

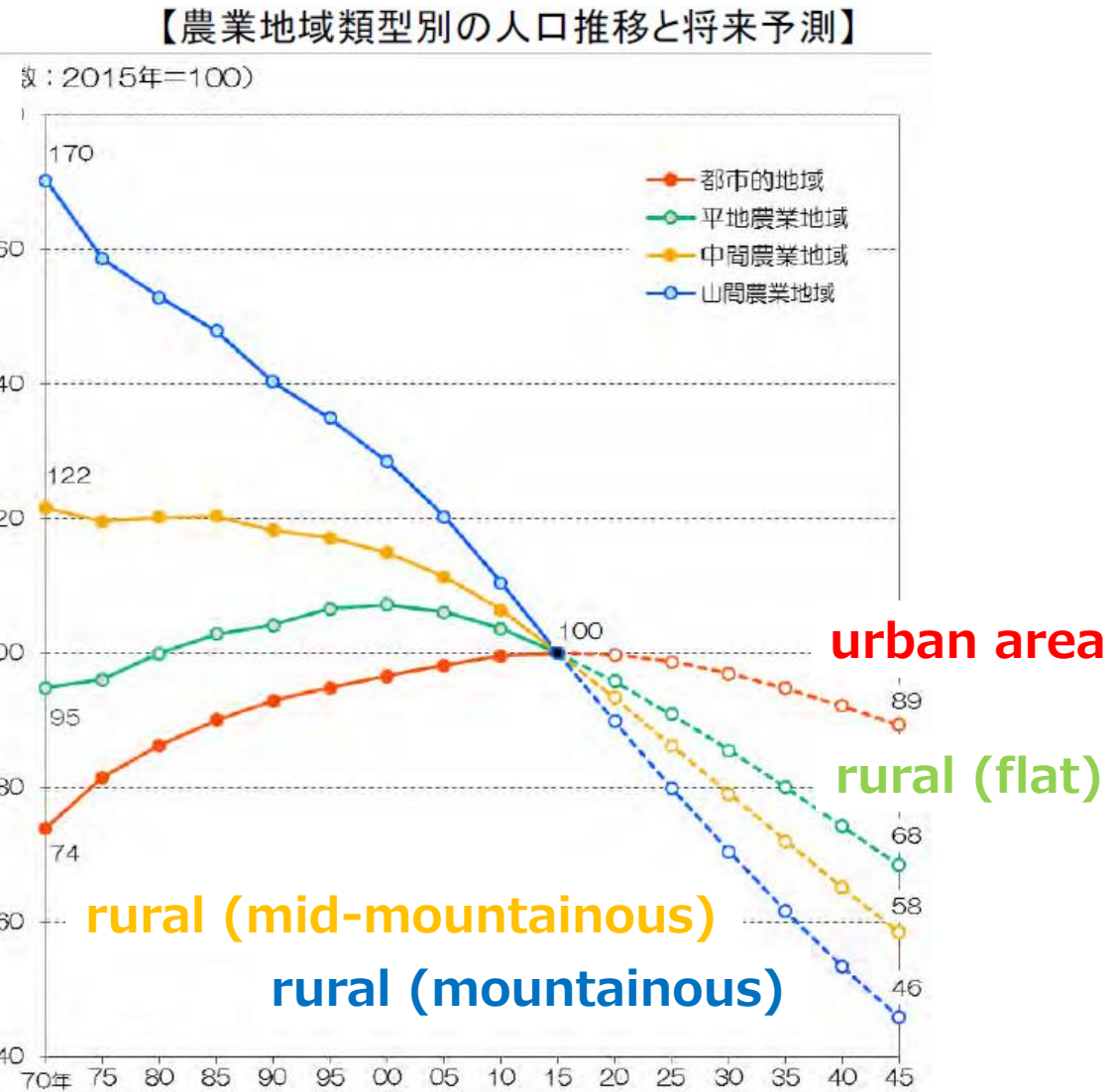
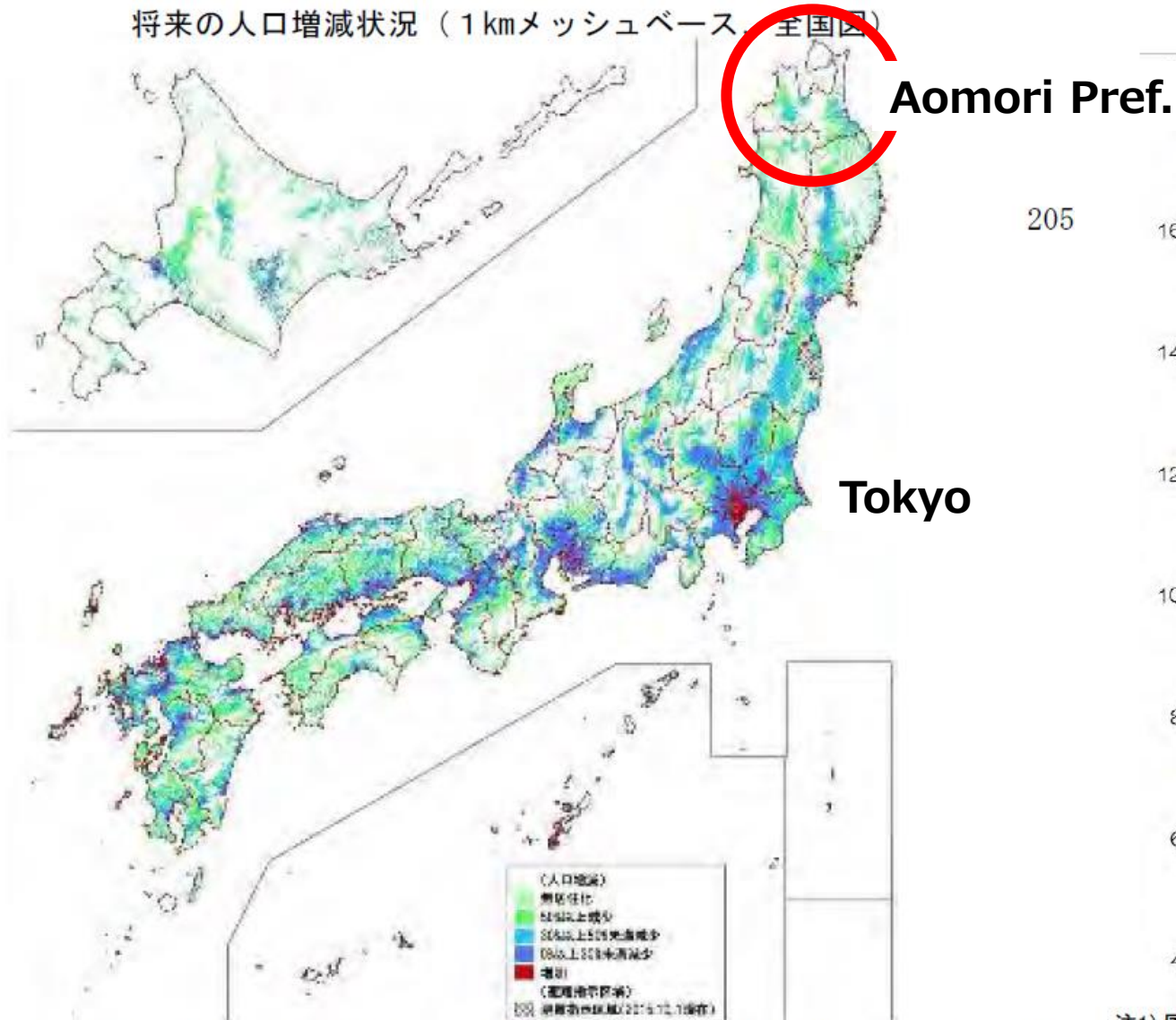


20210721TSCシンポ
Hirai, Taro(Sociology,
Hirosaki Univ.)

Revitalisation of Agriculture and Rural Community by Open Innovation in the era of Depopulation

Depopulation Trend in Japanese Rural Communities

1

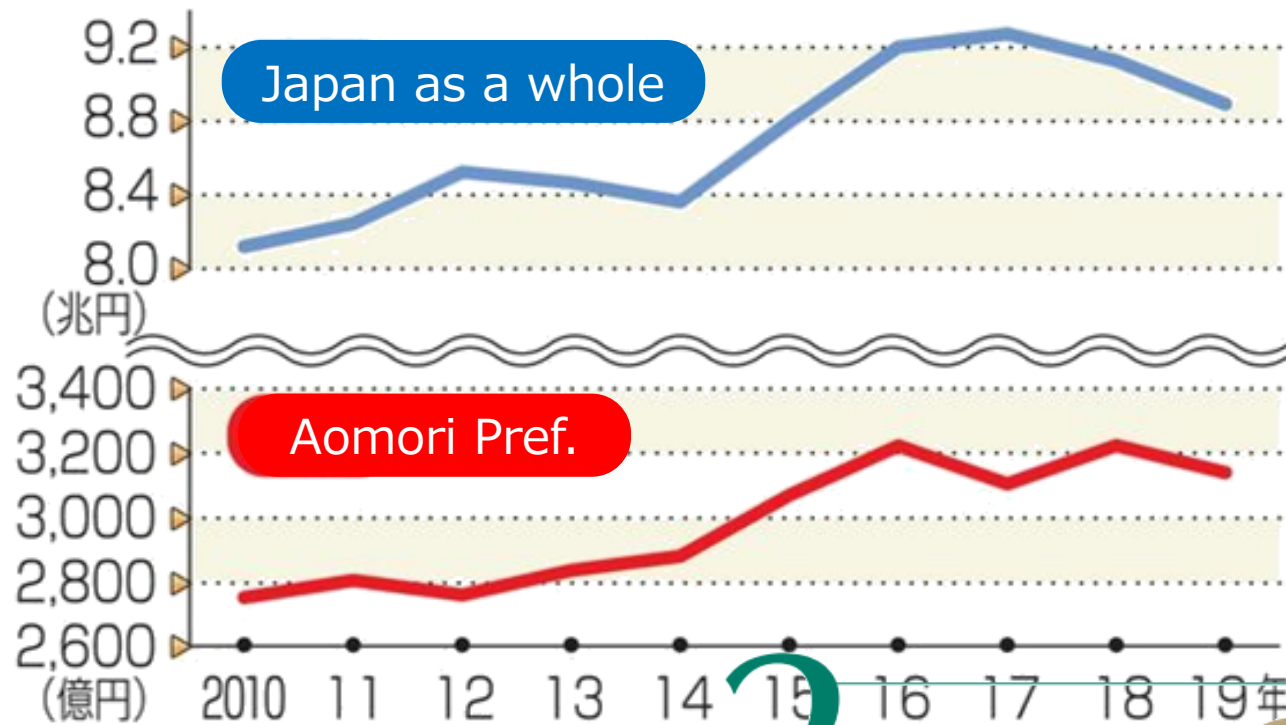


注1) 国勢調査の組替集計による。なお、令和2年以降(点線部分)はコーホート分析による推計値である。
2) 農業地域類型は平成12年時点の市町村を基準とし、平成19年4月改定のコードを用いて集計した。

出典：農林水産政策研究所「農村地域人口と農業集落の将来予測」(2019年8月)

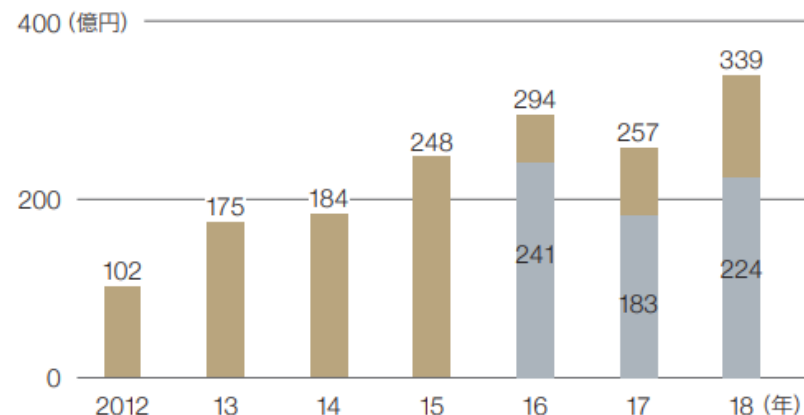
(備考) 1. 総務省「平成27年国勢調査」、国立社会保障・人口問題研究所「日本の地域」
2. 左図については、平成27年国勢調査時点（平成27年10月1日現在）における





2 百億円突破 4年連続

food exports



資料:JETRO青森「青森県の貿易」 ※2016年以降の内数は、紙製品等を除いた額

Agriculture of Aomori Pref.

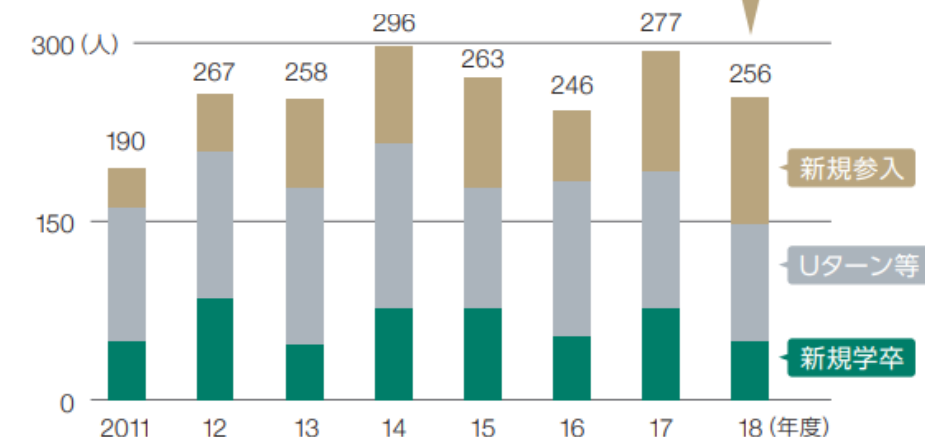
- 1) consistent growth of sales(2019, 320bill JPY=1.15 times in 10 years)
- 2) consistent growth of exports (2019, 33.9bill JPY=3 times in 10 years)
- 3) consistent entering of new farmers (2-300 persons)

Industrial Growth of Agriculture has not sufficiently contributed to the sustainability of rural communities.

農業で食べていける青森県

だからこそ新規就農者が増えています

new farmers



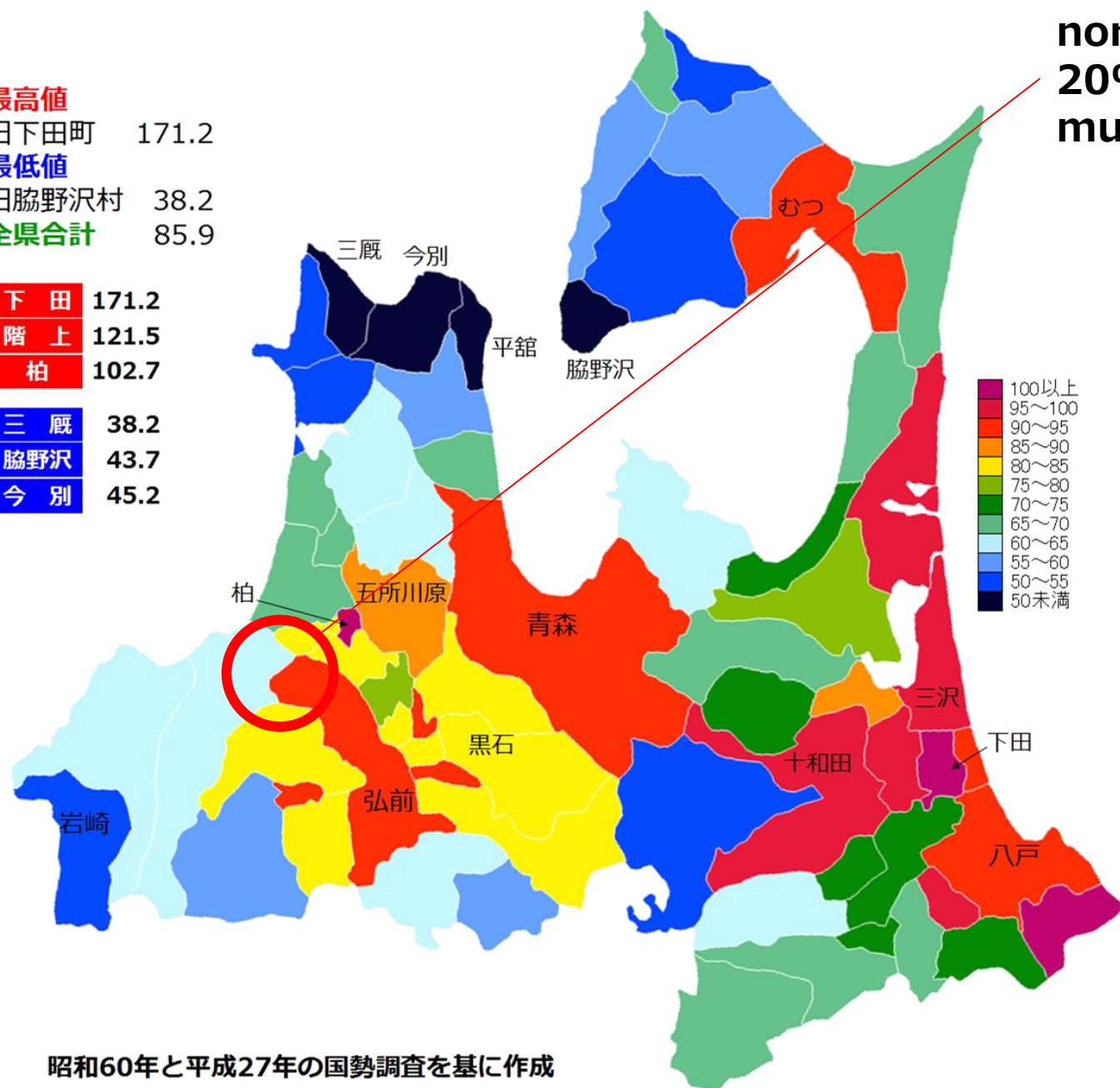
資料:青森県農林水産部

**What kind of innovation of agriculture
can contribute the sustainable
development of rural communities?**

最高値
旧下田町 171.2
最低値
旧脇野沢村 38.2
全県合計 85.9

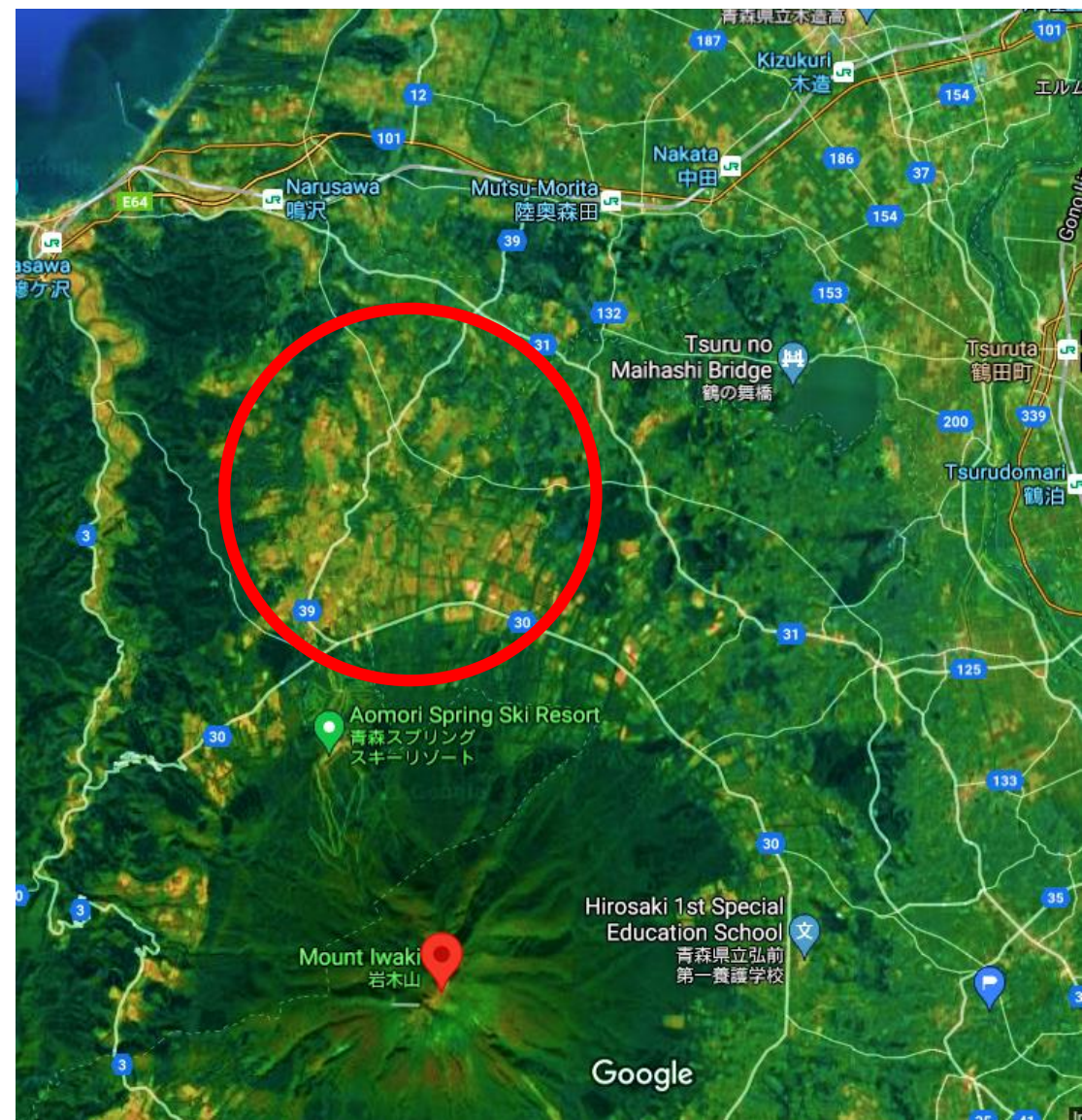
下田 171.2
階上 121.5
柏 102.7

三厩 38.2
脇野沢 43.7
今別 45.2



昭和60年と平成27年の国勢調査を基に作成

northern foothills of Mt. Iwaki in Aomori Pref.
20% of population decline since 2000
multiple farming of apple and rice





male permanent 30s
married with
immigrating woman

farming company "S"
★established in 2004 ★sales 3000 million JPY

female permanent 20s
migrates from Tokyo

seasonal 30s (farmers in
near communities) married
with left woman

★sales 1.farming service(50%)
2.food sales(30%)
3.processing(10%)
4.renewable energy(10%)

★farm size
rice(including soybeans) 160ha
apple 40ha (20ha for processed apple)
★employment: permanent:8, male:6, female:2,
20-30s.:4, 40-50s:3, 60s:1
seasonal20

①

Innovation of Human Resources:

Younger Immigrants from Metropolitan Area, especially Younger 5 Women

farming corporation "S"

★ established in 2004 ★ sales 3000 million JPY

②

Innovation of Business and Profit Size:

- adoption of large-scale machines and ICT
- contract farming, processing, energy sale

★ sales

- 1.farming service(50%)
- 2.food sales(30%)
- 3.processing(10%)
- 4.renewable energy(10%)

③

Innovation of Cultivation Techniques:

farming of apple for processing

★ farm size
 rice(including soybeans) 160ha
 apple 40ha (**20ha for processed apple**)
 ★ employment: permanent:8, male:6, **female:2**,
20-30s.:4, 40-50s:3, 60s:1
 seasonal20

1

**Innovation of Human Resources:
Younger Immigrants from Metropolitan
Area, especially Younger 5 Women**



企業・学生団体向け
通年農場体験
みんなたば!

**Internship of Metropolitan
Students since 2008**

since 2011, 5 students
immigrated in the trends
of **"lifestyle migration"**

4 immigrating women got
married with employees

marriages contributed to
job retention, problems of
farming corporations

employed immigrants
(younger women)
developed new business,
guest house and
restaurant

Innovation of Business and Profit Size:

- adoption of large-scale machines and ICT
- contract farming, processing, energy sale

harvester, drone for spraying, self-travelling mower, ICT management system... **"smartification"**

Women Employees leads **"KAIZEN"** of machine and system management
--- **gender equalization**
against Japanese myth = man is good at machine



2

Innovation of Business and Profit Size:

- adoption of large-scale machines and ICT
- contract farming, processing, energy sale



風丸農場のりんごを、時間をかけて低温でじっくり乾燥させました。中から濃厚な味が出てくる、しっとりとしたキャラメルのような食感で、砂糖や添加物は一切不使用のため、素材そのものの味を楽しめます。

農家が
干した
りんご



commercialization of wounded fruit or pruned branch through **face to face relations with experts**

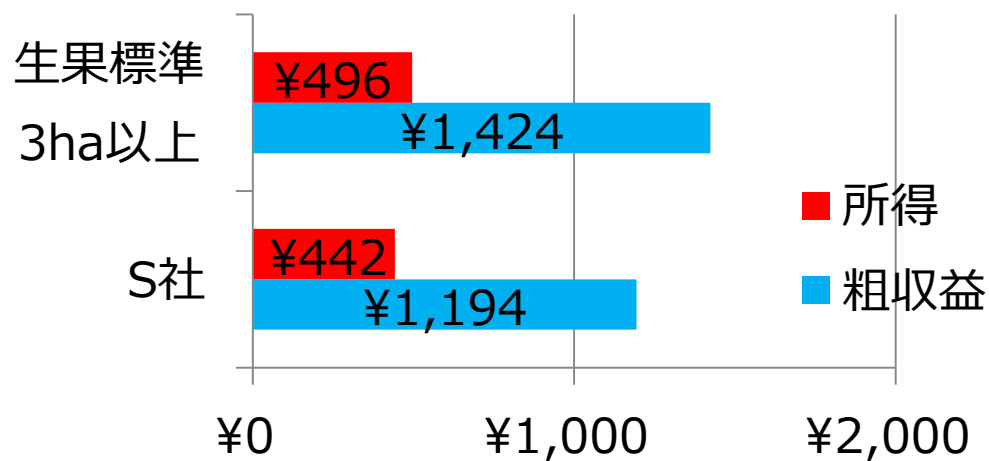
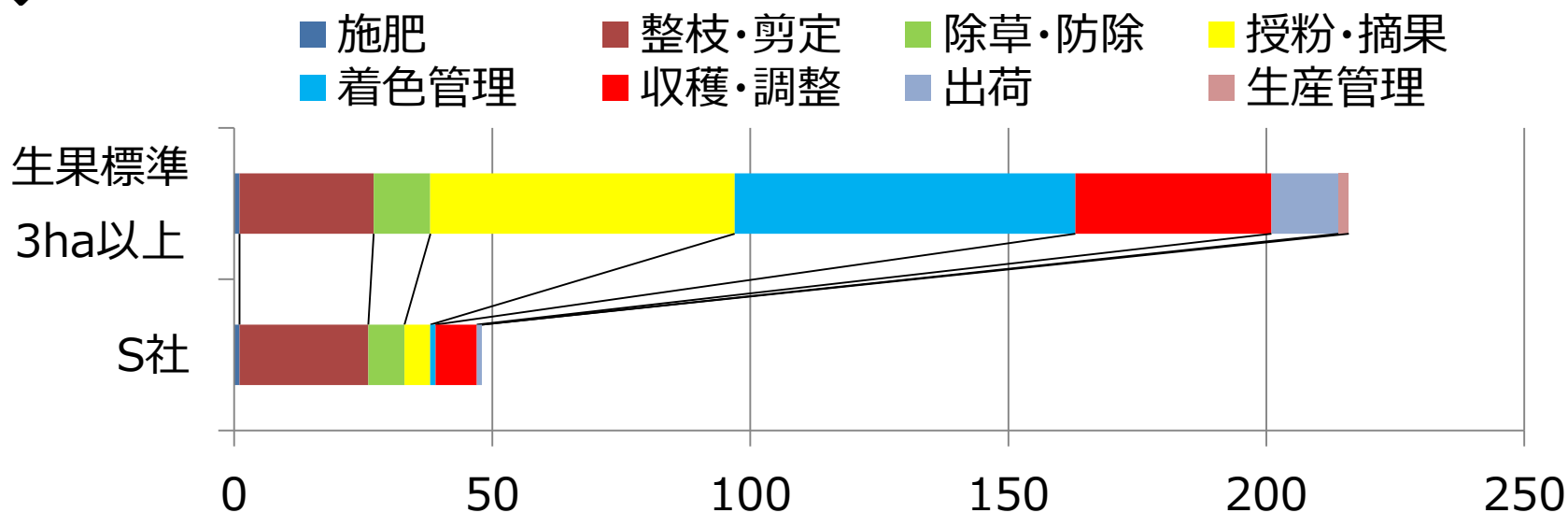
revenue sources in winter, obstacle of incorporation

commercialization of branch
→ direct contract with Italian restaurants and **heat supplying business**

3

Innovation of Cultivation Techniques: farming of apple for processing

11

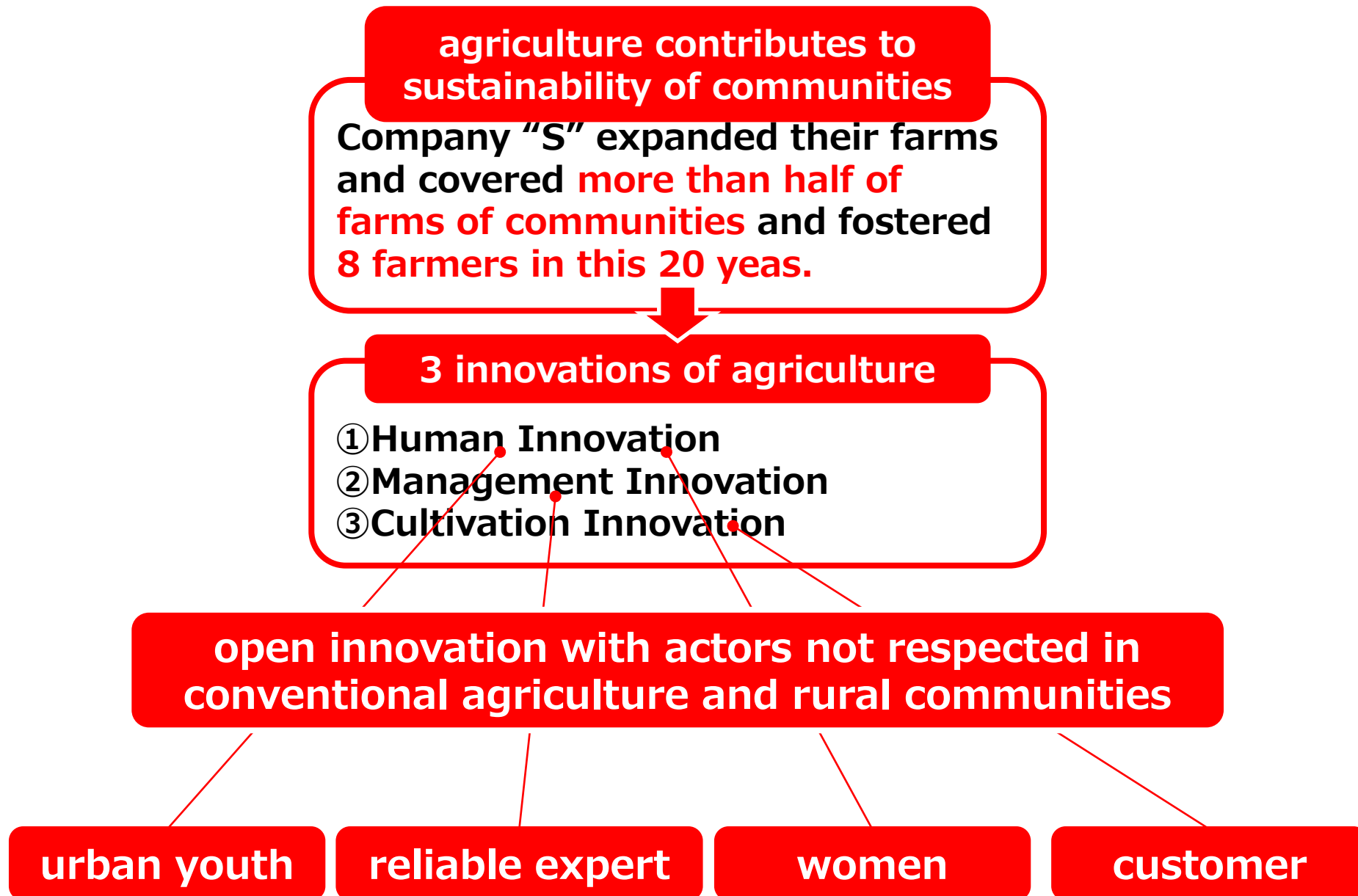


conventional business model:
high-value addition by
intensive labour

reduction of labour to 1/4
with the request of customer
→ contract farming

sale per area: 80% of standard
profit per area: 90% of standard

expansion of farming service
of abandoned of elders
→ the size of 40ha is the
biggest apple farm by single
farmers



3 innovations of agriculture

- ① Human Innovation
- ② Management Innovation
- ③ Cultivation Innovation

pandemic

positive and negative impact
but threat can be changed to chance
by open innovation

urban youth

reliable experts

women

customers

rise of job seeker of
farming in urban area

Company "S" expanded
internship and employee

need of change subsidizing
policy for new farmers
restricted to independent

expansion of subsidizing
policy for smartification

Company "S" starts to
foster human development
for smartification

need of knowledge and
technology transfer to
rural communities

devastating damage of
business model depended on
inbound tourists and
real communities

Company "S" find a way out
by "micro-tourism" and
online communities