This is food. This is what we eat.

#notmyphoto

This is also food. Plant food. Fertilizer.

We get the nutrients that we need through the food we eat.


They, too.

Sure, we can choose what to eat. The food that we really need...


...or the food that we want.

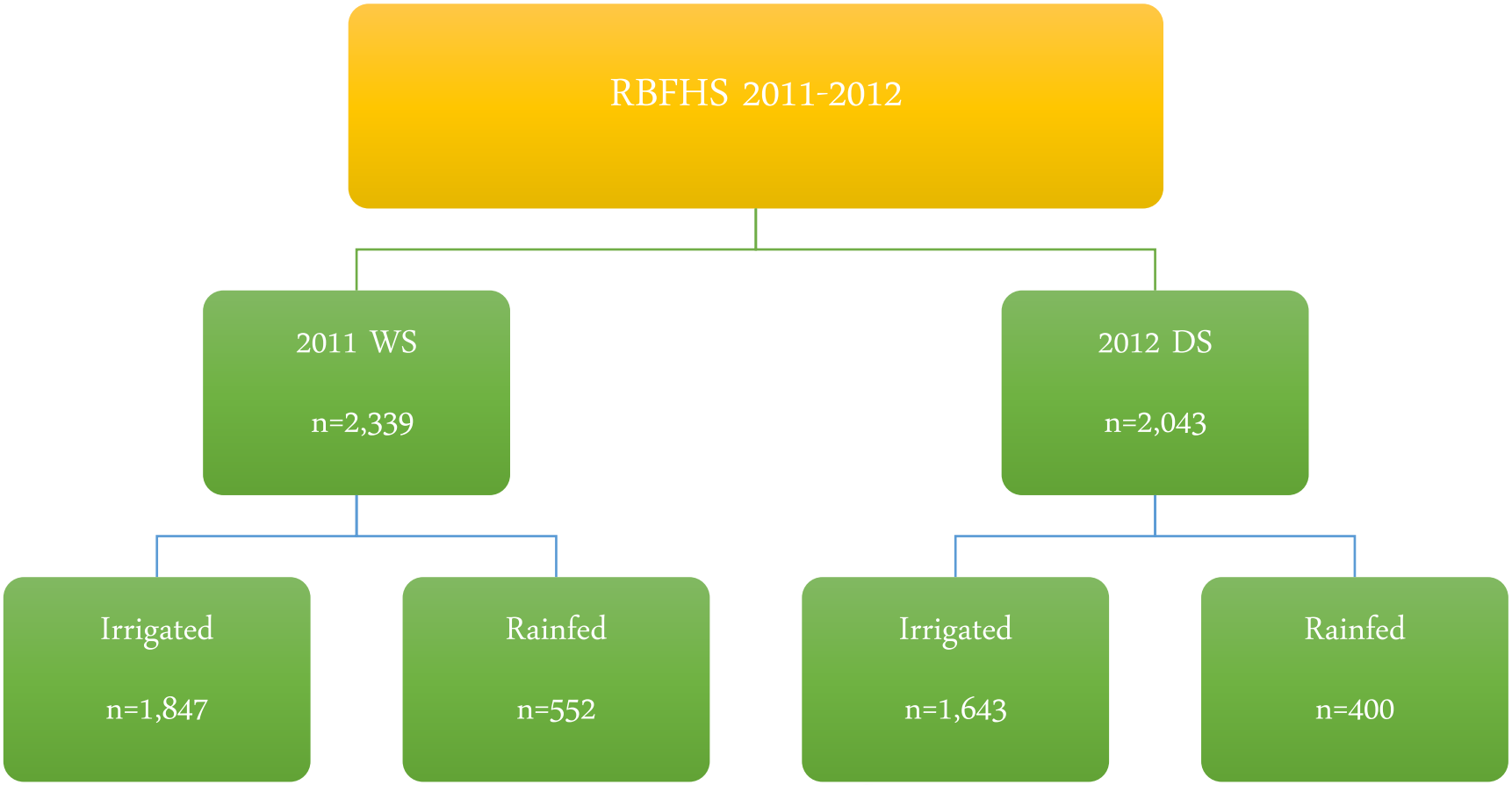

But our rice plant can't.

The farmer chooses what to feed their crops.

Feeding the Rice Crop:

Filipino Farmers' Management Practices

Charmaine G. Yusongco*
Rowena G. Manalili
Chona P. Austria
SED Staff


RBFHS 2011-2012
2011 WS
n=2,339
2012 DS
n=2,043
Irrigated
n=1,847
Rainfed
n=552
Irrigated
n=1,643
Rainfed
n=400

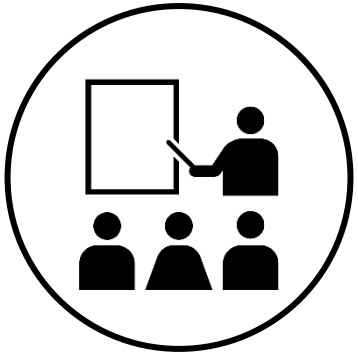

METHODOLOGY

2011 Wet Season

&

2012 Dry Season

- What do farmers “feed” their rice?
- How much fertilizer do they use?
- How frequent do they feed their rice plants?
- When do they feed their rice?
- Do they get their money’s worth?
- The “rice lifestyle”?



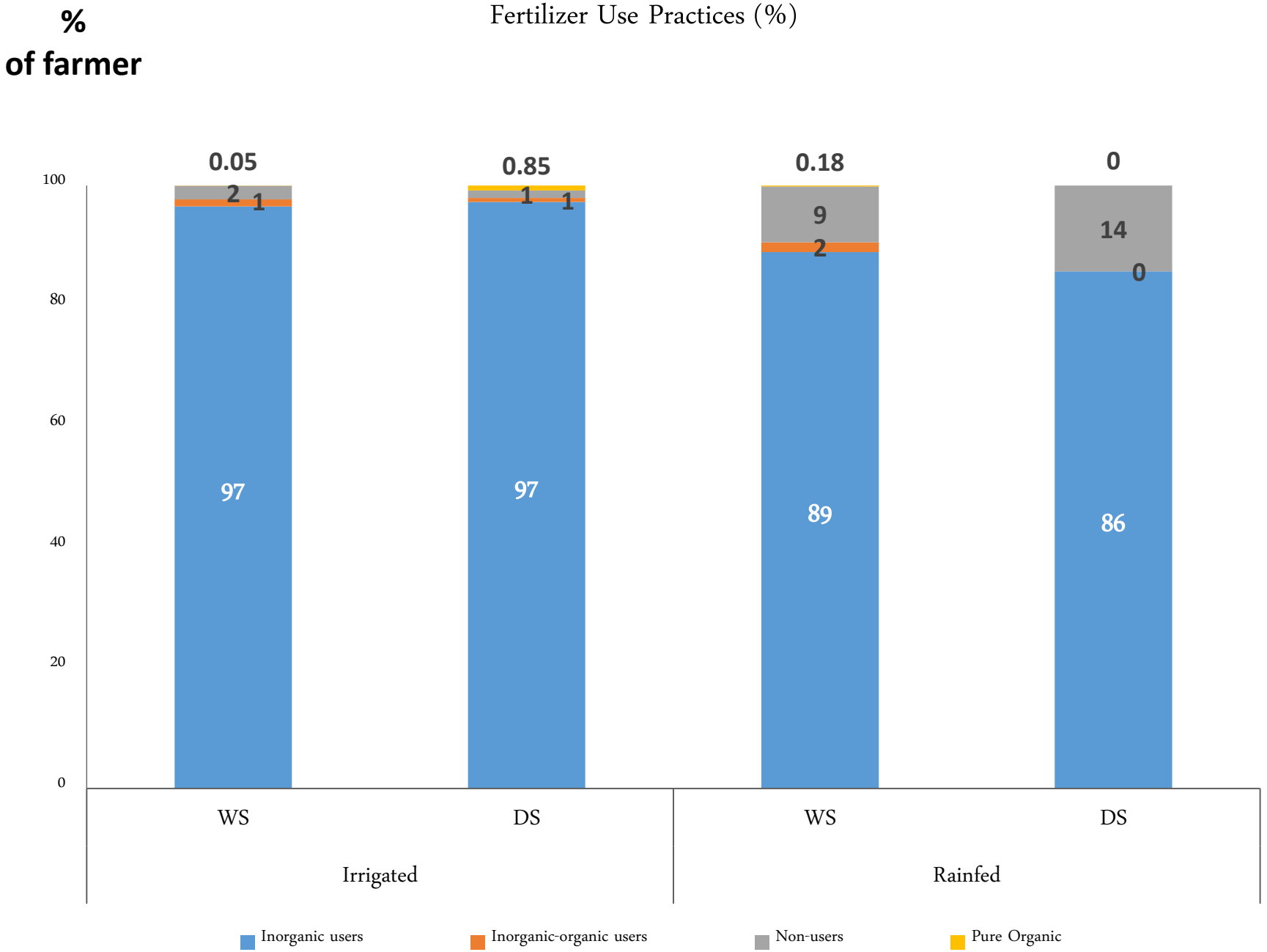
- What are the feeders’ training on nutrient management?

- What are the government services availed and wanted by farmers?
- What are the technology awareness and adoption on Nutrient Management Practices?

OBJECTIVES

WHAT DO THEY FEED THEIR RICE PLANTS?

INORGANIC ORGANIC


% of farmer
Fertilizer Use Practices (%)
100
80
60
40
20
0
0.05
2
1
97
0.85
1
1
97
0.18
9
2
89
0
14
0
86
WS
DS
WS
DS
Irrigated
Rainfed
Inorganic users
Inorganic-organic users
Non-users
Pure Organic

Commonly used fertilizer grade

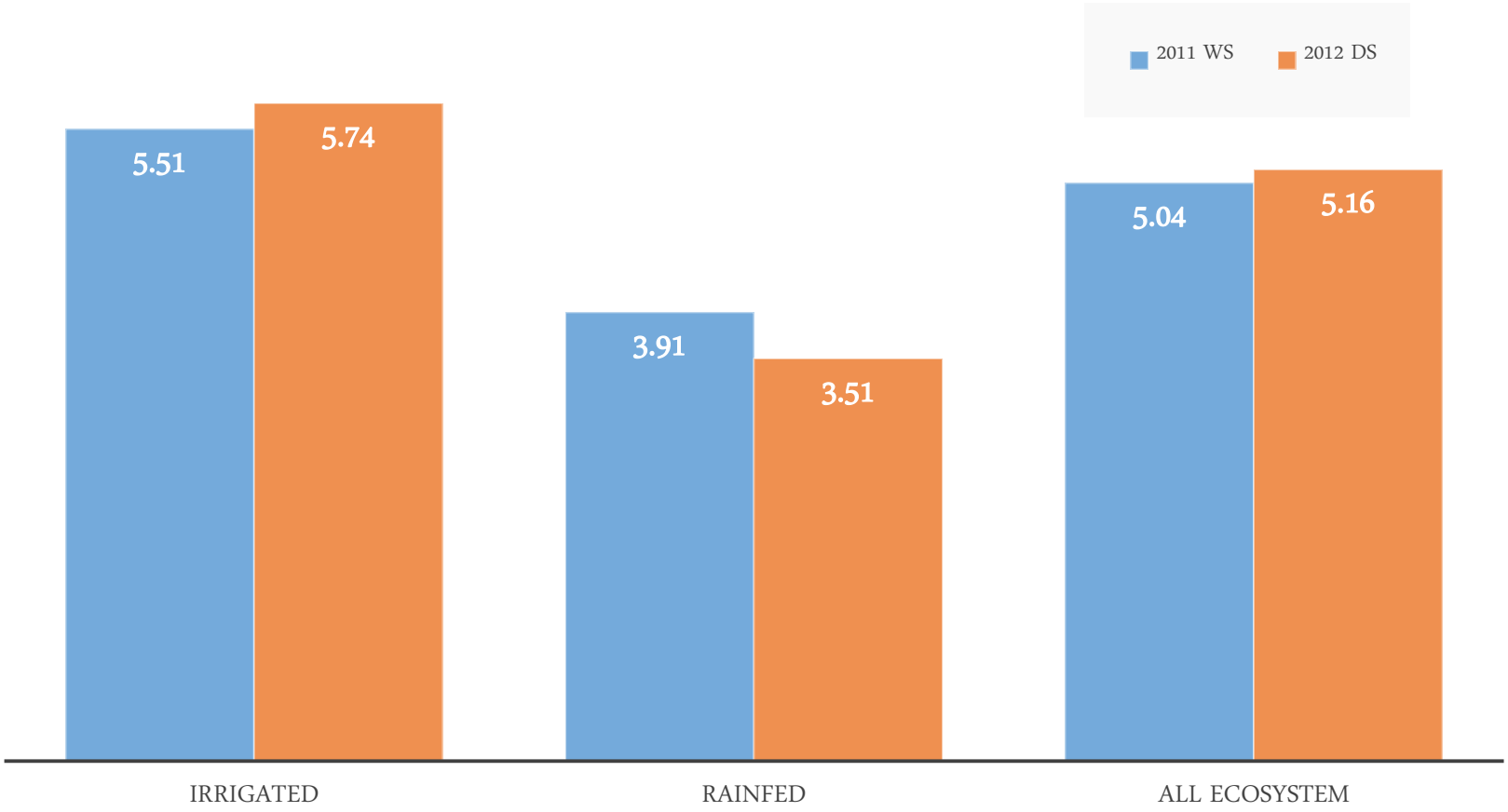
HOW MUCH

FERTILIZER

DO THEY USE?

Average Inorganic Fertilizer Use

(bag/hectare)



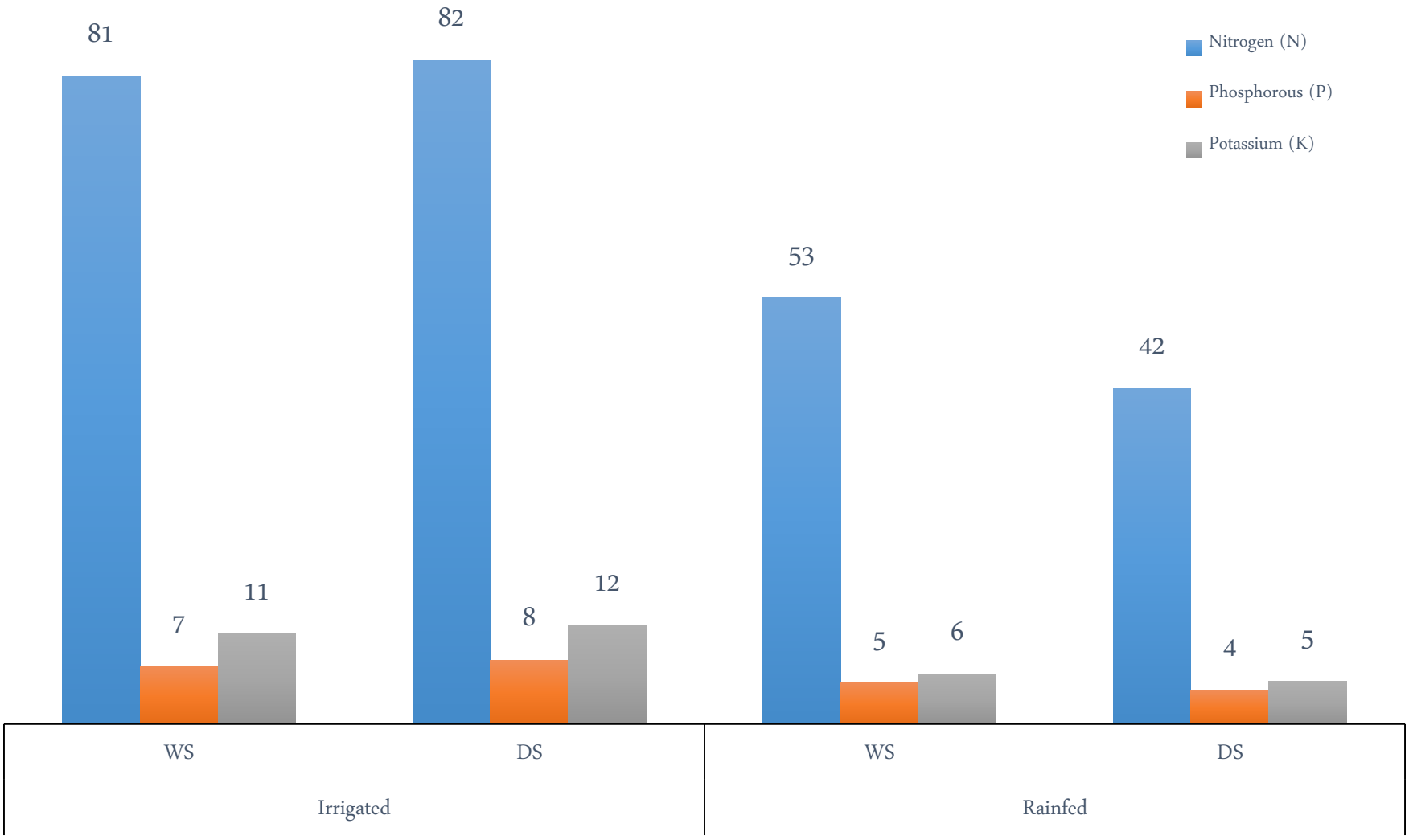
Note: 1 bag = 50 kg

Average Inorganic Fertilizer Use

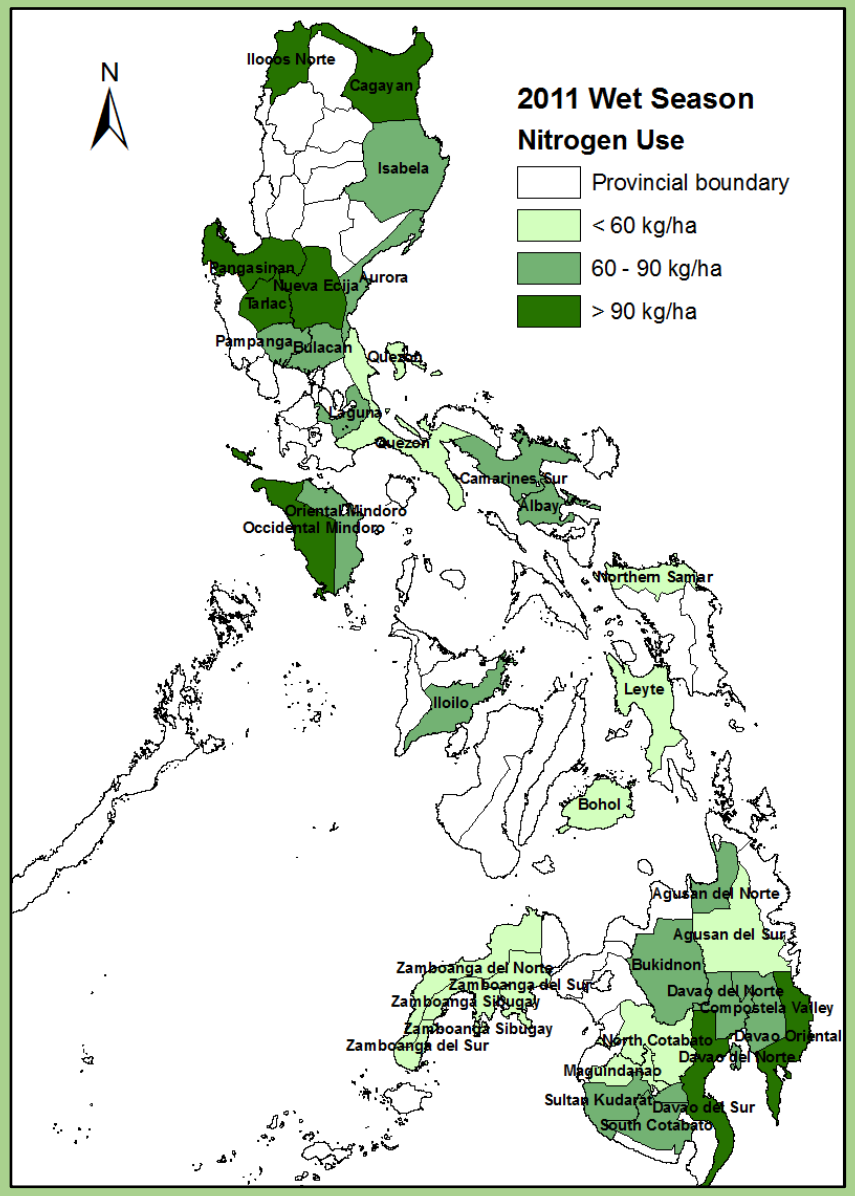
(bag/hectare)

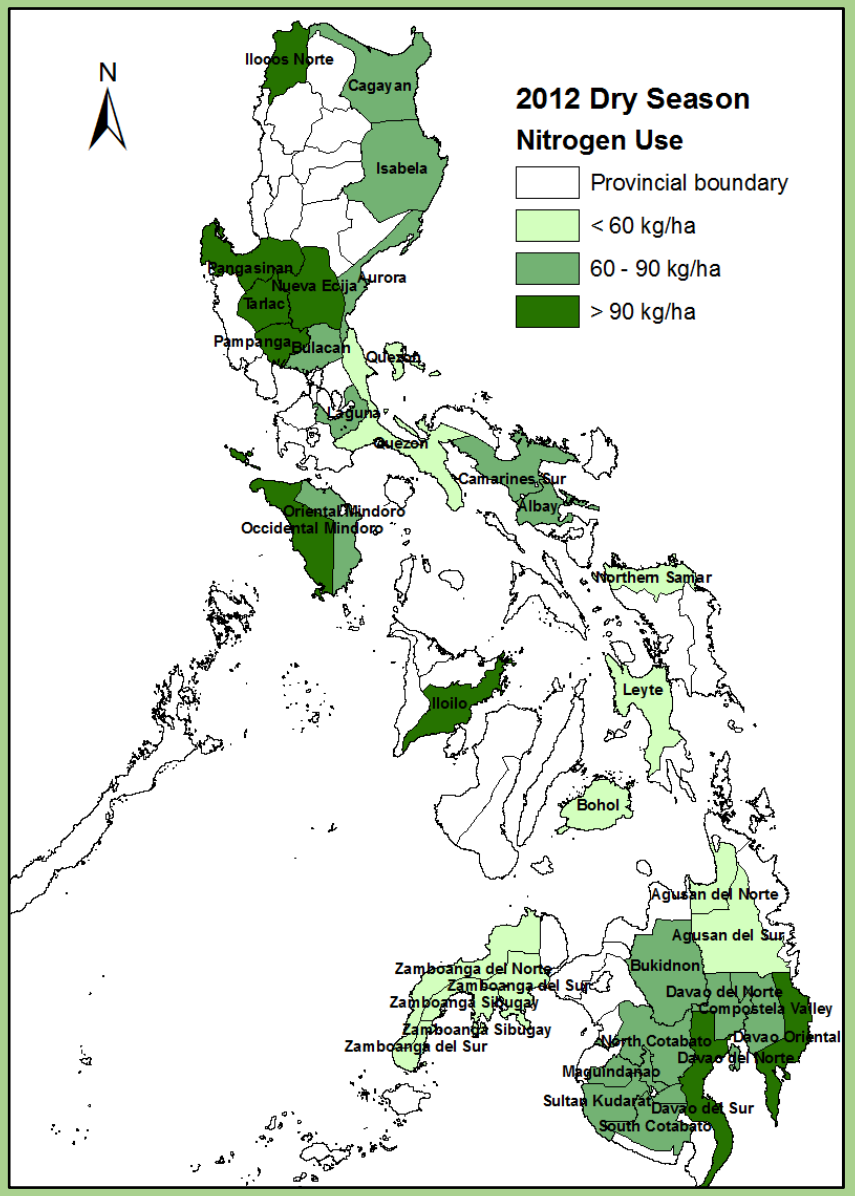
Fertilizer	Irrigated		Rainfed	
	WS	DS	WS	DS
Urea	2.47	2.55	1.77	1.31
Complete (14-14-14)	1.69	1.88	1.05	0.89
Ammonium Sulfate (21-0-0)	0.69	0.67	0.57	0.72
Ammonium Phosphate (16-20-0)	0.46	0.47	0.45	0.49
Potassium Nitrate (17-0-17)	0.07	0.06	0.02	0.05
Muriate of Potash (0-0-60)	0.02	0.04	0.01	0.01
Other Inorganic	0.11	0.08	0.04	0.05
TOTAL	5.51	5.74	3.91	3.51

Average NPK Used
(kg/ha)

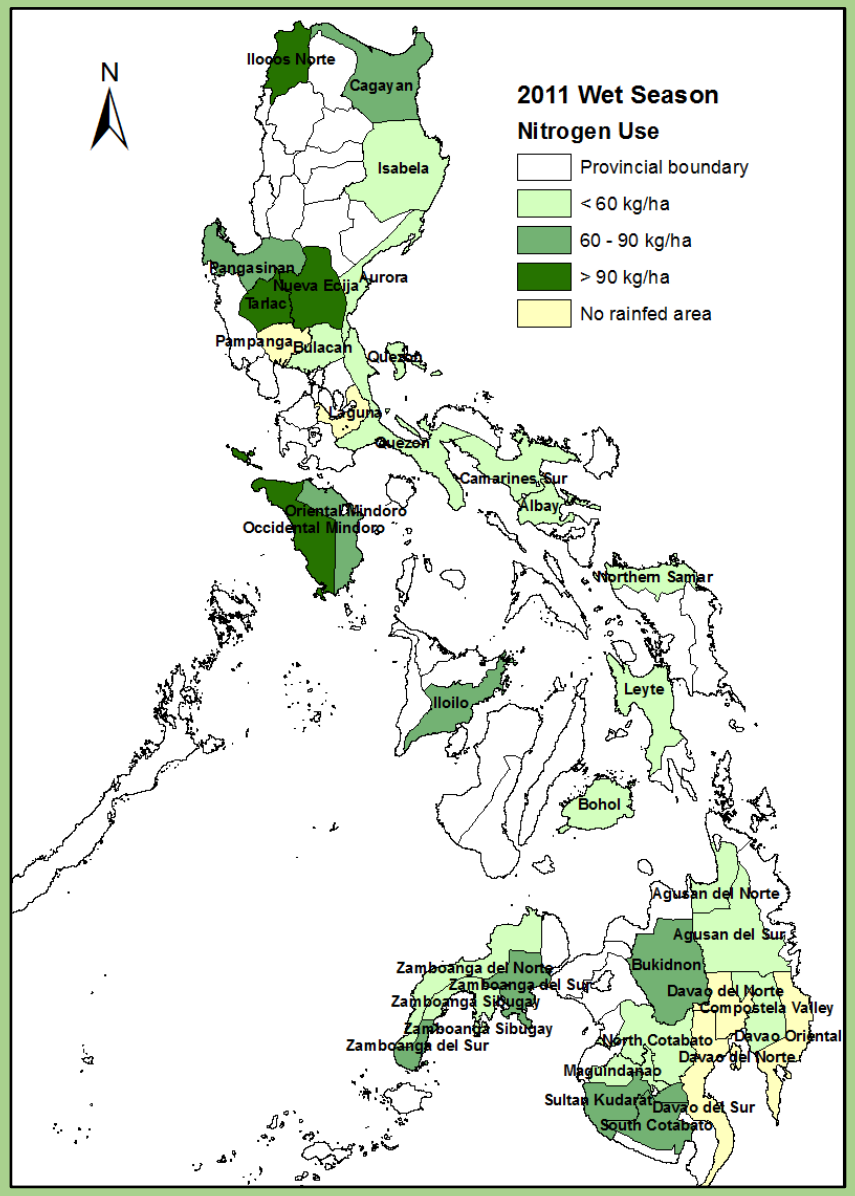


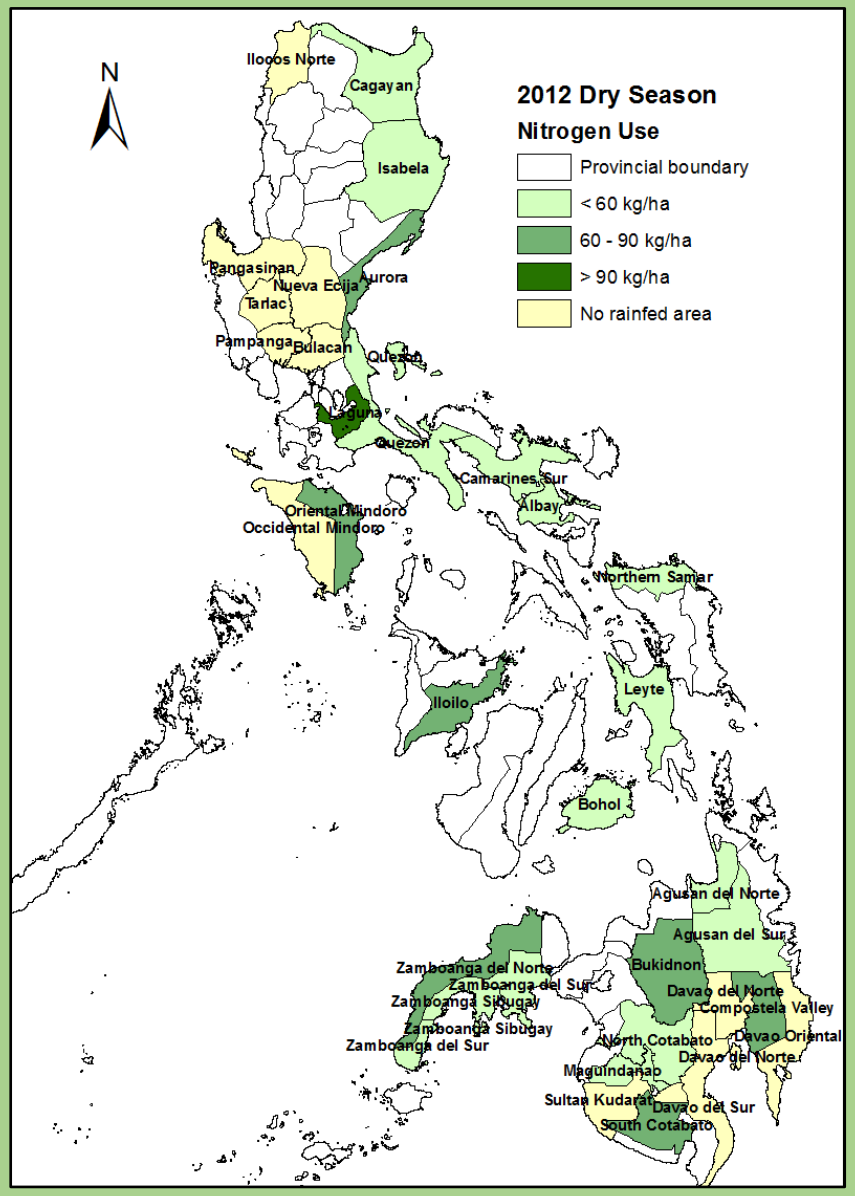
N use in Irrigated Areas



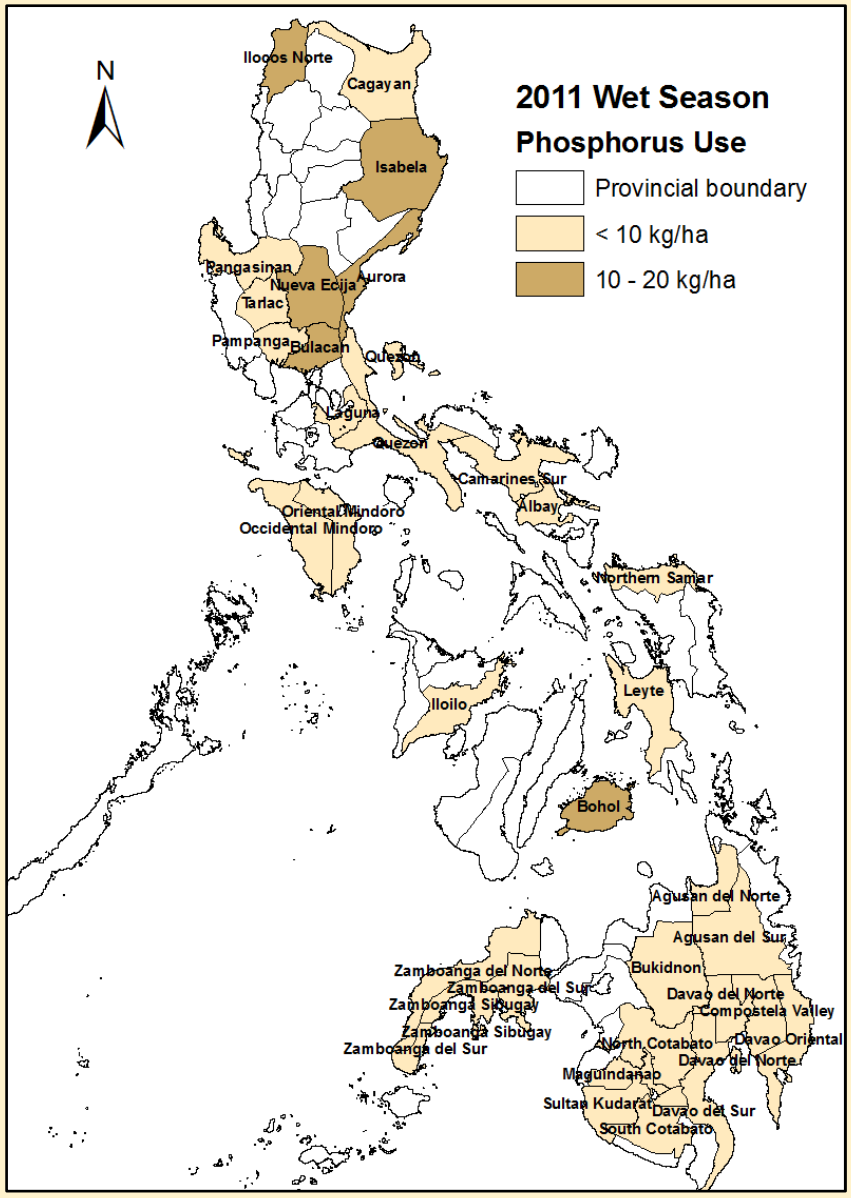


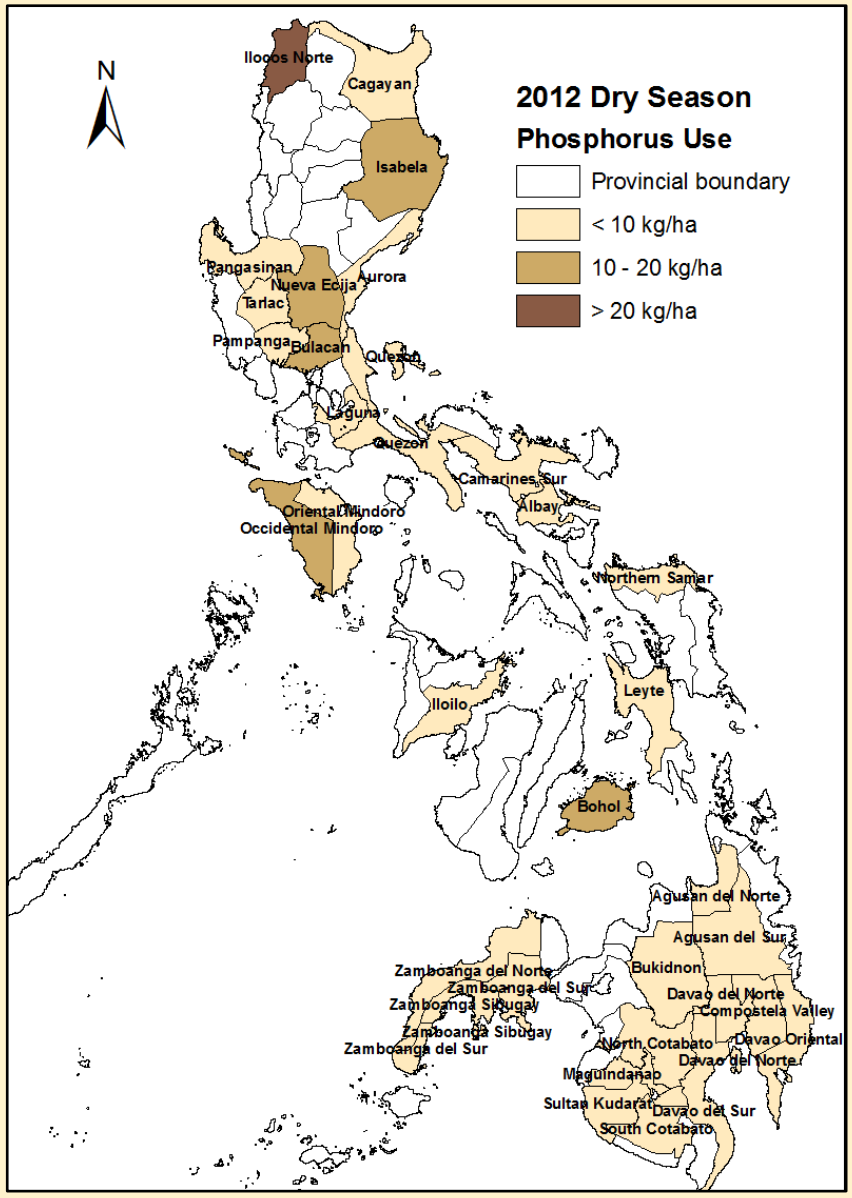
N use in Rainfed Areas



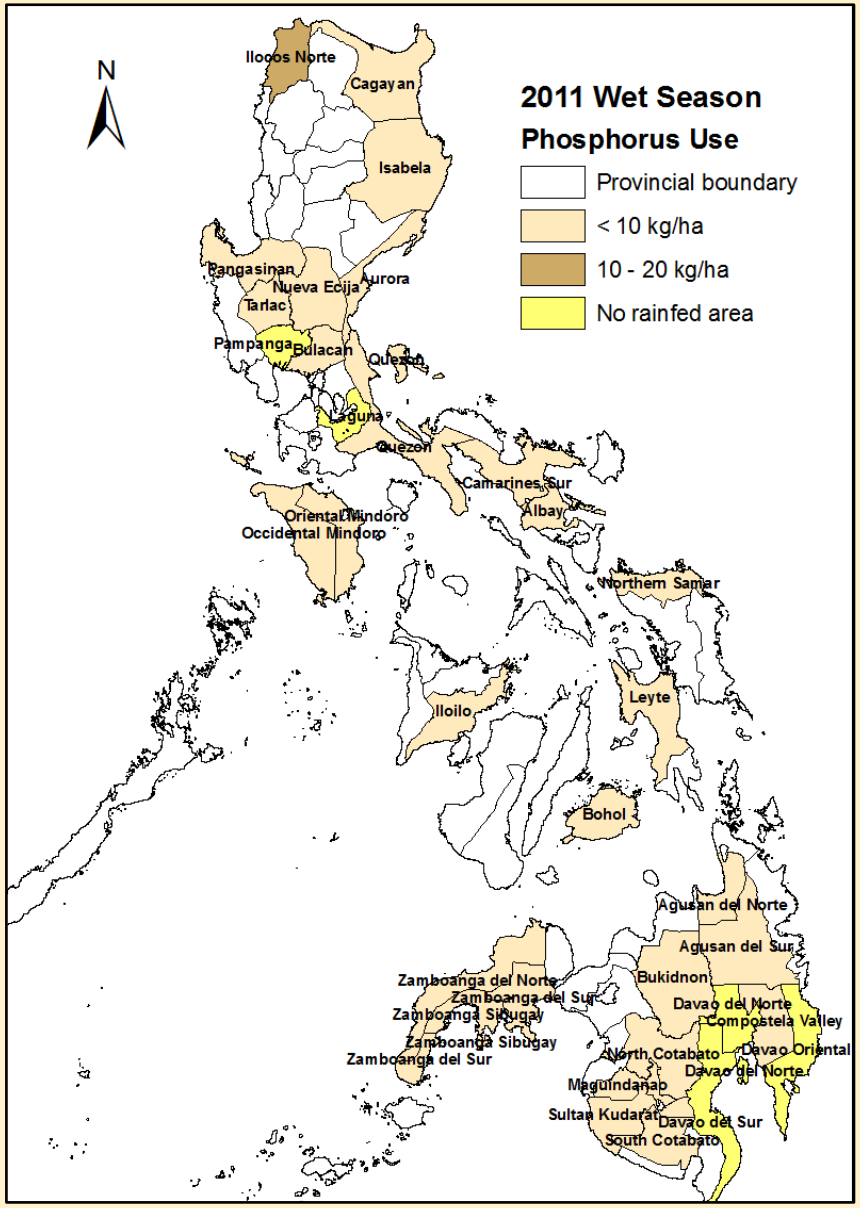


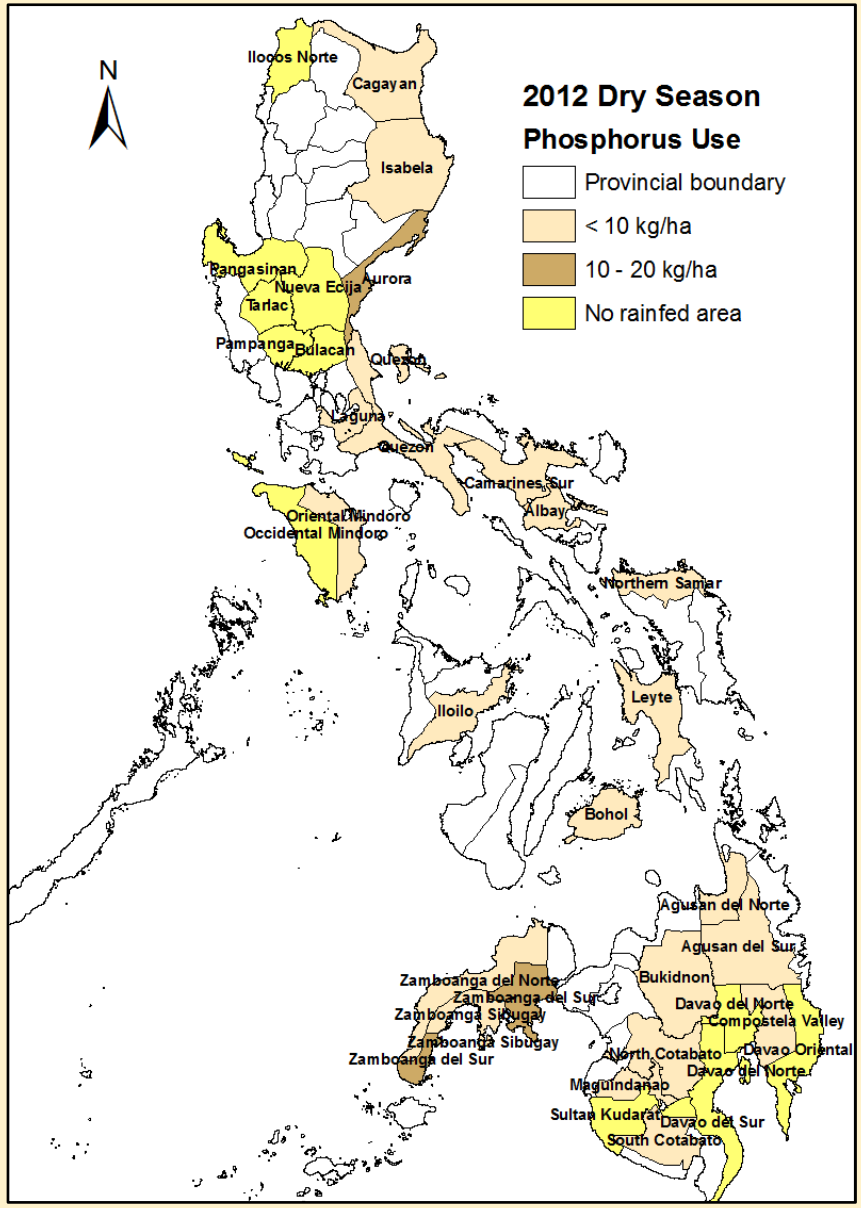
P use in Irrigated Areas



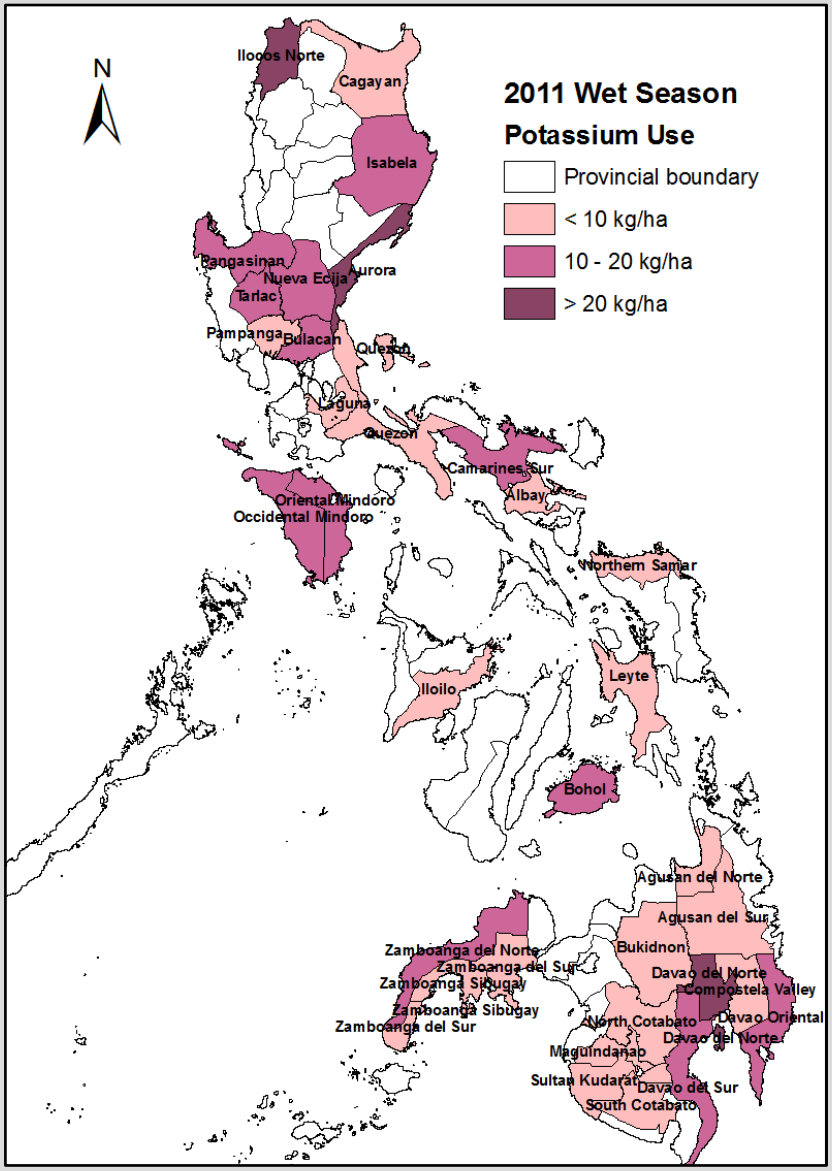


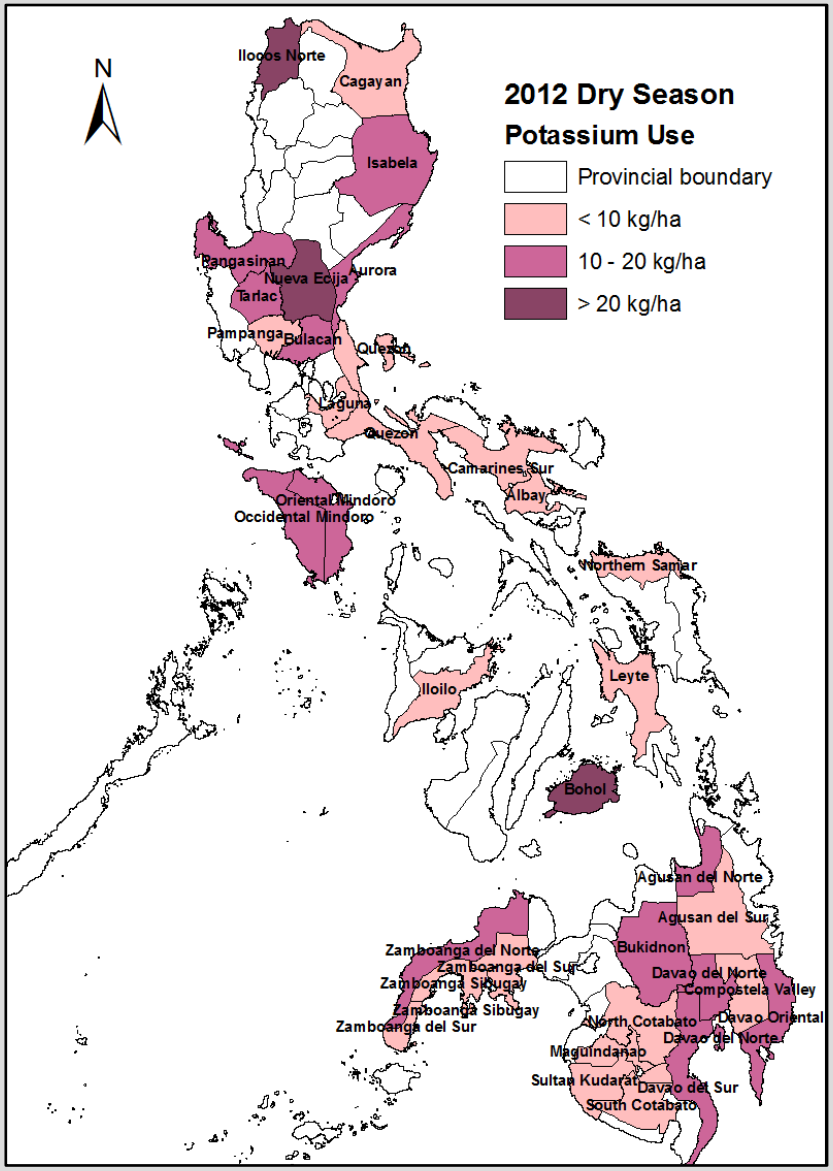
P use in Rainfed Areas



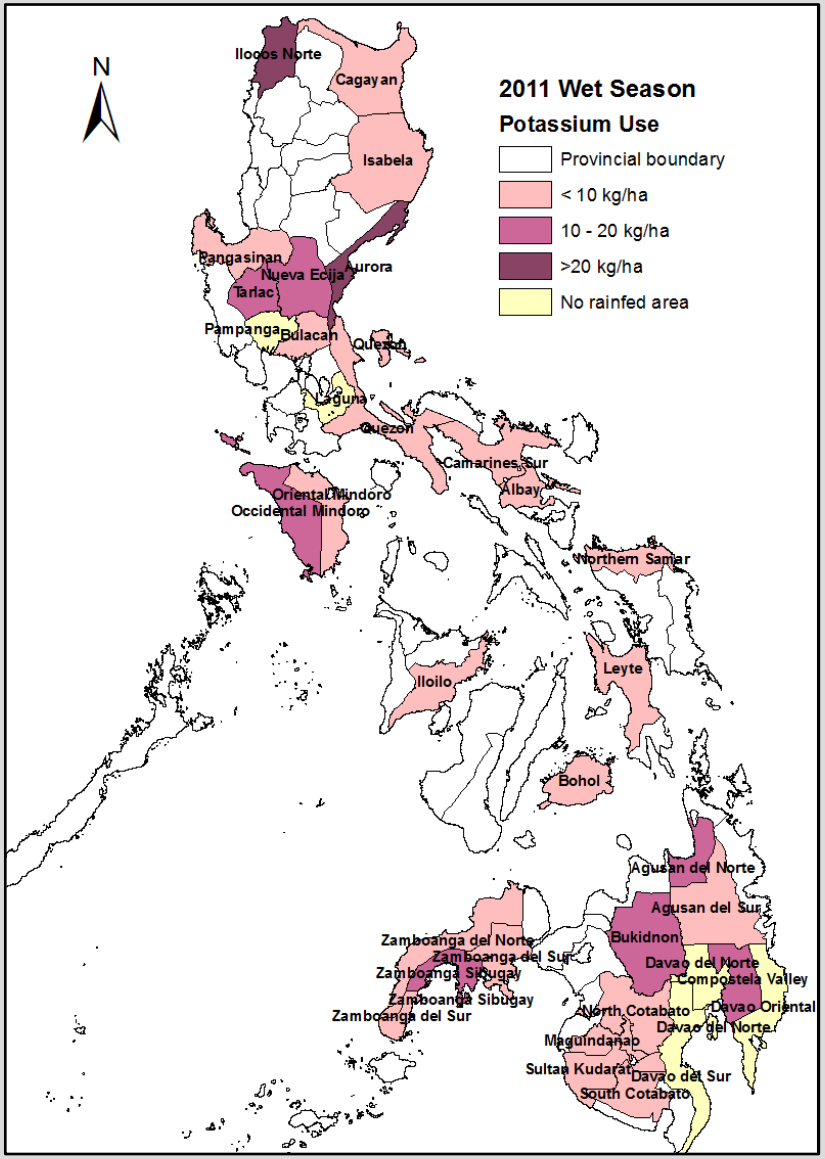


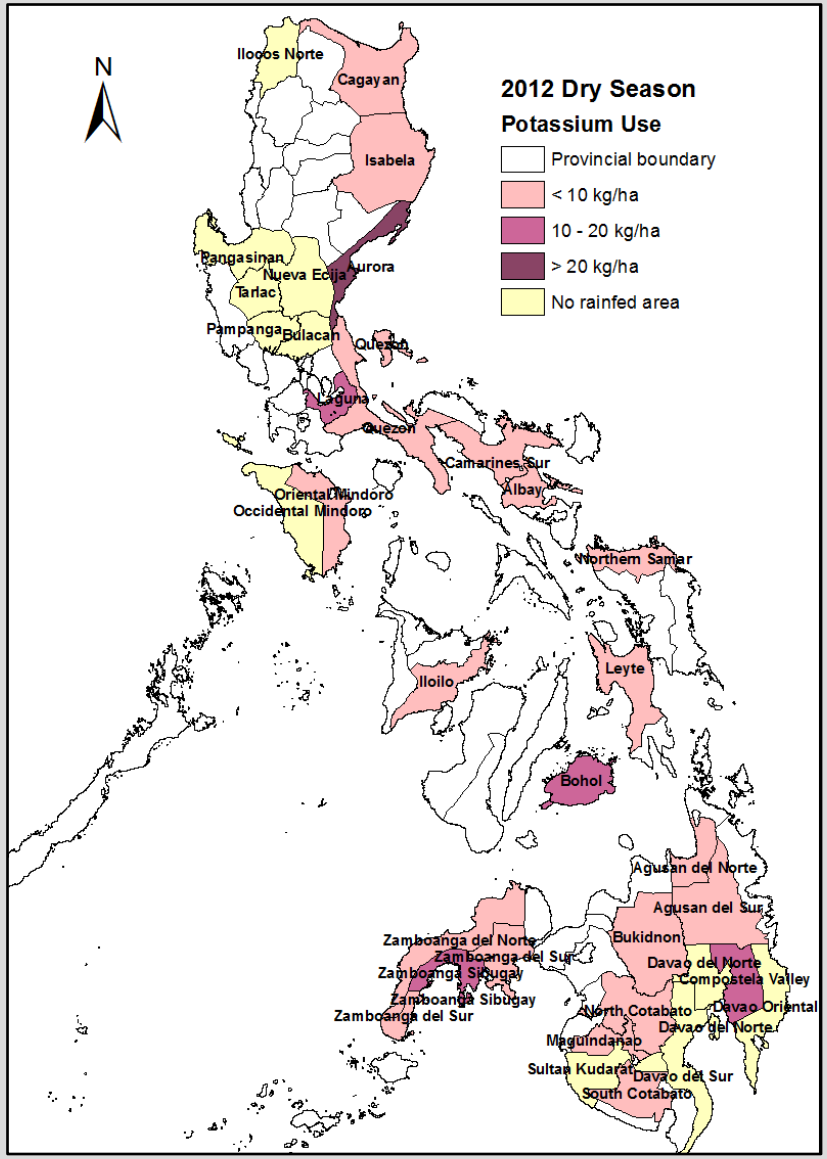
K use in Irrigated Areas





K use in Rainfed Areas



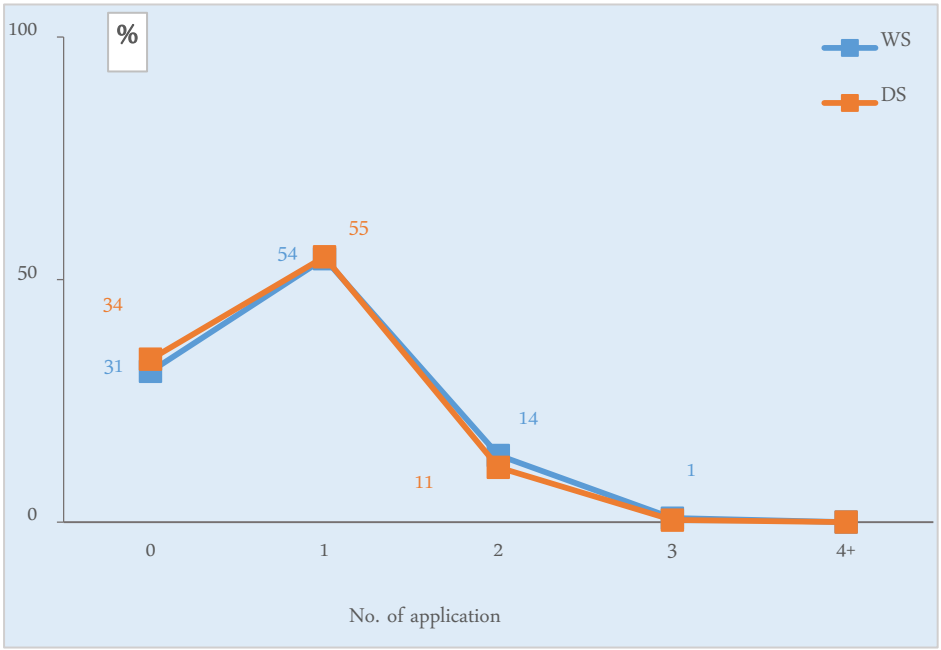


HOW FREQUENT DO THEY FEED THEIR RICE PLANTS?

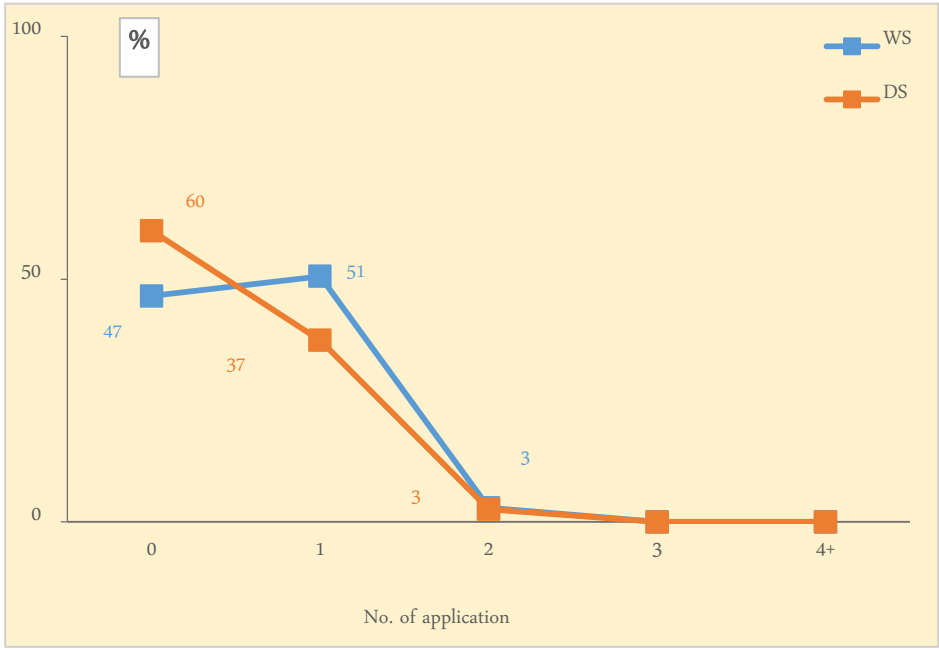
Number of fertilizer application during

seedling stage

(% farmers by ecosystem)



Irrigated

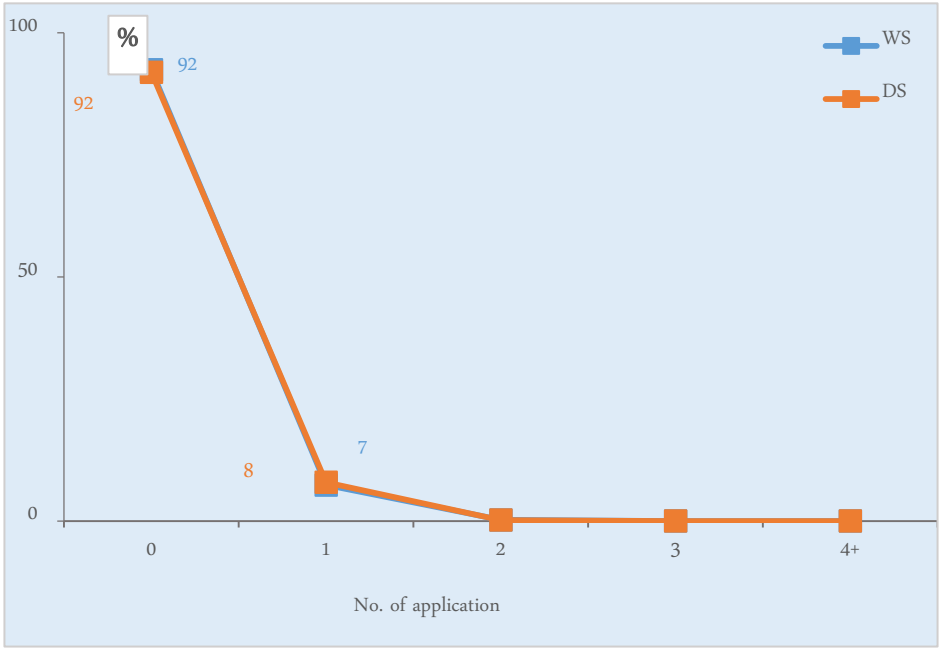


Rainfed

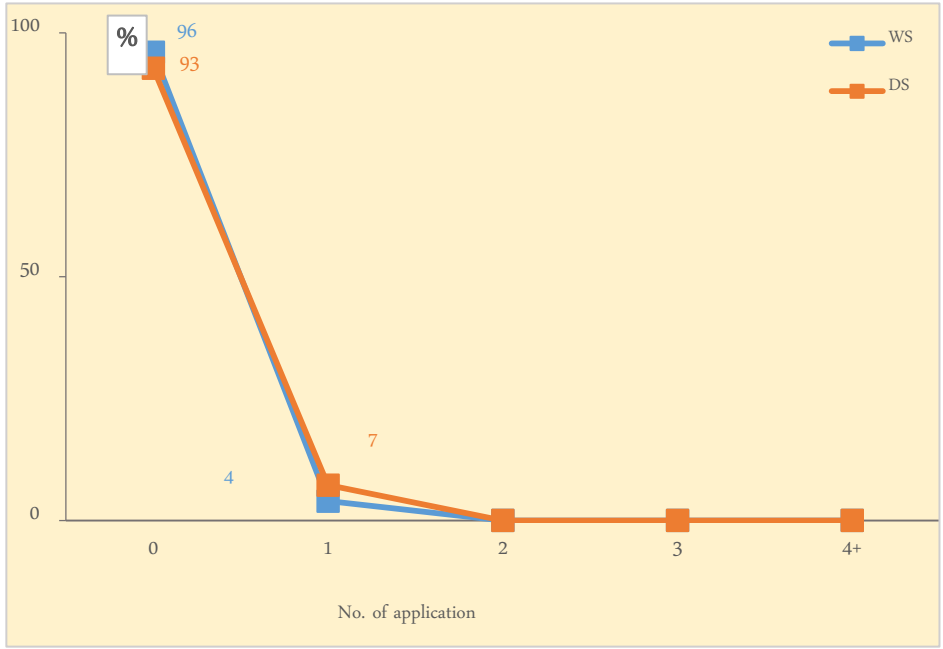
Number of fertilizer application during

pre-standing crop stage

(% farmers by ecosystem)

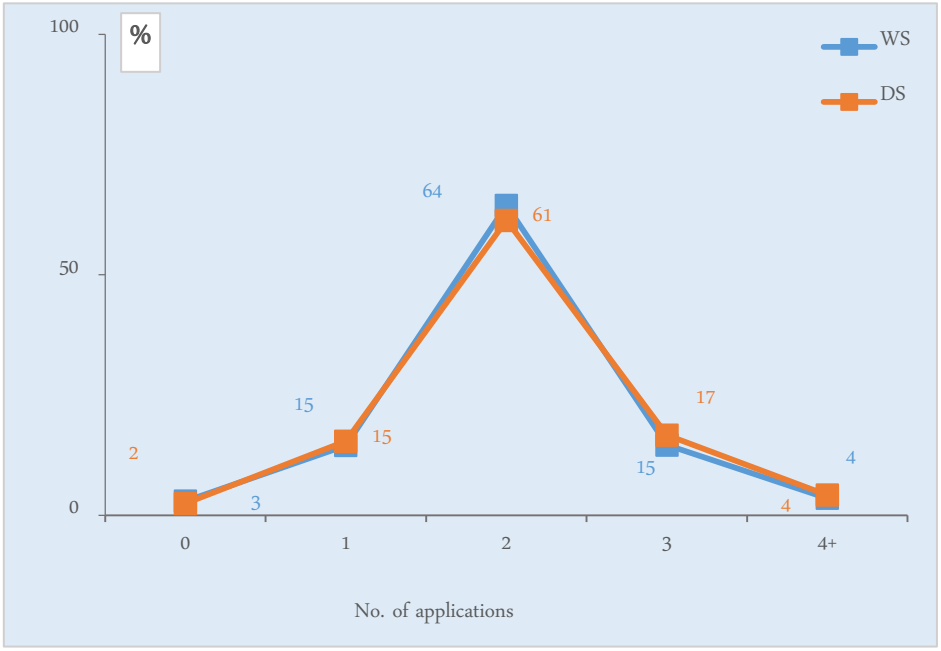


Irrigated

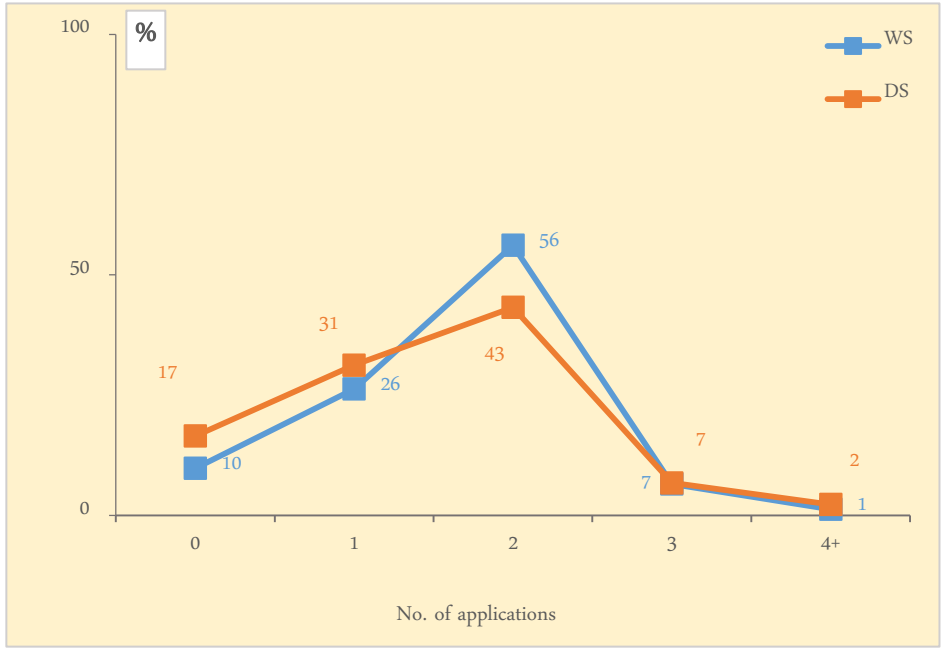


Rainfed

Number of fertilizer application during
standing crop stage
(% farmers by ecosystem)



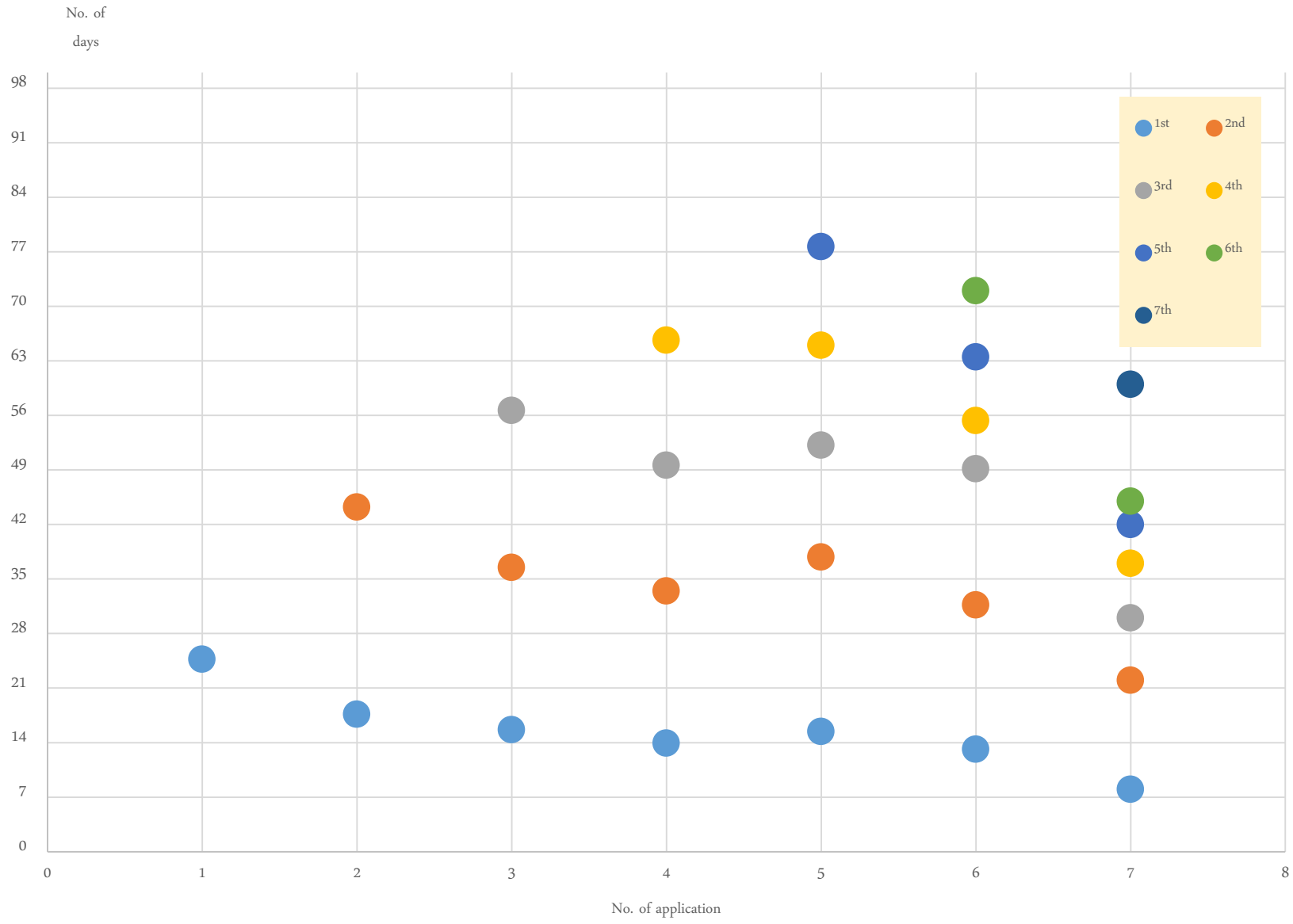
Irrigated



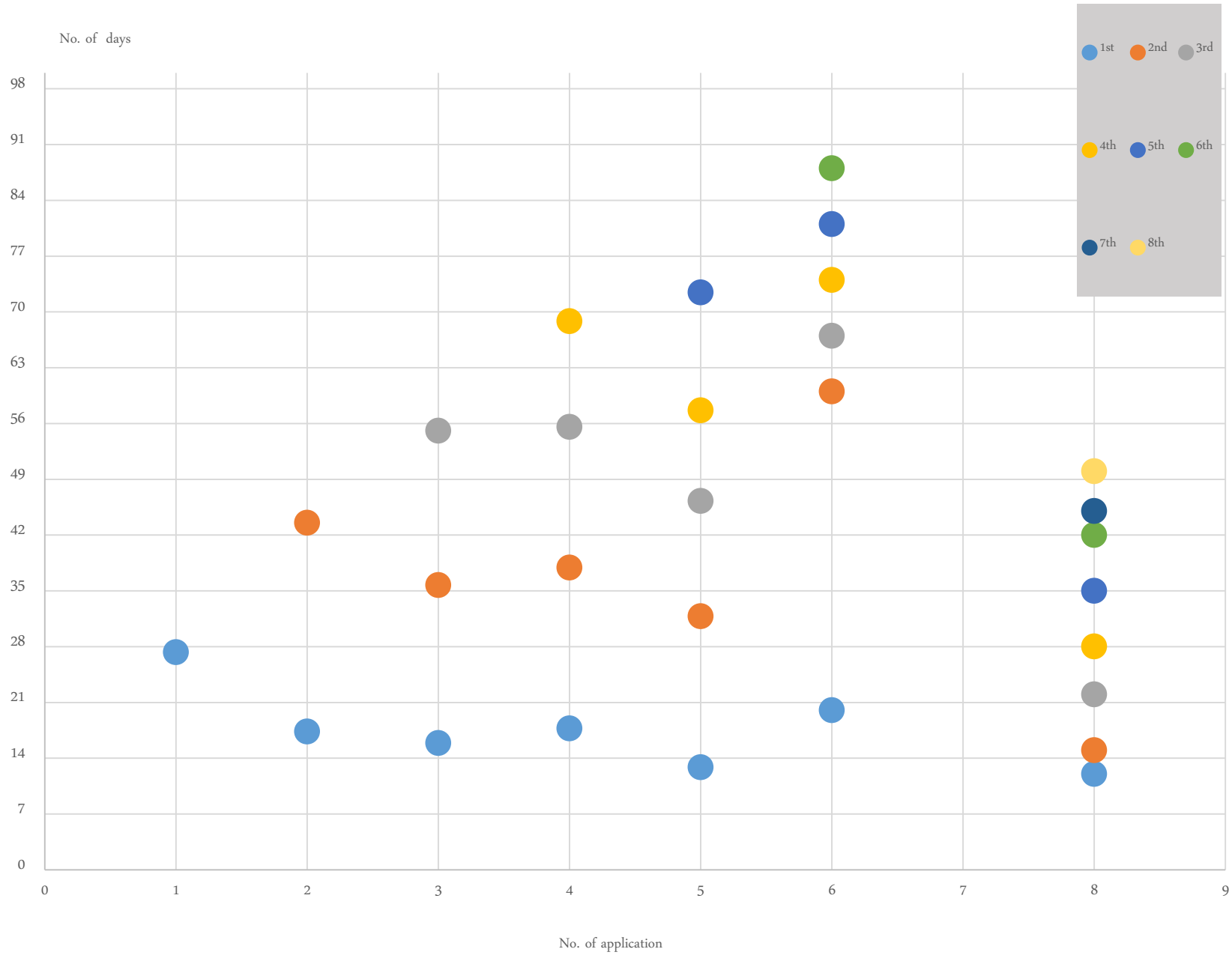
Rainfed

WHEN DO
THEY FEED
THEIR RICE?

Timing of application, WS 2011



Timing of application, DS 2012



DO THEY GET

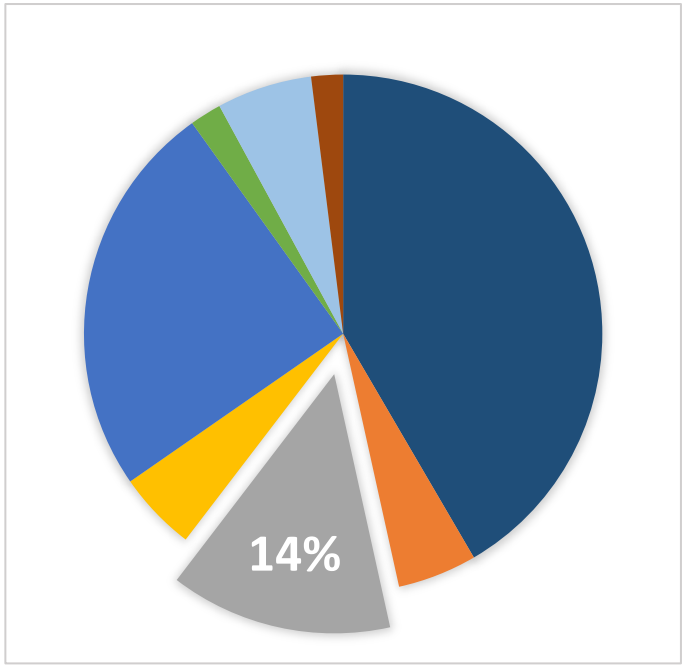
THEIR

MONEY'S

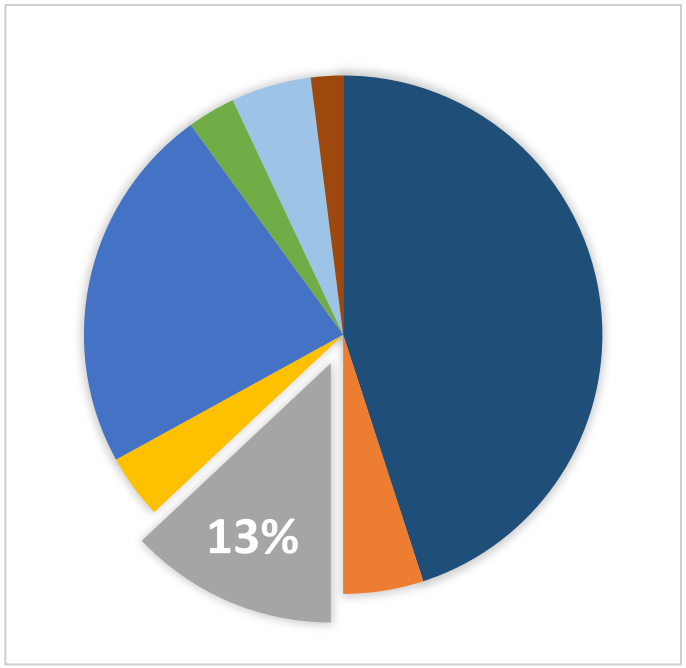
WORTH?

Production Cost Share (%), by season

- Labor and power
- Seed
- Fertilizer
- Chemicals
- Land rent
- Irrigation and drainage
- Interest
- Others

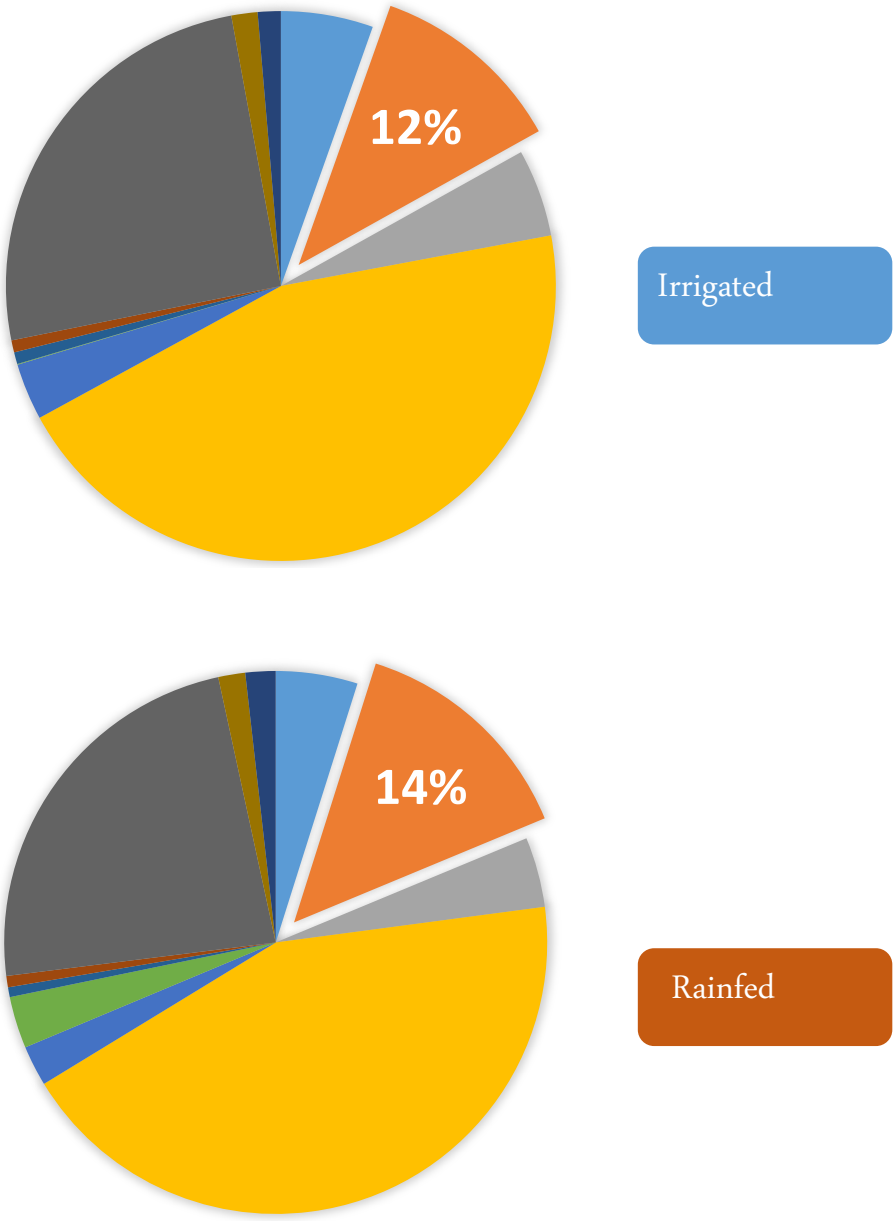


WS



DS

Production Cost Share (%), by ecosystem



Yield and Fertilizer Cost by Type of Fertilizer User
(Irrigated Areas)

Fertilizer Use	Wet Season			Dry Season		
	Freq	Yield	Fert Cost	Freq	Yield	Fert Cost
	(%)	(kg/ha)	(P/ha)	(%)	(kg/ha)	(P/ha)
Inorganic users	97	3,897	6,568	97	4,480	6,800
Inorganic-organic users	1	4,217	6,722	1	3,344	9,076
Non-users	2	3,143	-	1	3,288	-
Pure Organic	<1	4,000	8,000	1	3,274	1,440

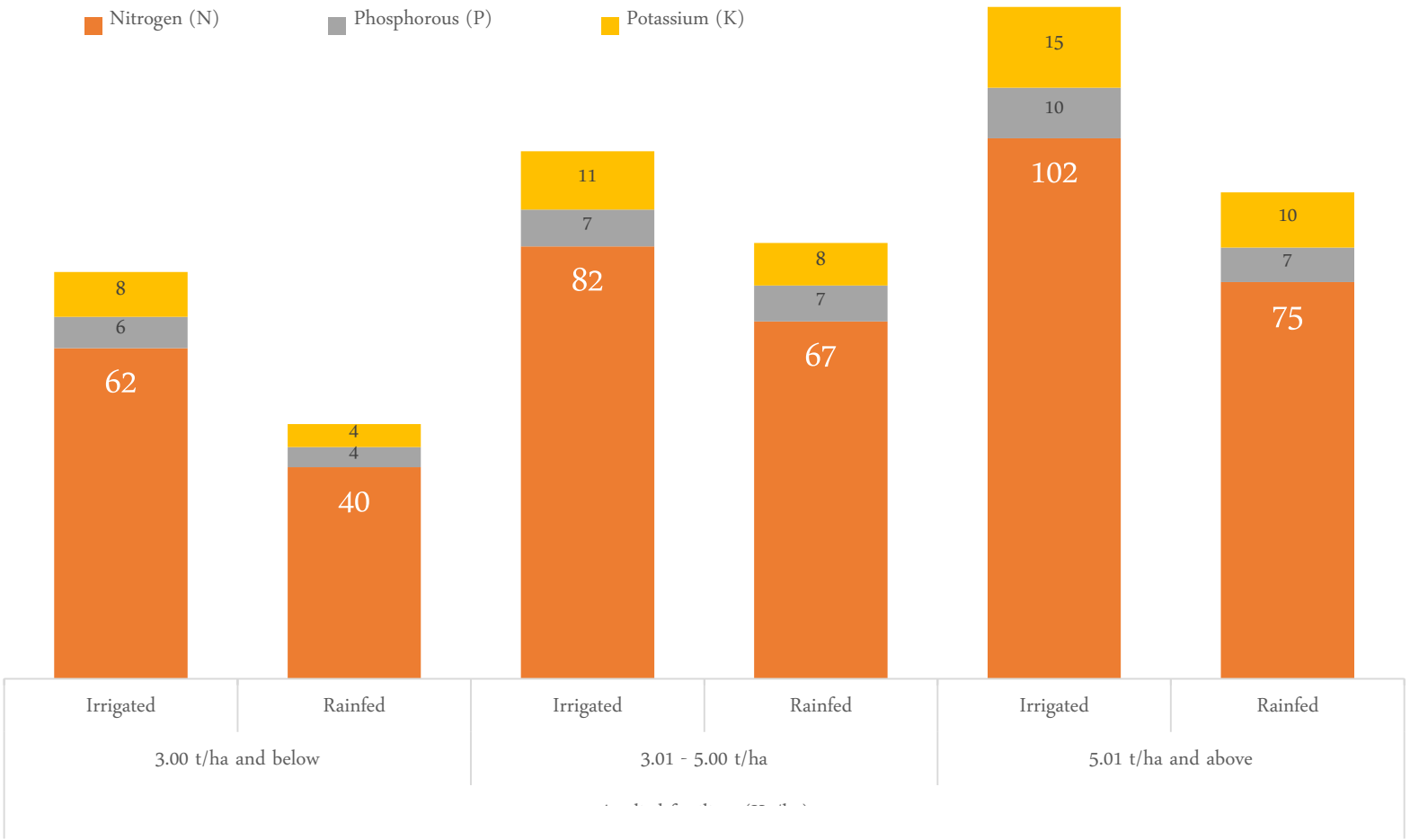
Yield and Fertilizer Cost by Type of Fertilizer User

(Rainfed Areas)

Fertilizer Use	Wet Season			Dry Season		
	Freq	Yield	Fertilizer Cost	Freq	Yield	Fertilizer Cost
	(%)	(kg/ha)	(P/ha)	(%)	(kg/ha)	(P/ha)
Inorganic users	89	3,060	4606	86	2,893	4117
Inorganic-organic users	2	3,492	6182	-	-	-
Non-users	9	2,011	-	14	2,194	-
Pure Organic	<1	1,040	333	-	-	-

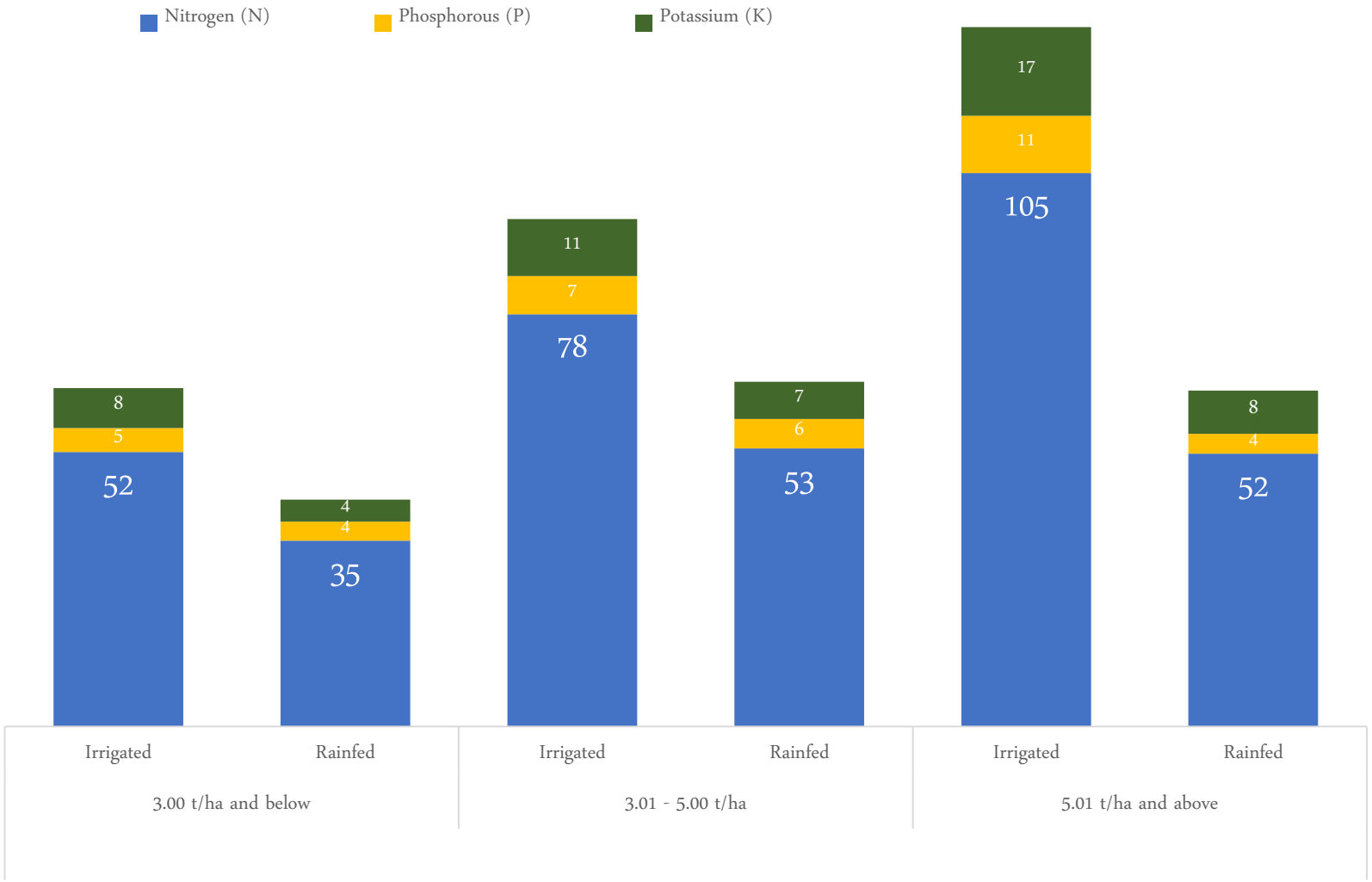
Average NPK Used by Yield Level, WS 2011

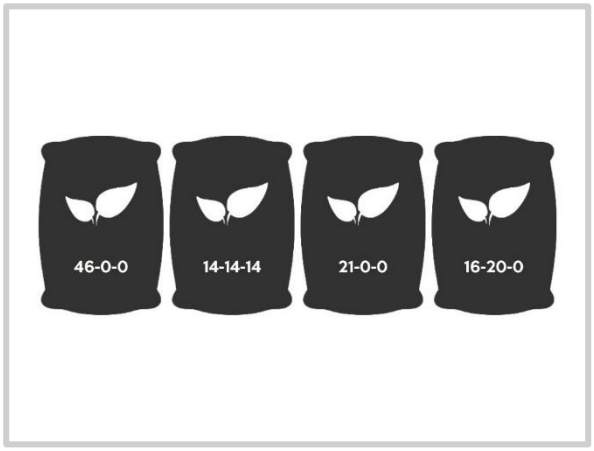
(kg/ha)



Average NPK Used by Yield Level, DS 2012

(kg/ha)





What?

How?

WHAT ELSE?

How much?

When


RICE “LIFESTYLE”

Quality Seed

Seed Class	2011 Wet Season		2012 Dry Season	
	Yield	NPK Use	Yield	NPK Use
Hybrid	4,715	96-12-21	5,829	112-13-19
Registered	4,441	88-9-16	4,576	93-10-12
Certified	3,858	84-8-12	4,526	81-8-13
Good Seed	3,689	73-6-9	3,845	71-7-10
Farmers' Seed	3,318	62-5-7	3,612	64-6-8

Sufficient Water Source

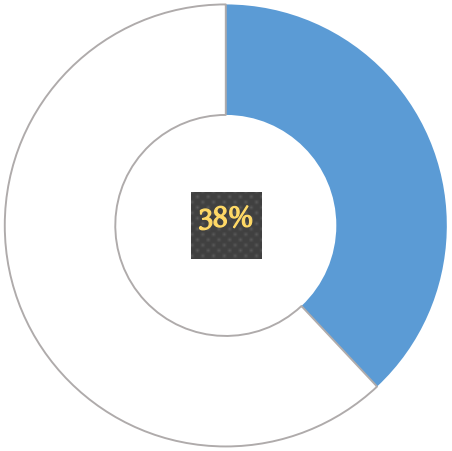
Water Source	2011 Wet Season		2012 Dry Season	
	Yield	NPK Use	Yield	NPK Use
NIS/CIS	4,118	82-8-12	4,770	88-9-14
SSIS	3,655	91-7-12	4,083	86-6-8
Natural Irrigation	3,327	65-6-9	3,693	64-7-10
Rain	2,967	53-5-6	2,793	42-4-5

Crop Establishment

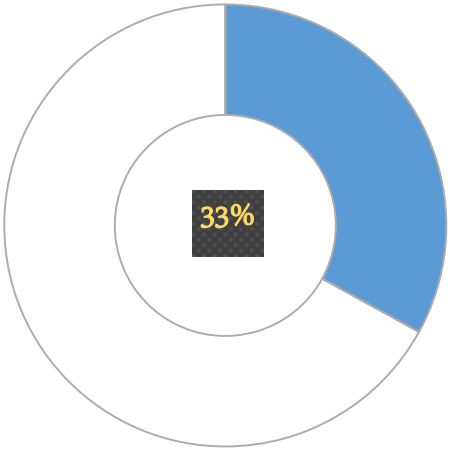
Crop Establishment Method	2011 Wet Season		2012 Dry Season	
	Yield	NPK Use	Yield	NPK Use
Transplanted	3,779	77-7-11	4,230	74-8-11
Direct Seeded	3,413	68-6-8	3,881	75-7-10

Top rice and rice related seminars/trainings

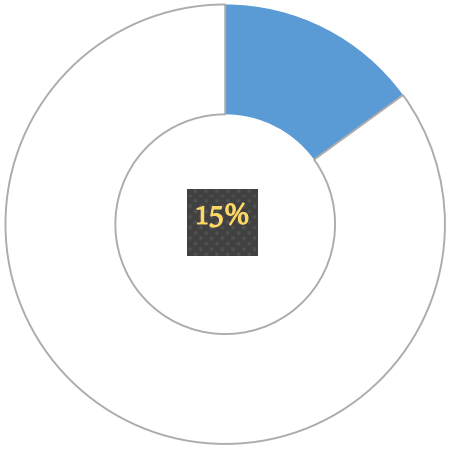
(2009-2011)



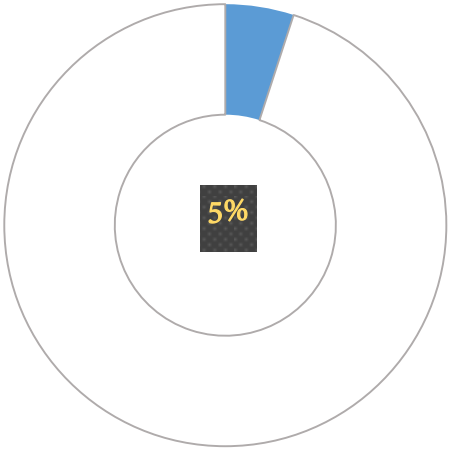
IPM/Pest and disease management



Rice production/rice farming technology



PalayCheck



- Integrated nutrient management
- Organic farming
- FFS
- Water management
- Rice Varieties

Least attended rice and rice related seminars/trainings (2009-2011)

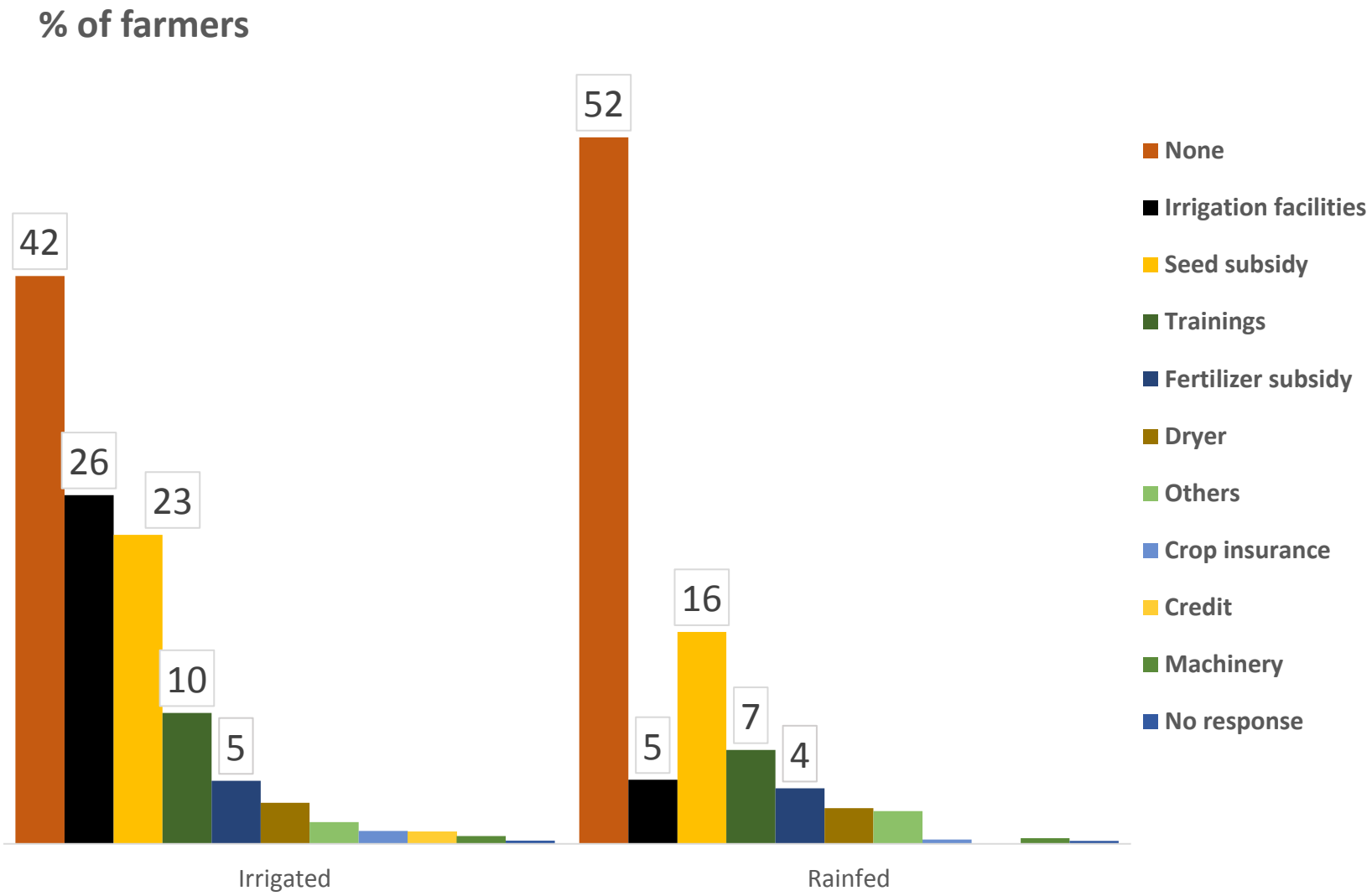
- Planting of rice and vegetables
- Postharvest
- MOET
- Community-based seed banking
- National grains post-harvest summit workshop

Awareness and adoption of technologies related to nutrient management

Technology	Irrigated (n=1936)		Rainfed (n=610)	
	Awareness	Adoption	Awareness	Adoption
MOET	26	5	16	3
Basal fertilizer application	81	30	80	26
Organic fertilizer application	88	28	89	24
Leaf color chart (LCC)	38	12	28	6

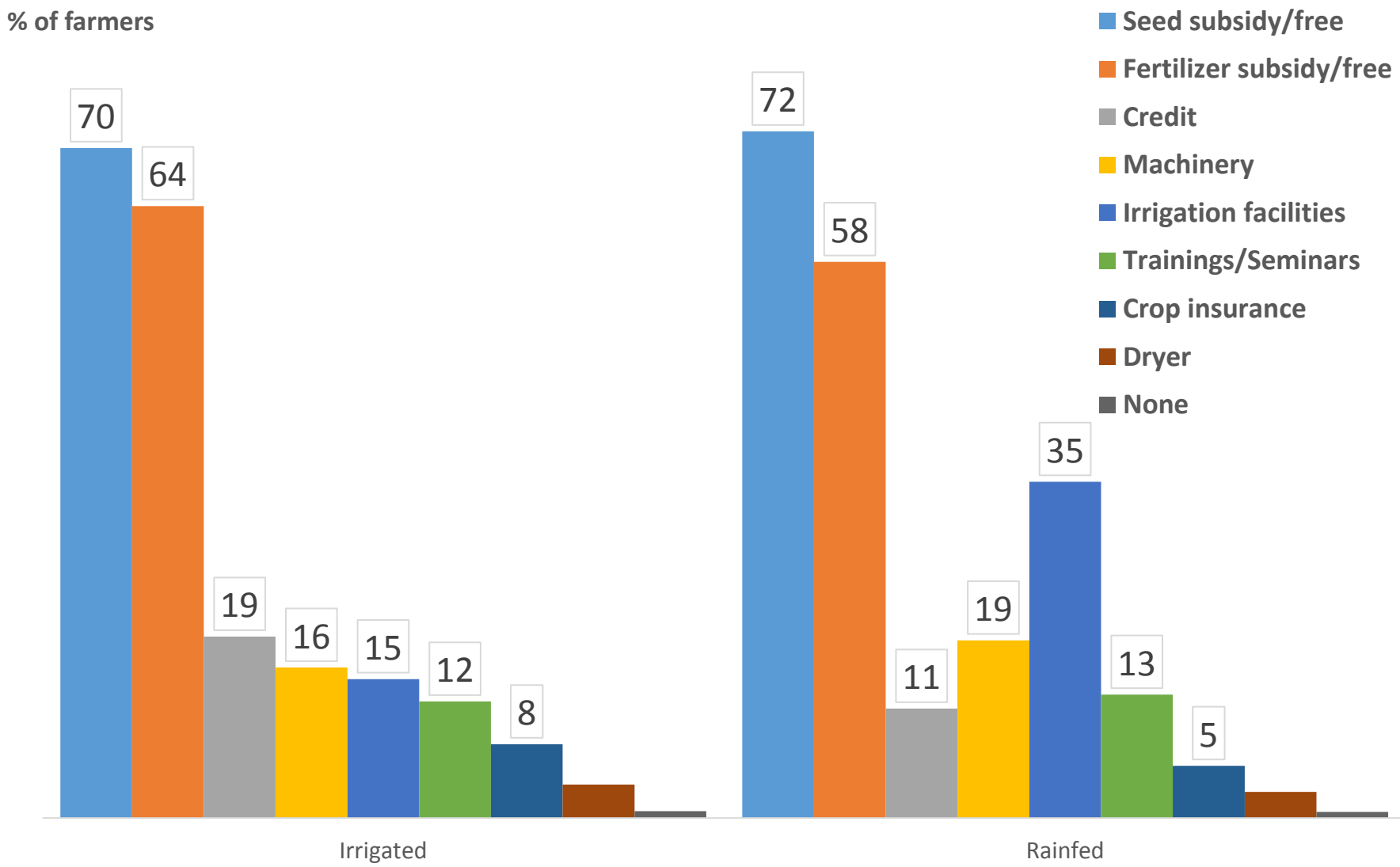
Government Services/Support Availed

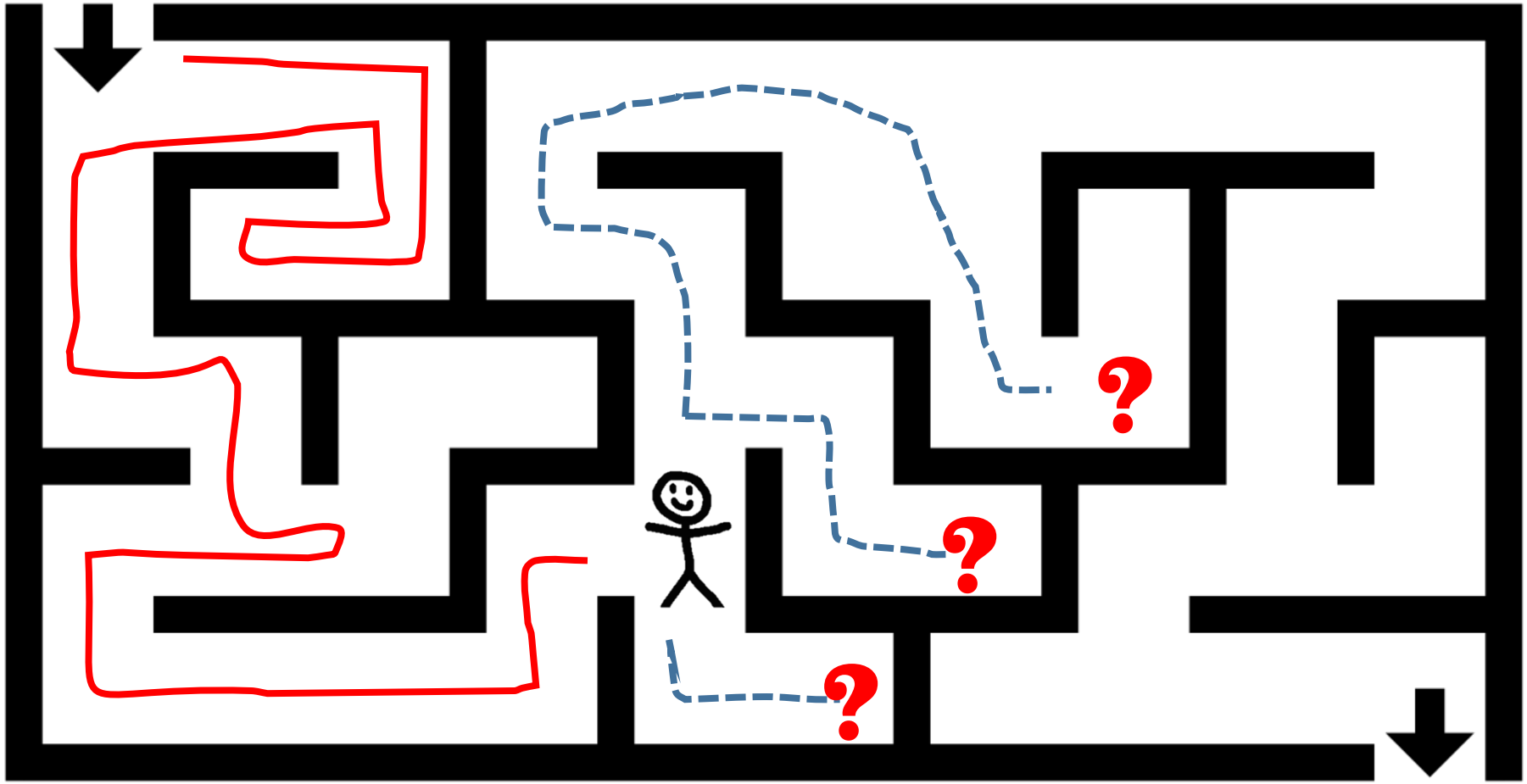
(by Ecosystem)



Government Services/Support Wanted to Receive by farmers

(by Ecosystem)





The End