.2%		2.3%	24.4%	86
2020		8.0%	2.3%	59.1%	3.4%			27.3%	88

Table 15: SSSA Fellows Committee Members by Ethnicity, (excluding Chairs)

Year	American Indian/Alaska Native	Asian	Black/African American	Caucasian/White	Hispanic/Latino	Native Hawaiian/Other Pacific Islander	Other	Unknown	Total
2010		8.3%		83.3%		8.3%			12
2011		9.1%	9.1%	81.8%					11
2012		18.2%	18.2%	54.5%				9.1%	11
2013		16.7%	8.3%	66.7%				8.3%	12
2014				100.0%					11
2015				100.0%					10
2016				100.0%					12
2017				100.0%					12
2018		25.0%	8.3%	66.7%					12
2019		25.0%	8.3%	66.7%					12
2020			16.7%	66.7%			8.3%	8.3%	12

Reflective of our membership composition, Caucasian/White members dominate among nominees and recipients for awards and fellows (Figure 3), with Asians the next prevalent group in the nomination pool for awards (2.5-26.1% of all awards nominees) and fellows (2-23% of all fellow nominees). Blacks/African American, American Indians, and Hispanic/Latino members fare the poorest in the Fellow selection process; they may be nominated, but their nominations are generally unsuccessful. There have been NO (self-identified) Native American nor Hispanic/Latino Fellows in the last 20 years (2000-2020).

Figure 3: SSSA and ACS Award Nominees and Recipients by Ethnicity

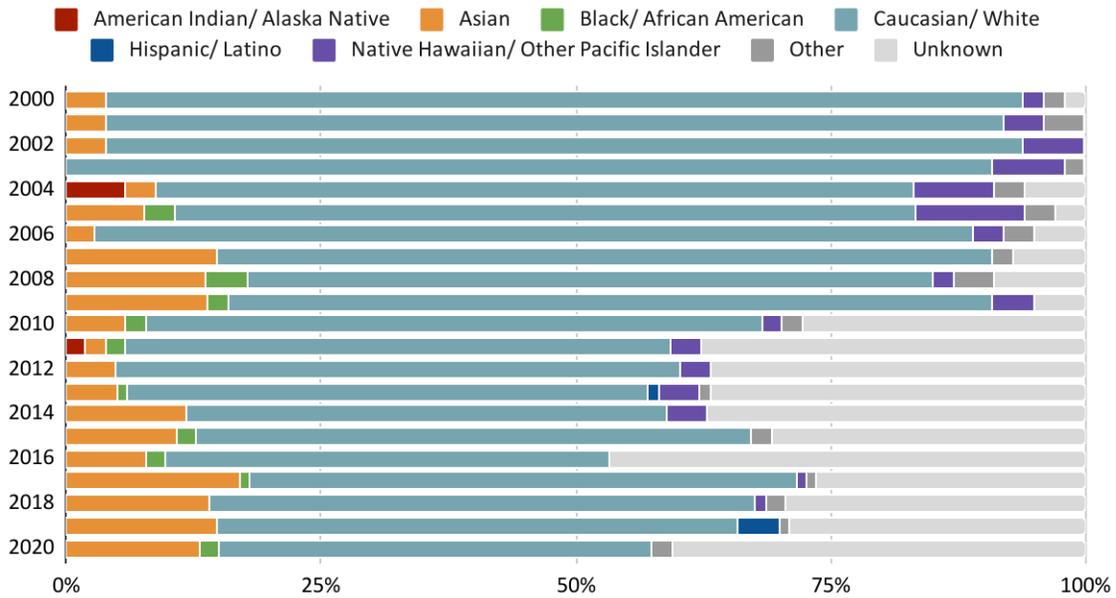
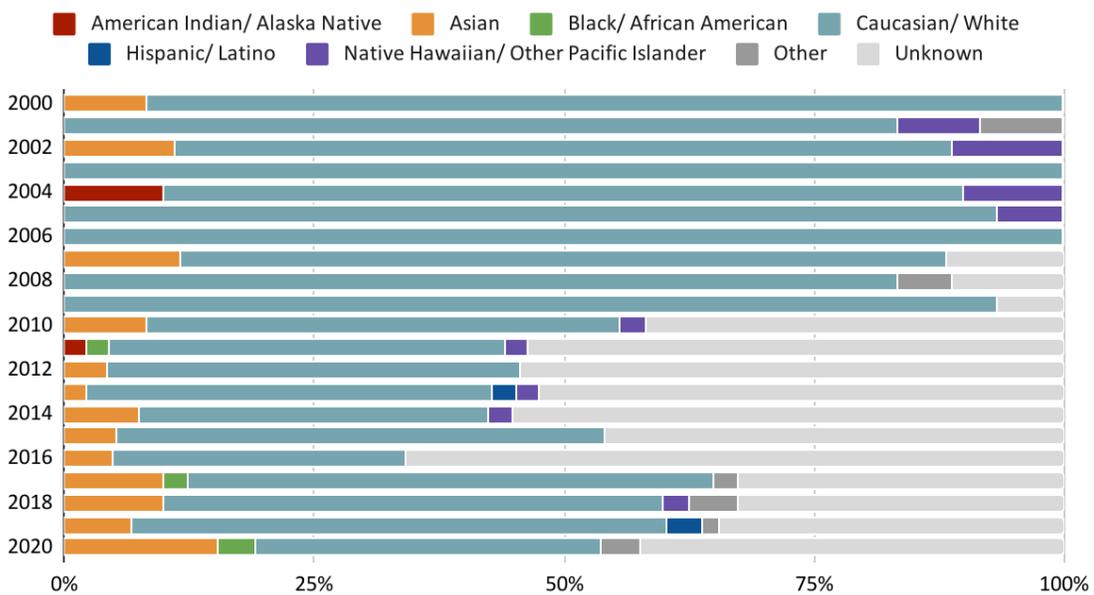
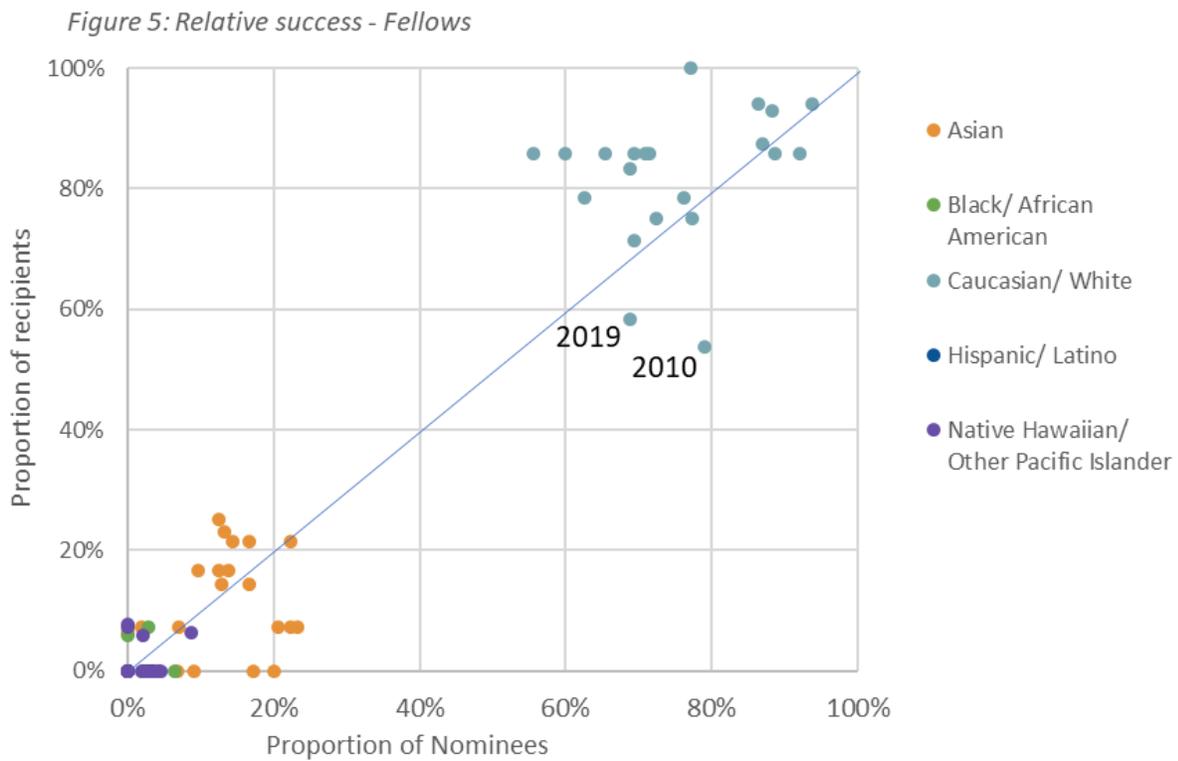


Figure 4: SSSA and ACS Award Recipients

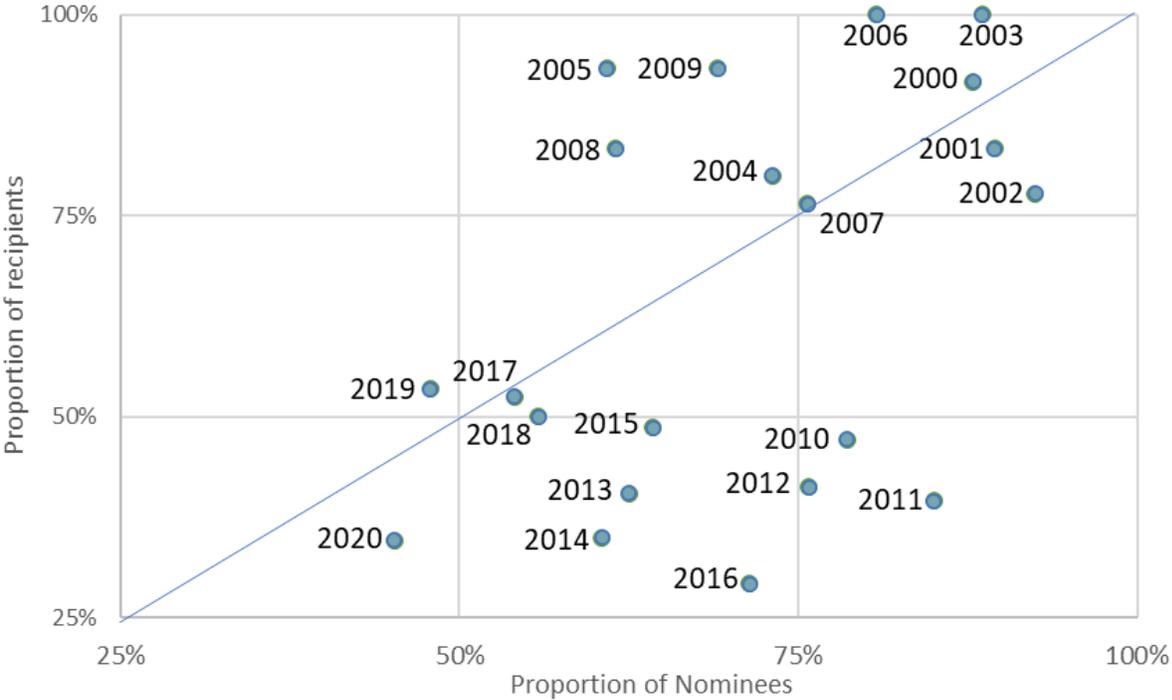


Non-Caucasians are generally characterized by lower award nomination rates (position on the x-axis in Figure 5 and 6), and therefore their lower numbers among award recipients and SSSA Fellows are not altogether surprising. However, if we compare the ethnic composition of the recipients (y-axis) to that of the slate of nominees (x-axis), additional patterns can be observed that are noteworthy. Indeed, if the ethnic composition of the recipients is solely driven by the ethnic composition of the nominee pool, then plotting the relative abundance (as %) of a given ethnic group among recipients against the relative abundance (as %) of that ethnic group among nominees would place all the points on straight 1-to-1 line. If points fall below the 1:1 line of recipients vs nominees, this would indicate lower than expected success rates based on the composition of the nominee pool, while points above the 1:1 line of recipients vs nominees indicate higher than expected success rates.



Caucasians/Whites dominate as fellows and their success is mostly in line with or above their relative representation in the fellow nominee pool (except in 2010 and 2019 when below the 1:1 line) (Fig. 5). For the awards, there appears to have been a shift in dynamics for Caucasian/whites (Fig. 6). Prior to 2010, Caucasians represented more than 75% of the award recipients and their success rate was greater than their relative representation in the nominee pool (i.e., frequently above the 1:1 line). After 2010 there was a downward shift in the relative dominance of Caucasian award recipients representing 50% or less of the awards recipients overall, and with a relative success rate closer to their representation in the nomination pool (on or below the 1:1 line). The higher than expected success rate of Caucasian/White nominees relative to other ethnic groups may be linked to the composition of the fellows' selection committees which has been predominantly Caucasian/White and has in some years lacked any ethnic diversity. It is not clear whether some of the temporal trends, especially the declining proportion of Caucasian/whites among awards, fellows, and scholarship nominees and recipients after 2010 reflects real ethnicity shifts or are caused by the increasing proportion of individuals with unknown ethnicity.

Figure 6: Relative success Caucasian/White - Awards



SCHOLARSHIPS

The ethnic makeup of nominators, selection committees, nominees, and recipients largely mirror patterns discussed under Awards and Fellows. Prior to 2010, ethnic diversity among scholarship nominators was limited (Table 16). Caucasian/white members dominate as nominators, representing 50-100% of nominators with Hispanic or Latino members representing 8-50% and the unknown category 7-25% of the scholarship's nominators. Between 2013 and 2020 there has been a major decline to 9-31% in the proportion of nominators who self-identify as Caucasian/white members with a major increase in the unknown category (52-82%). During that same period, 1-8% of scholarship nominators identified as Hispanic or Latino and 3-7% as Asian. American Indian/Alaskan Native members and Native Hawaiian/Pacific Islanders are noticeably absent for many years as nominators except in 2013, 2014 (1-2% Native Hawaiian/Pacific Islanders), and 2018 (1% American Indian/Alaskan Native). Black/African Americans are noticeably absent for many years as nominators until 2014, after which they represent 1-3% of the nominators.

Table 16: SSSA and ACS Scholarship Nominators

Year	American Indian/ Alaska Native	Asian	Black/ African American	Caucasian / White	Hispanic / Latino	Native Hawaiian/ Other Pacific Islander	Other	Unknown
2002				92.9%				7.1%
2003				61.5%	7.7%		15.4%	15.4%
2004								
2005				50.0%	50.0%			
2006				75.0%				25.0%
2007								
2008				100.0%				
2009								
2010								
2011								
2012								
2013		5.1%		25.3%		1.3%	1.3%	67.1%
2014		3.1%	3.1%	31.3%	7.8%	1.6%	1.6%	51.6%
2015		4.0%	0.7%	16.0%	0.7%		0.7%	78.0%
2016		3.2%	2.4%	16.9%	2.4%		1.6%	73.4%
2017		7.3%	0.8%	17.7%	4.0%		0.8%	69.4%
2018	1.3%	4.5%		16.8%	2.6%		0.6%	74.2%
2019		5.3%	2.3%	9.9%				82.4%
2020		3.6%	1.4%	9.4%	2.2%		1.4%	82.0%

Between 2002 and 2010 Caucasian/White members dominated among scholarship nominees (39-100% of nominees) with a major decline in this ethnic group after 2012 (to 9-20% of total number of nominees) (Table 17). Concomitantly, ethnic diversity is low and inconsistent prior to 2010. During those years, 7-8% of nominees identify as Hispanic/Latino, 7-17% as Black/African American, and 5-21% as Asian, with the ethnicity unknown for 7-62% of nominees. Between 2010 and 2020, 3-11% of nominees are Asian, 1-6% Black/African American, less than 5% Hispanic/Latino (except for 11% in 2014 and 6.7% in 2014), while the percentage of nominees with unknown ethnicity remains high (61-83%). Throughout the period on record, American Indian/Alaskan Native are only sporadically nominated (7% of nominees in 2002, 3% in 2014 and 1% in 2018). Native Hawaiian/Pacific Islanders are noticeably absent for many years as scholarship nominees except in 2013 (2%).

Table 17: SSSA and ACS Scholarship Nominees (excludes Recipients)

Year	American Indian/ Alaska Native	Asian	Black/ African American	Caucasian / White	Hispanic / Latino	Native Hawaiian/ Other Pacific Islander	Other	Unknown
2002	7.1%			85.7%				7.1%
2003				58.3%	8.3%		16.7%	16.7%
2004				100.0%				
2005		20.0%		60.0%	6.7%			13.3%
2006		21.4%	7.1%	64.3%				7.1%
2007		8.3%	16.7%	50.0%	8.3%			16.7%
2008		5.0%		50.0%				45.0%
2009				38.5%				61.5%
2010				57.1%	7.1%			35.7%
2011				35.7%	3.6%			60.7%
2012		6.7%		13.3%				80.0%
2013		3.8%		9.6%		1.9%	1.9%	82.7%
2014	2.9%	5.7%	5.7%	8.6%	11.4%			65.7%
2015		5.7%		13.2%	0.9%		0.9%	79.2%
2016		4.7%	3.5%	15.1%	3.5%		2.3%	70.9%
2017		11.4%		11.4%	6.3%		1.3%	69.6%
2018	0.9%	5.6%		19.6%	3.7%		0.9%	69.2%
2019		8.4%	1.2%	12.0%				78.3%
2020		3.3%	2.2%	8.8%	3.3%		2.2%	80.2%

Until 2008, Caucasian/White members were the dominant group among the scholarship recipients (100% in 2003, 2004, and 2005) and only in 2002 is there any ethnic diversity, when 50% of scholarship recipients self-identify as American Indian/Alaskan Native (Table 18). After 2010 scholarship recipients are generally more ethnically diverse, but the ethnicity of a large proportion of the recipients (61-83%) remains unknown. Among those with known ethnicity, most scholarships go to Caucasian/White members (6-37%), followed by Hispanic/Latino (1.7- 12.5%), Asian and Black/African American (2-4%), Americans Indian/Alaskan Native (0-6.3%). Native Hawaiian/Pacific Islanders are absent as recipients except in 2014 (2%). In general terms, as was the case with awards and fellows, in the scholarship process, non-Caucasians experience both low nomination and success rates.

Table 18: SSSA and ACS Scholarship Recipients

Year	American Indian/ Alaska Native	Asian	Black/ African American	Caucasian / White	Hispanic / Latino	Native Hawaiian/ Other Pacific Islander	Other	Unknown
2002	50.0%			50.0%				
2003				100.0%				
2004				100.0%				
2005				100.0%				
2006				55.0%				45.0%
2007				52.6%				47.4%
2008				16.7%				83.3%
2009				33.3%				66.7%
2010	6.3%			18.8%				75.0%
2011				23.1%	7.7%			69.2%
2012				20.8%	12.5%		4.2%	62.5%
2013		2.6%		36.8%			2.6%	57.9%
2014			2.2%	22.2%	4.4%	2.2%	2.2%	66.7%
2015			2.3%	22.7%				75.0%
2016				19.0%	1.7%			79.3%
2017			2.2%	28.3%				69.6%
2018	2.0%	2.0%		10.2%				85.7%
2019			4.1%	6.1%				89.8%
2020		4.2%		10.4%				85.4%

Recognition of achievements among our members (at junior and senior levels) has long favored Caucasian/White members. While there has been a broadening of ethnic diversity among SSSA fellows, awards and scholarship recipients, several ethnic groups are not at par with their proportion among the membership. The ethnic composition of the key players (and especially the leadership) in the nomination and selection process may need to be considered when trying to achieve greater ethnic parity. Scholarships are mostly bestowed on the younger tier of SSSA membership (students and early career) and may therefore shape their perception of the SSSA's efforts in achieving ethnic diversity, and ultimately their decision to become or remain active members.

SUMMARY OF FINDINGS

- 1. Data and membership:** There is a clear lack of comprehensive ethnicity data on our membership. The available data show the racial and ethnic composition of SSSA membership partially mirrors patterns reported by NSF of degrees in the life sciences over the last 15 years. Caucasians/ white, the dominant ethnic group in SSSA, earned 77% - 83% of the doctoral degrees in the 2018 data from NSF. Asians are the second largest ethnic group among SSSA members with graduate degrees, driving the ethnic diversity of advanced degree holders, accounting for almost 10% of members with a PhD. The proportion of SSSA members with BS or MS degrees who are Black/African American is slightly below the national average. The relative proportion of Hispanic/Latino members is well below their relative representation among degree holders in both the life and earth sciences where the relative proportion of Hispanics or Latinos has steadily risen between 2005 and 2018.
- 2. Graduate student retention:** Data shows 10% of graduate students retain SSSA memberships as full professional members after 7 years of joining. The data is consistent in showing an attrition rate of around 50% in year 2 for new SSSA graduate students. It will be important to evaluate the exact reasons behind this trend to develop recommendations to reduce the attrition rate and increase the rate of graduate students transitioning into full professional members. Although the exact ethnic makeup of SSSA graduate students is not known, we suspect that this is the most diverse group joining our society.
- 3. Governance:** The ethnic diversity in society governance largely reflects the composition of the active senior members of SSSA. Caucasian/White members dominate the leadership and governance positions, commensurate with their preponderance in the most senior membership ranks. Asian is the next dominant ethnicity, albeit substantially lower than Caucasian/White. All other BIPOC categories have considerably lower representation than Asian, reflective of their low proportion among active members. The Board of Directors (BOD) for SSSA is predominantly Caucasian/White (92.9- 100%) from 2010-2020
- 4. Society Recognition:** In general, Caucasian/White members largely dominate as nominators. By contrast, Black/African American and Hispanic/Latino members are noticeably absent for many years as nominators, even though they represent 1-2% of our professional members. Selection Committees, similarly, have been characterized by low ethnic diversity between 2010 and 2020, although Awards committees tend to be ethnically more diverse than the Fellow's selection committees. Reflective of our membership composition, Caucasian/White members dominate among nominees and recipients for awards and fellows, with Asians the next prevalent group in the nomination pool for awards and fellows. Black/African Americans, American Indians, and Hispanic/Latino members fare the lowest in the Fellow selection process. There have been no (self-identified) Native American nor Hispanic/Latino Fellows in the last 20 years (2000-2020).
- 5. Scholarships:** Until 2008, Caucasian/White members were the dominant group among the scholarship recipients (100% in 2003, 2004, and 2005) and only in 2002 there was any ethnic diversity, when 50% of scholarship recipients self-identify as American Indian/Alaskan Native. After 2010 scholarship recipients are generally more ethnically diverse, but the ethnicity of a large proportion of the recipients (61-83%) remains unknown. Among those with known ethnicity, most scholarships go to Caucasian/White members (6-37%), followed by Hispanic/Latino (1.7- 12.5%), Asian and Black/African American (2- 4%), Americans Indian/ Alaskan Native (0-6.3%)

RECOMMENDATIONS TO THE SSSA BOARD OF DIRECTORS

Although the data presented in this report is not complete, they provide valuable information on the status of the diversity of our society. The recommendations below focus on the importance of collecting data to evaluate future progress, improve the retention of graduate students, and implement mentoring and training programs for an inclusive society. The focus of SSSA should not only be on creating diversity in membership but also on creating a climate of inclusion and participation by all in SSSA activities.

We acknowledge the excellent work that other committees are currently doing in this space including ASA-CSSA-SSSA DEI committee and the Women in Science Committee. The ASA-CSSA-SSSA DEI committee has conducted a comprehensive survey, submitted a recommendation report that was approved and includes priorities of anti-harassment policy development, mentoring programs, and education/training on DEI topics. We also acknowledge ASF's role in funding provided through the ASF-IDEA fund that needs to be strategically used to achieve our goals of increasing diversity in SSSA.

1. Need for comprehensive ethnicity data on our membership: We understand the value of privacy, but formal steps from SSSA need to be taken to collect this data. We suggest adding statements regarding the importance of collecting this data and strong encouragement to all our members when they renew membership. In addition, many members may not feel they belong to the rigid US census classification of ethnicity and race. Additional categories need to be added especially for international members. At the very minimum, the following changes should be made: "Caucasian/White" to "White"; add "Middle Eastern or North African"; add "Native of Indian Subcontinent." Another category to be considered: "Prefer to self describe". SSSA can consider adding a requirement for all award nominees and nominators to provide their demographic information prior to submitting a nomination. All demographic data provides an option for "prefer not to answer" so members will have that option.
2. Rates of student membership in SSSA after graduation are notably discouraging for the future growth of SSSA membership. SSSA should focus on improving retention and encouraging students and early career members to actively participate in governance and seek leadership positions. SSSA should focus on stemming the attrition of student members and solidifying their affiliation with SSSA as this group is estimated to be the most diverse. Students represent almost one third of the SSSA membership and are active participants in the Annual Meetings. However, few transition into professional membership or participate in governance of SSSA. More resources should be allocated to engage student members at the Annual Meetings and follow-up contacts during the rest of the year. We need to better understand what they value and what they envision as valuable products SSSA can provide them after graduation, whether their careers will be in industry, consulting, professional, science policy, research, or teaching. Changes that help students easily identify the ample opportunities SSSA has for them to participate in and lead SSSA committees and Division activities should be prioritized to aid in solidifying student affiliation with SSSA. A concrete example would be for the annual volunteer signup link to immediately ask volunteers if they want to view committees by "student eligible" or "all members eligible" which will help students clearly identify which committees they can choose to volunteer for. Currently, it is not readily clear to a student volunteering regarding their eligibility to sign up for a committee. Additionally, extra volunteer options can be listed for each SSSA Division where students can select the Division they are interested to volunteer for and add a listing of types of activities they are willing to be active in (e.g., moderate and chair technical sessions at the annual meetings, manage social media accounts).

3. The SSSA needs to expand and formalize mentoring programs for graduate students and early career members for all divisions. These should be widely available and publicized to all members. Special emphasis should be placed on reaching out to under-represented groups. Some divisions have mentoring programs, but they are not clearly formalized or supported by SSSA. Guidelines, training, and monetary support is needed to formalize this as part of each division. This could include workshops focusing on preparing nomination portfolios for awards and other recognition. However, mentoring may prove insufficient if not accompanied by active sponsorship (i.e., routinely and sustainably create opportunities for participation, extend invitations to keynote speakers, nominations for leadership positions and awards).
4. SSSA should focus on encouraging student and early career members to more actively participate in governance and seek leadership positions. Division involvement is key to future appointments in SSSA leadership positions. Therefore, SSSA should encourage ALL Divisions to provide Best Paper awards and Early Career awards to encourage the participation of graduate students and early career members in the divisions. Additionally, presenting the Division-level awards at the Division Business Meetings might result in early career members (and student members) becoming more familiar with the working of SSSA and actively participating in their Divisions. The candidates for Division Chair, Board Representatives, and President are chosen at the Business Meetings from floor nominations as well as nominations solicited by email through discussion boards. It is vital for young scientists to establish a presence to facilitate their consideration for leadership positions such as Division Chair and Associate Editor. The SSSA BOD has one seat for graduate students and one seat for early career members where they serve for a two-year term and recently approved a DEI Member-At-Large (in response to this committee's recommendation). All of these are excellent steps to increase the diversity of the BOD. We recommend additional steps: increase the seats for graduate students and early career members to two each to ensure synergy and support for these two groups. We also encourage the BOD to appoint 1-2 members for a 3-year term in addition to the elected members. These appointed members' pools can be from international members (outside the US), industry reps, and practitioners.
5. The ethnic composition of the key players (and especially the leadership) in the nomination and selection process may need to be considered when trying to achieve greater ethnic parity. Scholarships are mostly bestowed on the younger tier of SSSA membership (students and early career) and may therefore shape their perception of the SSSA's efforts in achieving ethnic diversity, and ultimately their decision to become or remain active members. The lack of diversity in leadership positions and as Award recipients is due to low nomination rates. Hence, the SSSA should make a concerted effort to increase the diversity among the nominees by more proactively seeking out potential candidates, more widespread publicity about the importance of these awards, and more effort should be placed on involving the membership in the nomination process. The SSSA might need to look into streamlining the nomination procedures to increase overall participation of members as nominators, nominees and selection committee members, evaluate the burden of putting portfolios together (by nominators/nominees) and what resources are available to facilitate this process.
6. Initiatives to connect with Historically black colleges, Hispanic serving institutions, MANNRS, SACNAS need to be formalized and strengthened. Some of these initiatives that were enacted in 2021 and were successful include inviting BIPOC students to attend and present at the annual meetings with assigned mentors. The society may have a greater role to play with land grant colleges to create and publicize scholarship opportunities for BIPOC students for graduate programs in soils and environmental sciences. The diversity of our society is connected to the success of US institution efforts to attract and retain BIPOC students, mentoring programs and creating inclusive communities is crucial.

ADDITIONAL RECOMMENDATIONS

The American Geophysical Union (AGU) has developed a Diversity and Inclusion Strategic Plan which contains many good ideas that AGU is considering implementing. These recommendations should be evaluated to see which ones are also appropriate for recommendation and implementation by SSSA.

[AGU Diversity and Inclusion Strategic Plan • Adopted December 2018](#)

Conclusions and recommendations from this committee need to be translated into changes in policy and procedures. This includes, but is not limited to, greater transparency in eligibility criteria for members and chairs of committees and honors, and in the nomination and decision-making processes, for example by making that information easily accessible on the SSSA website. Furthermore, equity in outcomes can be fostered through greater standardization and formalization of procedures, criteria, and responsibilities that underlie decision making in the nomination and selection of members to committees, boards and for honors and awards. Greater scrutiny should be applied to mechanisms which populate important committees and their leadership.

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APPENDIX

Table 19: Soil Science Society of America (SSSA) members count by ethnicity

Year	American Indian/Alaska Native	Asian	Black/African American	Caucasian / White	Hispanic/Latino	Native Hawaiian/Other Pacific Islander	Other	Unknown	Total
2010	-	319	82	3,658	-	-	141	2,123	6,323
2011	9	313	76	3,536	14	24	114	2,327	6,412
2012	11	311	79	3,397	31	24	94	2,834	6,781
2013	9	311	84	3,308	45	23	103	2,922	6,806
2014	10	325	88	3,176	59	19	97	3,103	6,876
2015	9	314	97	3,047	64	17	105	3,102	6,755
2016	9	300	82	2,769	73	19	92	2,643	5,987
2017	11	322	73	2,641	78	17	81	2,624	5,847
2018	11	311	76	2,562	82	17	78	2,770	5,907
2019	6	314	77	2,471	81	13	73	2,876	5,911
2020	10	345	100	2,282	154	15	84	2,514	5,504

Table 20: SSSA General, Awards, Fellows, Board, Division, and Editorial Committee Chairs, %

Year	American Indian/Alaska Native	Asian	Black/ African American	Caucasian/ White	Hispanic/ Latino	Native Hawaiian/ Other Pacific Islander	Other	Unknown	Total
2010		6.1%	2.4%	86.6%				4.9%	82
2011	1.1%	3.3%	1.1%	86.7%			1.1%	6.7%	90
2012	1.0%	4.0%	1.0%	85.1%		1.0%	2.0%	5.9%	101
2013	1.0%	2.1%	2.1%	83.3%	2.1%	1.0%	1.0%	7.3%	96
2014	1.0%	3.1%	1.0%	87.8%	1.0%		2.0%	4.1%	98
2015	1.0%	2.1%	2.1%	87.5%	1.0%			6.3%	96
2016		3.1%	3.1%	78.6%	3.1%		2.0%	10.2%	98
2017		7.4%	3.2%	75.8%	2.1%			11.6%	95
2018		8.4%	2.1%	75.8%	3.2%			10.5%	95
2019		4.5%	2.2%	71.9%	3.4%		3.4%	14.6%	89
2020		3.4%	5.6%	73.0%			1.1%	16.9%	89

Table 21: Soil Science Society of America Journal (SSSAJ) Reviewers by Ethnicity

Year	American Indian/ Alaska Native	Asian	Black/African American	Caucasian/ White	Hispanic / Latino	Native Hawaiian/ Other Pacific Islander	Other	Unknown	Total
2013		3.5%	0.6%	37.8%	0.6%	0.1%	0.7%	56.6%	679
2014		3.9%	0.5%	33.5%	0.4%	0.3%	0.9%	60.4%	761
2015		4.4%	0.6%	33.2%	0.6%	0.3%	1.3%	59.5%	617
2016	0.2%	4.6%	0.3%	31.9%	0.6%	0.2%	0.9%	61.3%	636
2017		3.3%	0.2%	29.0%	0.5%		0.8%	66.2%	607
2018		4.7%	0.5%	28.8%	0.5%		0.8%	64.6%	611
2019		5.5%	0.5%	26.5%	0.7%	0.2%	1.2%	65.5%	597
2020		6.8%	0.6%	26.2%	0.7%		0.9%	64.7%	541