Study on Supply Chain Optimization of Fresh Agricultural Products

2020 11 832

floyd

As of November 2020, all 832 state-level poverty-stricken counties in China have been lifted out of poverty, and the next step is to continue to promote the development of rural industries and consolidate the results of poverty alleviation.This paper analyzes the countermeasures to the problems of uneven upstream product specifications and high downstream distribution costs in the process of helping agriculture and poverty alleviation through the research of domestic and foreign scholars on fresh agricultural products supply chain - the development of the "farmland cloud" system and the "direct delivery" model. The "direct delivery from origin" model and the launch of "buy vegetables from DuoDuo", which effectively alleviated the problems of fresh agricultural products in opening up the "first kilometre" and optimising the "last kilometre". However, there is still much room for its development in the optimization of fresh produce supply chain. Combined with the problems encountered by Pinedo, using Floyd algorithm and linear programming method in the optimization of fresh agricultural products supply chain warehouse location and distribution path, and the simulation, A practical example is given to solve the model, and the viewpoint of building the supply chain information network ecosystem and improving the response efficiency to feedback information is put forward. Finally, it concludes that the key points of the transformation from "poverty alleviation and blood transfusion type" to "bypass blood type" are to cultivate farmers' standardization and brand awareness, improve fresh agricultural products logistics system, improve agricultural products e-commerce support system, and build additional agricultural products industry. We hope to alleviate the impact of the epidemic on the sales of fresh agricultural products and promote the overall development of rural revitalization.

: pindo fresh agricultural products supply chain rural revitalization.

1

1 1

2019 1

2019 1364

13 3

15.7 540 2020

27 100 10

2020

2020 11 823

EB OL 2019

02 19 http www gov cn zhengce 2019 02 19 content 536697 htm

EB OL 2020 04

22 https baijiahao baidu com s id 1664648049972609713

2500 EB OL 2020 10

17 https wap eastmoney com a 202010171666920855 html

823 EB OL 2020 11

25 http politics people com cn BIG5 n1 2020 1125 c1001 31943978 html

1 2

Floyd

1 3

Xueli Ma Shuyun Wang Sardar

MN Islam Xiaobing Liu

Wladimir E. Soto-Silva

· Armin Cheraghalipour · · Mohammad

Mahdi Paydar · - Mostafa Hajiaghaei-Keshteli

pareto

+ + +O2O

floyd

2

2 1

2 2

2 3

1

1

3 2

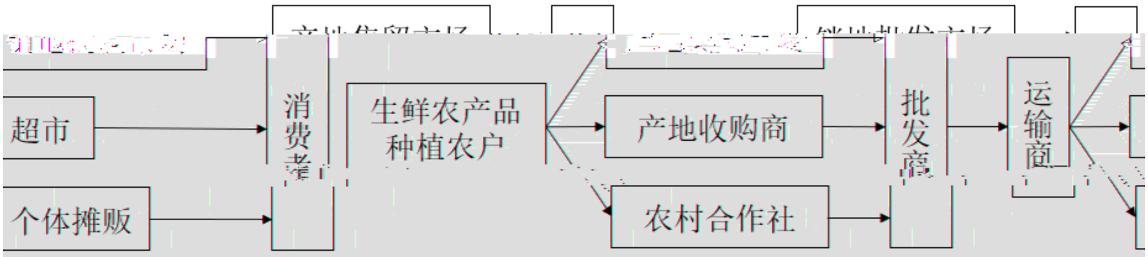
3 3

2017

2019 5 60

9

3



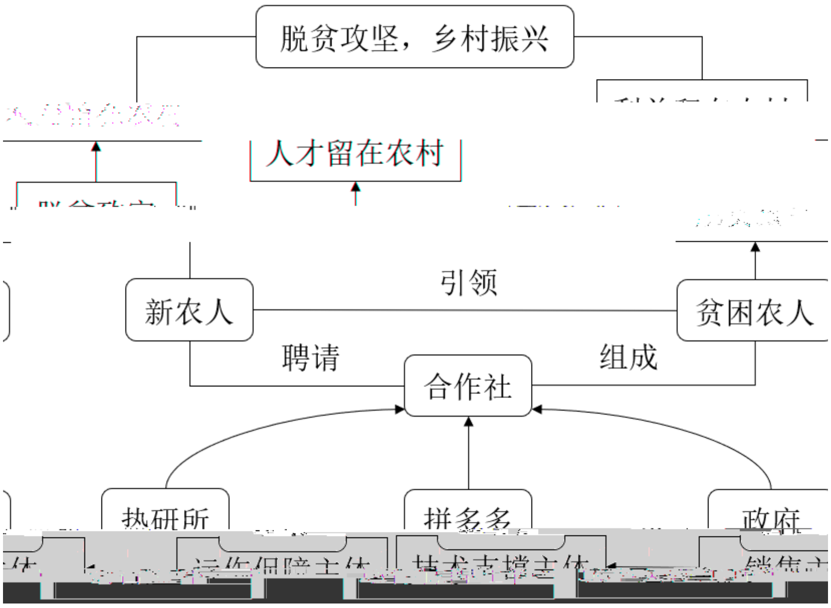
. [J].

,2018(15):103-106.

4

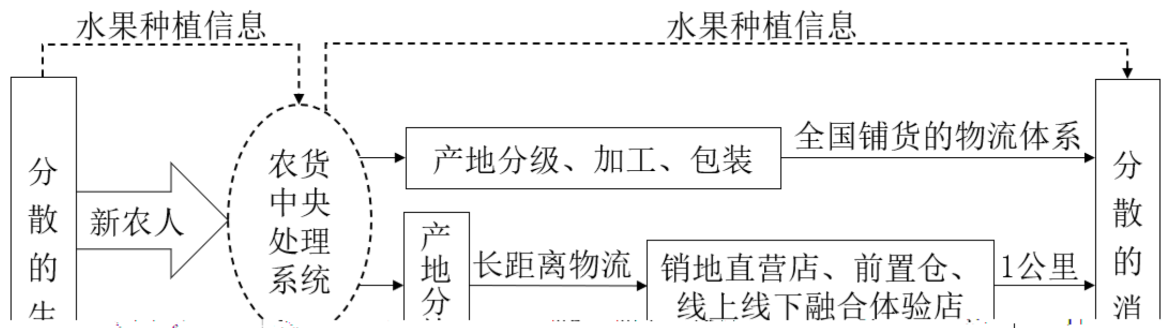
4 1

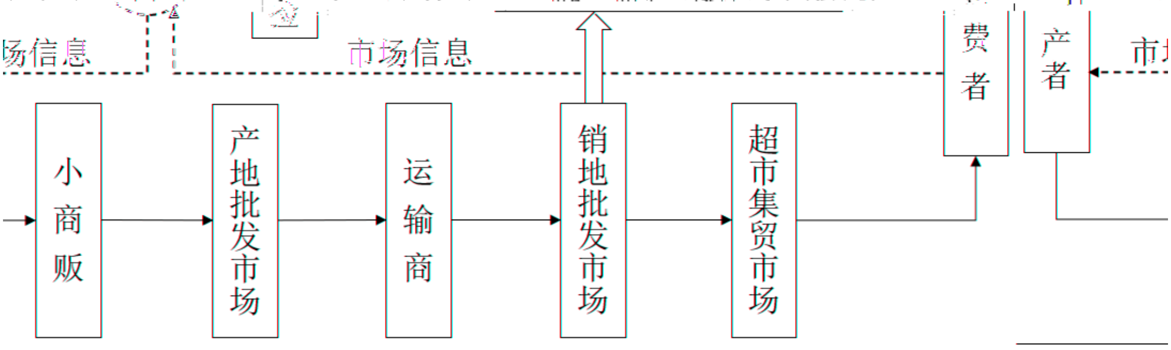
4



4

5





4 3 +

+

23 16

72 6

5

5 1

Floyd

floyd

5 2

5 2 1 1

2020

2 4 2018 55.11 13987.61

8

1 2 3 4

3

	1	2	3	4	5	6
1	0	17	30		25	
2	17	0	15	13		
3	30	15	0	18		
4		13	18	0		42
5	25				0	25
6				42	25	0

2

$= \quad ^{(0)} =$ $\quad$ $^{(1)} = \quad ^{(0)}$

$^{(2)} =$ $\quad$ $^{(3)} = \quad ^{(2)}$

$$^{(\ )} = \min \quad ^{(0)}, \quad _{1}{}^{(0)} + \quad _{1}{}^{(0)}$$

$^{(2)} \quad ^{(3)}$ $\quad$ 1 2 1

2 $(\ )$

$^{(4)} =$ $\quad$ $^{(5)} =$ $\quad$ $^{(6)} = \quad ^{(5)}$

$^{(6)}$

$^{(6)} =$

$_1$ $^{(6)}$ $_6$ 50 $(\ _1) = 50$

$_2$ $_6$ 55 $(\ _2) = 55$

$(\ _3) = 60$ $(\ _4) = 55$ $(\ _5) = 57$ $(\ _6) = 60$ $(\ _1) = 50$

$_1$ $_6$ 50

5 2 2 1

2000

1

2

3

4

5 A_1 A_2 A $_1$ $_2$

B_1 B_2 B $_1$ $_2$

= 2

6

2 3

4

5

c A =1,2,…, B =1,2,…,

A B

5 2 2 2

8

1 2 3 4 5 6 30t t

2 3 4 1 5 6 10t

10t / t 2 1 17

/ t 3

	1	5	6	
2	17	42	55	10
3	30	57	60	10
4	30	55	42	10
	10	10	10	30

$$= \qquad 17\ _{21} + 42\ _{25} + 55\ _{26} + 30\ _{31} + 57\ _{35} + 60\ _{36} + 30\ _{41} + 55\ _{45} + 42\ _{46}$$

7

Vogel

4

		10 17	42	55			㉕		
		10 30	57	60		㉗			
		10 30	10 55	10 42					⑫
		⑬							
			⑬						

$_{21}=10$ $_{31}=10$ $_{41}=10$ $_{45}=10$ $_{46}=10$

$^{-1}=$, ,…, ; , ,…, 8

xij P = + $_{+}$ $^{-1}$P = +

= $^{-1}$P = +) 9

+)=0

9

$_{21}$ $_{31}$ $_{35}$ $_{36}$ $_{46}$ 5 $_{1}=0$ $_{21}$

$_{1}+$ $_{1}$)=0 $_{1}=17$ $_{2}=13$ $_{2}=42$ $_{3}=29$ $_{3}=13$

5

	17 10	42	55		$_1$(0)
	30 10	57	60		$_2$(13)
	30 10	55 10	42 10		$_3$(13)
	$_1$(17)	$_2$(42)	$_3$(29)		

+

9 6

	17	42 0	55 26		$_1$(0)
	30	57 2	60 18		$_2$(13)
	30	55	42		$_3$(13)
	$_1$(17)	$_2$(42)	$_3$(29)		

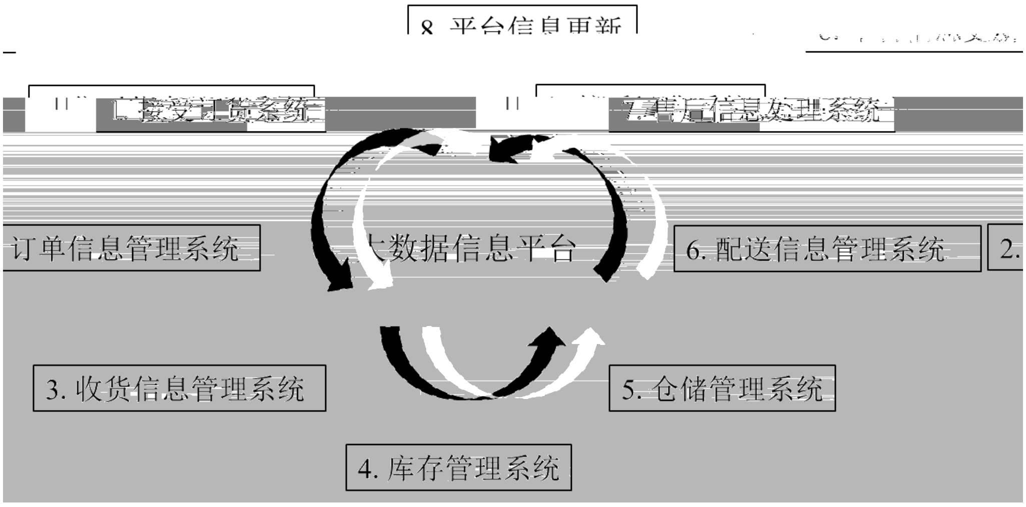
$_2$ $_1$

10t $_3$ $_1$ 10t $_4$ $_1$ 10t $_4$ $_5$ 10t

$_4$ $_6$ 10t

5 2 3 1

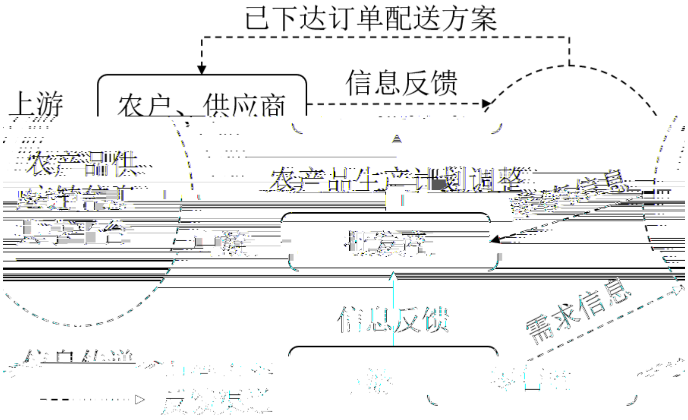
9



M . : 2017:158-168.

5 2 3 1

2020



. [J]. 2020

5 116-119

10

6

6 1

2020 2

11

3F

+ +

6 2

RFID GPRS GIS

1 J 2019 33 11 40 53

2 Xueli Ma Shuyun Wang Sardar M N Islam Xiaobing Liu Coordinating a three-echelon fresh agricultural products supply chain considering freshness-keeping effort with asymmetric information J Applied Mathematical Modelling 2019 67

3 J 2019 17 28 31

4 J 2019 45 19 6 8

5 J 2020 20 74 76

6 J 2019 06 118 120

7 J 2020 10 104 105

8 J 2019 07 100 101

9 Wladimir E Soto-Silva Marcela C González-Araya Marcos A Oliva-Fernández Lluís M. Plà-Aragonés. Optimizing fresh food logistics for processing: Application for a large Chilean apple supply chain J Computers and Electronics in Agriculture 2017 136

10 Armin Cheraghalipour Mohammad Mahdi Paydar Mostafa Hajiaghaei-Keshteli A bi-objective optimization for citrus closed-loop supply chain using Pareto-based algorithms J Applied Soft Computing 2018 69

11 J 2018 15 103 106

12 J 2019 35 01 37 41

13 J 2020 43 04
141 144

14 J 2019 27 33 197
198

15 J 2020 11 70 73

16 M 2017 1 8

17 M 2018 237 241

18 J
2020 5 116 119

19 J
2018 02 129 131

20 J
2021 03 37 39