

## Chesapeake Bay Commercial Turkey Populations in Virginia and West Virginia

The industry based county level commercial turkey production populations for Virginia and West Virginia sections of the Chesapeake Bay (Bay) watershed are presented in Tables 1 and Table 2, respectively. These populations were derived from turkey production data provided by Cargill Turkey Production, LLC and the Virginia Poultry Growers Association. The bird populations reflect the number of birds sold by growers to their respective processing plant at the end of each grow out/flock cycle. In general, for each year, the bird population were estimated was estimated by considering numbers sold during that calendar year (from January 01 to December 31). Note, Table 2 does not include birds (Hens and Big Hens) sold from 01/01/2015 to 05/31/2015 by Cargill. Table 3 provides a comparison between industry and USDA NASS bird estimated population data.

Briefly, the data summarized was at the flock-scale level. The information in the data included: type of birds raised (e.g. toms, hens), date and number of birds placed in a house, date, weight, and number of birds delivered to processing plants, and number of houses on a farm (production unit). The number of birds from each farm was estimated by summing up all the birds sold by each grower during the year under consideration. The county level turkey population was calculated as the sum of all birds from all farms located in that county. In general, turkey production in Virginia occurred in 11 counties, all within the Bay watershed. In West Virginia, turkey production occurred in two counties within the Bay watershed. Because all the production occurred within the Bay watershed, it was not necessary to split or partition bird populations into Bay and non-Bay watershed areas, i.e. the statewide and Bay watershed turkey population are similar for Virginia and West Virginia.

The USDA NASS data for 2015 and 2016 turkey production was obtained from USDA report published in April 2017: "Poultry – Production and Value 2016 Summary (ISSN 1949-1573). The link to the report is: <http://usda.mannlib.cornell.edu/usda/current/PoulProdVa/PoulProdVa-04-28-2017.pdf>. The detail of the statistical methodology for estimating the bird population is contained in the report. Of note, the USDA NASS estimates are based on birds placed between September 01 and August 31 (for example, for the year 2016, estimates are based on numbers of birds placed between September 01, 2015 to August 31, 2016).

Based on the 2016 complete data (from industry and USDA NASS), summarized in Table 3, it is apparent that the population of birds estimated by USDA NASS are approximately 30% larger than what the industry, for both Virginia (27%) and West Virginia (28%). We have not attempted to match the periods for estimation to see if that would reduce the difference in estimated numbers.

**Table 1: 2016 annual turkey population in each county based on birds sold or delivered to the processing plant from each farm**

State	County	Bird Type			Total	Statewide Population (%)
		Toms	Big Hen	Hen		
Virginia	Augusta	776,589	529,008	1,607,311	<b>2,912,908</b>	21.5
Virginia	Green	27,264	0	198,817	<b>226,081</b>	1.7
Virginia	Highland	217,411	240,078	131,691	<b>589,180</b>	4.4
Virginia	Louisa	64,926	0	93,511	<b>158,441</b>	1.2
Virginia	Madison	19,294	0	0	<b>19,294</b>	0.1
Virginia	Orange	102,134	0	481,310	<b>583,444</b>	4.3
Virginia	Page	0	105,530	1,252,988	<b>1,358,518</b>	10.0
Virginia	Rockbridge	165,558	57,752	64,994	<b>288,305</b>	2.1
Virginia	Rockingham	2,267,763	934,166	3,137,402	<b>6,339,331</b>	46.9
Virginia	Shenandoah	530,634	159,541	303,531	<b>993,706</b>	7.3
Virginia	Warren	57,077	0	0	<b>57,077</b>	0.4
<b>Virginia Totals</b>		<b>4,228,650</b>	<b>2,026,075</b>	<b>7,271,555</b>	<b>13,526,285</b>	<b>100</b>
West VA	Hardy	292,809	136,933	1,173,964	<b>1,603,706</b>	55.6
West VA	Pendleton	498,846	48,524	731,601	<b>1,278,971</b>	44.4
<b>West Virginia Totals</b>		<b>791,655</b>	<b>185,457</b>	<b>1,905,565</b>	<b>2,882,677</b>	<b>100</b>

**Table 2: 2015 annual turkey population in each county based on birds sold or delivered to the processing plant from each farm**

State	County	Bird Type			Total	Statewide Population (%)
		Toms	Big Hen	Hen		
Virginia	Augusta	1,037,003	194,439	1,029,977	<b>2,261,419</b>	20.3
Virginia	Green	0	0	191,308	<b>191,308</b>	1.7
Virginia	Highland	232,177	127,340	131,756	<b>491,273</b>	4.4
Virginia	Louisa	36,495	0	64,386	<b>100,881</b>	0.9
Virginia	Madison	26,668	0	0	<b>26,668</b>	0.2
Virginia	Orange	68,638	0	276,952	<b>345,590</b>	3.1
Virginia	Page	0	99,938	904,696	<b>1,004,634</b>	9.0
Virginia	Rockbridge	186,283	22,859	44,391	<b>253,533</b>	2.3
Virginia	Rockingham	2,590,811	405,115	2,472,146	<b>5,434,941</b>	48.9
Virginia	Shenandoah	668,334	77,003	218,083	<b>963,420</b>	8.7
Virginia	Warren	39,720	0	0	<b>39,720</b>	0.4
<b>Total</b>		<b>4,886,129</b>	<b>926,694</b>	<b>5,333,695</b>	<b>11,146,518</b>	<b>100</b>
West VA	Hardy	261,616	147,480	614,236	<b>1,023,332</b>	43.7
West VA	Pendleton	627,966	40,481	659,455	<b>1,319,663</b>	56.3
<b>Total</b>		<b>889,582</b>	<b>187,961</b>	<b>1,273,691</b>	<b>2,351,234</b>	<b>100</b>

**Table 3 Comparison of USDA NASS and Industry reported total state turkey bird populations in Virginia and West Virginia for 2015 and 2016**

Year	Virginia		West Virginia	
	Industry	USDA NASS	Industry	USDA NASS
2015*	11,146,518	17,000,000	2,351,234	3,000,000
2016	13,526,285	17,200,000	2,882,677	3,700,000

\*The 2015 data does not include hens and big hens sold between 01/01/2015 to 05/31/2015