

Preserving Next Generation Insecticides for IRS



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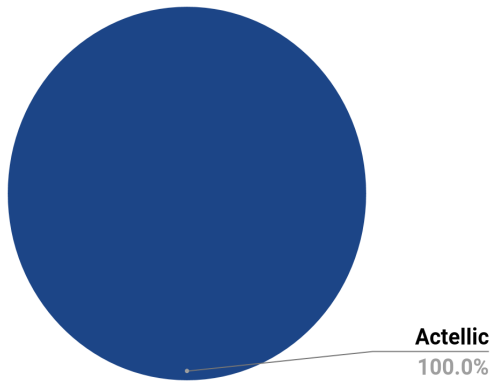


Next Generation Insecticides for IRS Approval / Introduction Timeline

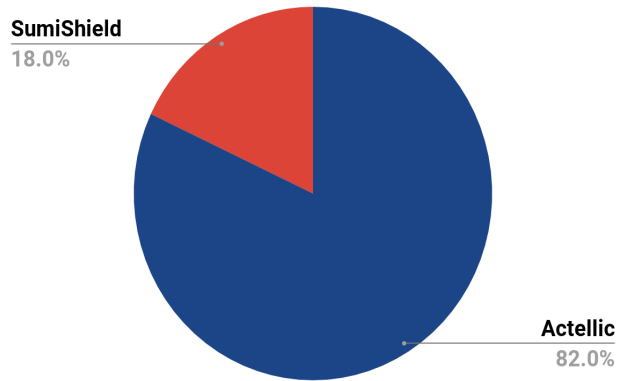


Insecticide Split Across 14 PMI VL Countries (By # of Structures Sprayed)

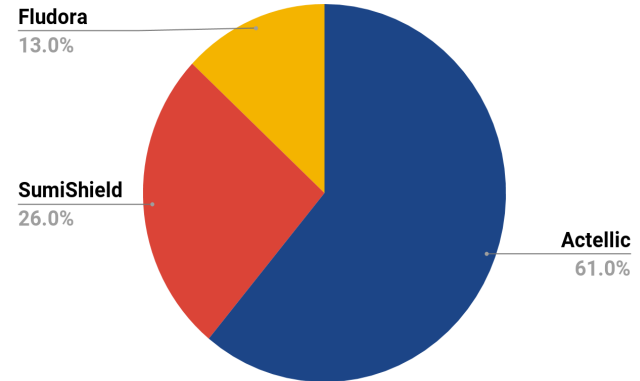
2017



2018



2019





GPIRM for IRS

Objective of IRM:

- IRM strategies are intended to maintain the effectiveness of vector control, despite the threat of resistance.

IRS IRM Strategy:

- Rotations of insecticides. Two, or preferably more, insecticides with different modes of action are rotated from one year to the next.



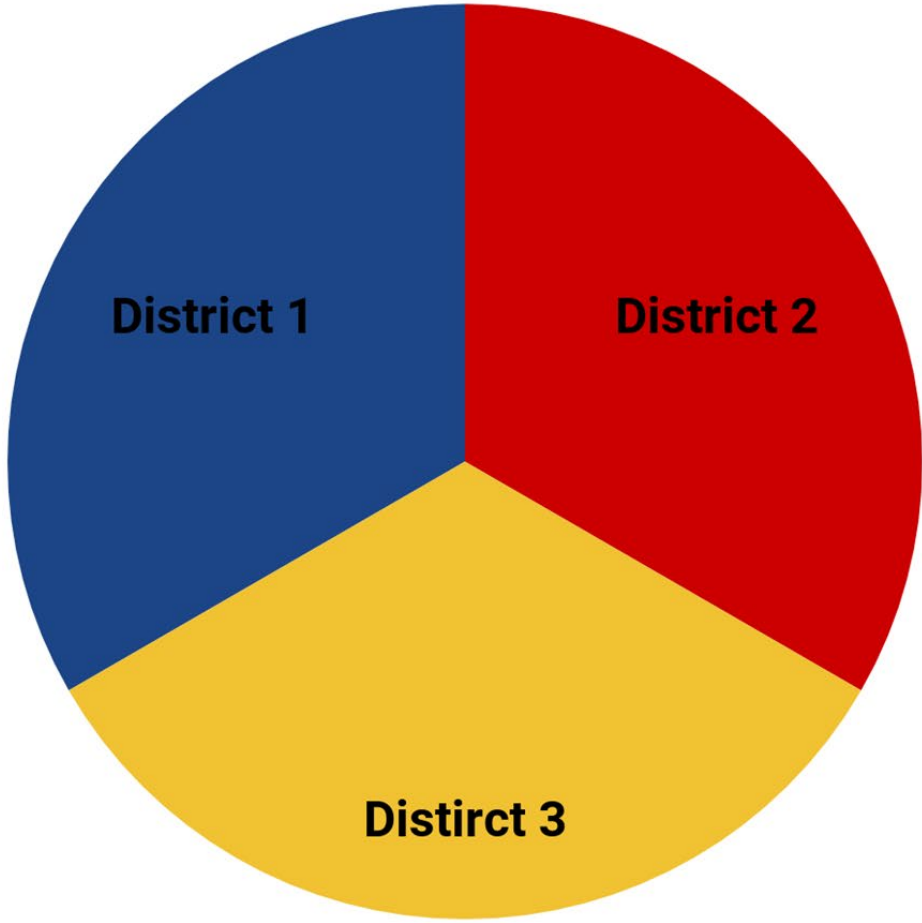
The Case for sub-National Rotation

- Prevent/mitigate insecticide resistance
- Limited options - need to keep all 3 currently approved insecticides in the mix
- Using multiple insecticides in the same country is operationally straight-forward
- Calculating average price/country will smooth insecticide cost variances



sub-National Insecticide Rotation Demo

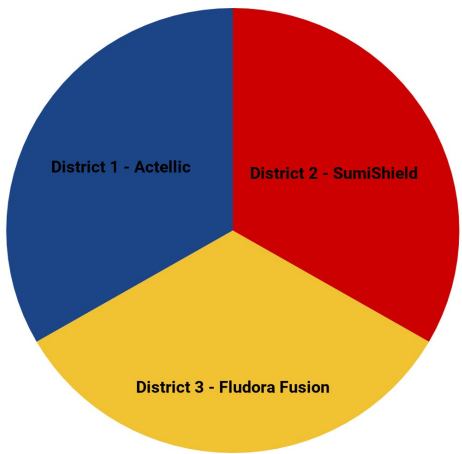
2019



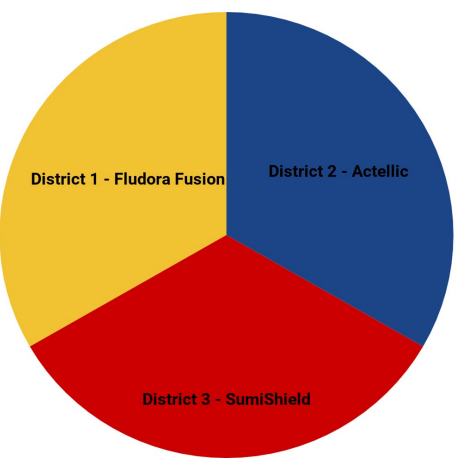


sub-National Insecticide Rotation Demo

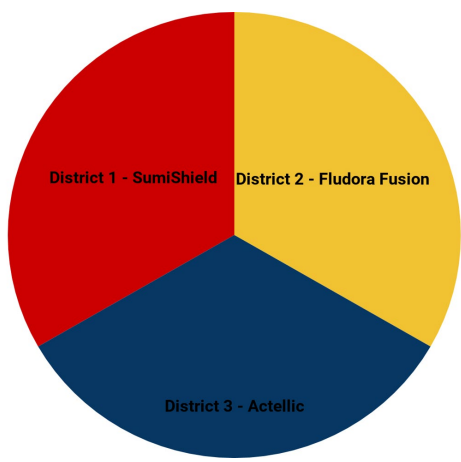
2019



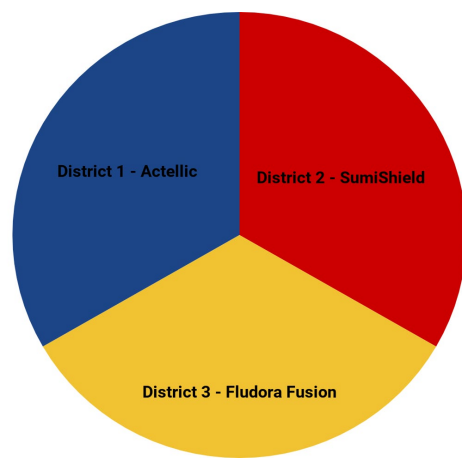
2020



2021



2022





Countries Implementing sub-National Insecticide Rotation

	No. of countries using 2 insecticides	No. of countries using all 3 insecticides
2018	6 of 14	NA
2019	11 of 14	2 of 14

Challenges to Implementing sub-National Rotation

- Countries used OP (Actellic) for so many years, some made national shifts to clothianidin products.
- Some countries are practicing their own version of GPRIRM that states that rotating insecticides should be every 2 years.
- Now that we have a 'competitive' market for IRS insecticides, there is marketing taking place at the country level.
- There is some variation in price between the 3 insecticides, which can be a decision factor. (Note: sub-national rotation smooths these differences)



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Thank You!



PMI VL 2018 Insecticide by country

Country	Actellic	SS	Total
Kenya	441,000	-	441,000
Benin	401,000	-	401,000
Burkina	159,000	100,000	259,000
Ethiopia	473,000	-	473,000
Ghana	278,000	21,000	299,000
Mada	419,000	130,000	549,000
Malawi	112,000	-	112,000
Mali	95,000	66,000	161,000
Moz	237,000	150,000	387,000
Rwanda	208,000	-	208,000
Zambia	476,000	83,000	559,000
Tanzania	-	498,000	498,000
Uganda	1,292,000	-	1,292,000
Zim	125,000	-	125,000
TOTAL	4,716,000	1,048,000	5,764,000



PMI VL 2019 Insecticide by country

Country	Actellic	SS	FF	Total
Kenya	498,000	10,000		508,000
Benin	335,000	-		335,000
Burkina	60,000	121,000	21,000	202,000
Ethiopia	487,746			487,746
Ghana	157,000	142,000		299,000
Mada	153,000	72,000	42,000	267,000
Malawi	91,000	17,000		108,000
Mali	122,000	27,000		149,000
Moz		134,000	197,000	331,000
Rwanda			222,000	222,000
Zambia		338,000	148,000	486,000
Tanzania	227,386	280,516		507,902
Uganda	1,071,000	220,000		1,291,000
Zim	60,000		71,000	131,000
TOTAL	3,262,132	1,361,516	701,000	5,324,648